WORKING PLAN OF BARIPADA FOREST DIVISION

Prepared by

Sri Bijaya Kumar Panda, OFS

Conservator of forests and

Working Plan Officer, Balasore

Supervised by

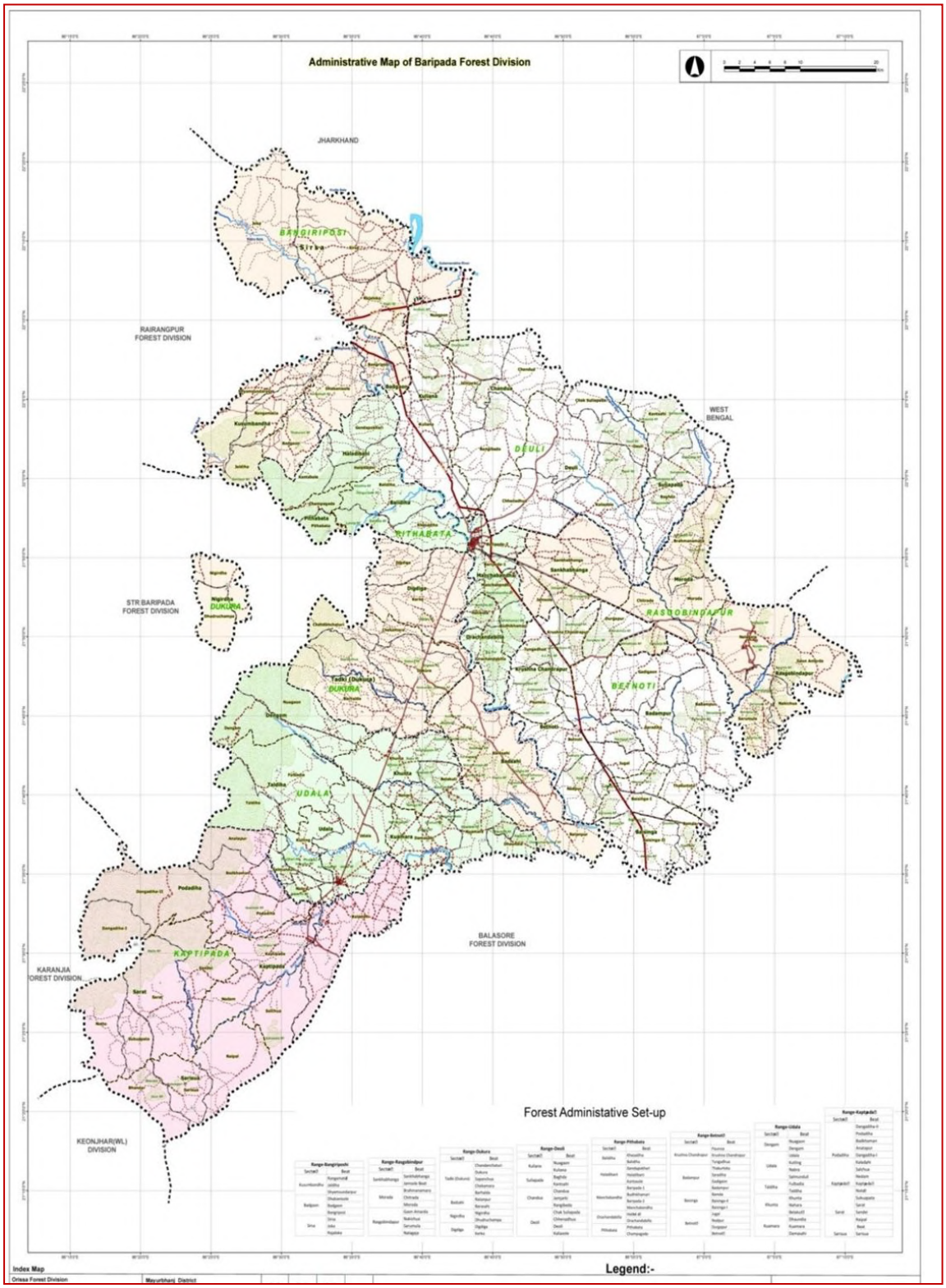
Sri M. Yogajayanand, IFS

Field Director, STR -cum-

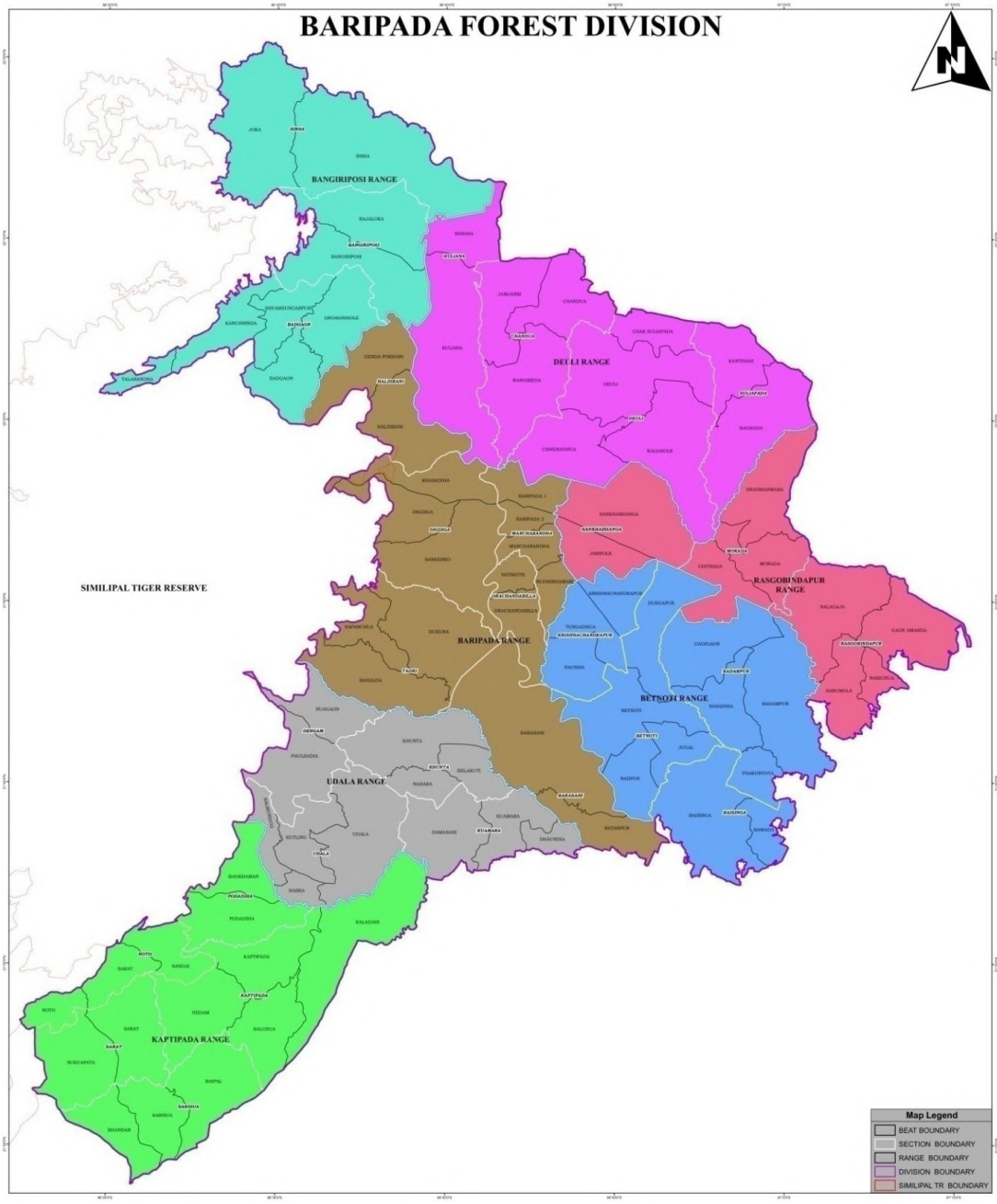
Regional Chief Conservator OF

Forests, Baripada Circle, Baripada

MAP OF BARIPADA FOREST DIVISION BEFORE RE-ORGANIZATION



MAP OF BARIPADA FOREST DIVISION AFTER RE-ORGANIZATION



ଶିଶିର୍ କୁମାର୍ ରଥ
SISIR KUMAR RATHO

ପ୍ରଧାନ ମୁଖ୍ୟ ବନ ସଂରକ୍ଷକ
ଓ ବନବାହିନୀ ମୁଖ୍ୟ, ଓଡ଼ିଶା
PRINCIPAL CHIEF CONSERVATOR OF FORESTS
& HEAD OF FOREST FORCE, ODISHA

FOREWORD

The Revised Working Plan of Baripada Forest Division has been approved vide Letter No. 8 (31) 28/2016-FCE dt.08/11/2021 of the Deputy Inspector General of Forests (C) O/o the Govt. of India Ministry of Environment, Forest & Climate Change, Integrated Regional Office, Bhubaneswar. This is the 5th revision of Working Plan of Baripada Forest Division for the period from 2021-22 to 2030-31 after merger of Mayurbhanj Estate in State of Odisha.

Six Working Circles, both exclusive & overlapping, are prescribed in this Working Plan covering a total area of 50038.72 Ha. Proper harvesting protocol for old and matured Plantations of Acacia/Eucalyptus raised prior to 1995 has been a unique feature of this Plan. Special thrust has been assigned to enhance bamboo forests through Afforestation Programme involving local community. Emphasis has been given in this Plan for value addition of NTFPs like Sal leaf, Sabai Grass and other NTFPs.

The Baripada Forest Division is very sensitive to Wild animal depredation, particularly elephants. The Wildlife Overlapping Working Circle has recommended many mitigative measures and habitat improvement activities. Adequate attention has also been assigned to the Trees Outside Forest Area since they play an important role in amelioration of climate, and satisfy public demand for small timber etc.

Sri Bijaya Kumar Panda, (OFS-I, Gr. A- SB) CF&WPO, Balasore under the guidance of Sri M. Yogajayananda, IFS, Regional CCF, Baripada has done a commendable job in revising the Working Plan to meet the challenging circumstances linked to Modern Forest Management and I hope this plan will thrive to achieve its stated objectives.

(Sisir Kumar Ratho, IFS)

ଅରଣ୍ୟଭବନ, ଜିଡି-୨/୧୨, ଚନ୍ଦ୍ରଶେଖରପୁର, ଭୁବନେଶ୍ୱର-୭୫୧୦୨୩, ଫୋନ: ୦୬୭୪-୨୩୦୦୮୫୩
Aranyabhawan, Plot No.: GD-2/12, Chandrasekharpur, Bhubaneswar-751023, Tel: 0674-2300853, Email : pccf.hoff@odisha.gov.in, Web: odishaforest.in

PREFACE

It is a great privilege and opportunity on my part to document this 5" Revised Working Plan of Baripada Forest Division, where I had opportunity to function as Divisional Forest Officer from 10/04/2009 to 08/05/2013. As DFO, Baripada Forest Division, I had faced some difficulties in field work because of inappropriate Prescriptions of Working Plan which didn't match the field realities. During preparation of this Revised Working Plan, I have discussed with the field staff and the DFO, Baripada Forest Division on several occasions and tried my best to prepare Working Plan matching field realities.

The feedbacks received from ORSAC, Bhubaneswar and the NRSA, Hyderabad has been useful. Old Working Plan Maps of 1996 Working Plan have been used for this Working Plan. We have been able to prepare required topo-maps with 6 vegetation layers through ORSAC, Bhubaneswar.

I extend my heartfelt thanks to Sri Swayam Mallick, IFC, Ex-DFO, Baripada for his valuable assistance. I am thankful to all Range Officers, Foresters and Forest Guards of Baripada Forest Division for their valuable assistance in field activities.

Focus in this working plan lies with handling the burning problem of Baripada Forest Division i.e. Human-Elephant conflict management, raising commercial forestry plantations in farmer's field, harvesting of over matured Eucalyptus/Acacia Plantations followed by re-planting, inter cultural operations in Teak plantations for improvement of trees, improvement in structure relating to procurement & processing of NTFP and posting of boundary pillars in all Forest Block Boundaries to prevent further encroachments.

I hope this plan will lead to sustainable management of Forests and act in direction of checking Global Climate Change faced by Humanity.

CF & WPO, Balasore

भारत सरकार / Government of India
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय / Ministry of Environment, Forest and Climate Change
एकीकृत क्षेत्रीय कार्यालय / Integrated Regional Office
ए/3, चंद्रशेखरपुर / A/3, Chandrasekharpur
भुवनेश्वर - 751 023, ओडिशा / Bhubaneswar - 751 023, Odisha

No. 8(31)28/2016-FCE Sth hotembcr, 202 1

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Thc Principal Chief Conservator uf Furcatr & HuFF.
Government of Odisha,
hate Forest Ftead Quarters, hanya Bhawan,
Chandra-sokharpur. BhHbaricswar - 751 023.

8ub: Approval nf draft Revised Working Plan tit' Bnripadn Forest Division of Odi#lia for the grind from 2021 -22 to 2fl10-31 - rug,

Rat'. The PCCF & ltoFF, Odisha letter No. 7fi1 7/11F fSF 0872019 dated 13.04.2021 and leiter Ni›. 1 7474/11 8 tS€'M) 08/2019 duted 11.10.2021,

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2. Tbc Beripada £nres\ Division was reurgBliized in 2001 of Govt. of Odirhu. F'orusl A EXtvJraumenJ Depoitni<nt anJ as per 20C3 reorganisation, here are eight nwnber of Ruoges name]y Kaptipada, tJdala, Pithgbata, Dukura, Bongiriposi, Dculi, Rasg‹ vindpur. Betac•ti Rnnge and ‹one unified check gate fUCGJ i.e. Jamsota U«ifi•d Chevk Gale. I3uriny 2019 teutganizetinn the Sinulipal Sezictuury portion web shifted to Sin1ili]aaI Nt›rth aod SimilipaT Suuth Divisions. Burlier Illis Division had covered entire pre rc-organized hnlasorc district and part of Mayurbharlj district. Al present, it ii *cruised* fa lwe ftc venue Sitb-Givisions namely Baripada and Kapttpada Mayurbhanj district.
3. Now, the revised working plan for a puriud of 10 ycers t'rona 202 I -22 to 203u-31 has been submitted to rhas office vide letter ‹lntcd 25.06.20* 1. for according approval »d« roresi iconseivationl Act, l9filL
4. The aJditit*nuI infomiaticn/cumyli8nce was suught by lftis *ohice* vide letter dated l 9 08.20? 1. The compliance sport bas been provided by the PCCF & HoFF, Odislia through lener referred in above and all the information hue been matlr pan of Working Plao anJ annexed In Lhe revised WorLiDg Plsn.

5. n ti mm ihrs itic proposals accorded approval kntlJr I crests (Conservation 1 Act. 19g0, were cXpeuted IO be e n\irlcd 4 Id rtluntt4rlrlg report regarding {resent 9ta1M, No be Submitted to ihis office, within o period of' 6 months front the dutc of jssue of this epprovnl. 'Ftic non- forest loud proc idcd Lor CA io lieu of' diversion ot' foruxt liind nmded in be uainferred W mutated in tzvoi ni' fetes dep»rimenc
6. The work fng plun proposed for ltte period 2021-22 to 2030-31 has been examined in accordance with the provisions of' the lorests (Conservation) Act. 1980, the guidelines issued by the Ministry of Enviiuoment end Fnresrs, New Delhi from tjme to time, Fictional Forent Poiic y, 1955. the order nf IJun'blc Supreme vourt in PH, WP tE} No, 202?95 dated 12.12.06 read with W P (CI No. 171,96 end subsequent order pessed in thu diffetrnt lA by ltte Hon'bie .Supreme Coun and tire Naiiotiol Working Plan €_'ode issued by the Ministry in 2M.
7. As mentioned iii the w‹irking plan submitted. ihe fi›rcsi araa fn the Divixioe 8anpoda cif O6isha i5 ñO488.†34 ha. The Iota} forest mrna comprises of 124 RFs of 46373.74 ha of 0t hos. PFs of 989.23 ha, 13 PRFs ot' 24d4.45 ha. 127 Q.s of 588.314 ha and UF of 53 be.

   Time Bacipala Force Division Yes want 2'tM.45 he of nutit\cd forest \and atid aT\ area has been inutelcd in the nnme of State Fnrcsf filopaztmcnj ae per paragraph IO.4 of Chapter-i0.

   3'he infoymutloo is ptotlded above wM be treated sa part ct the working plum and the foreit ecez for management under present worMiig plen wlll be as per the iwformalioit provided by the PCCF & floFF. Odishz letttr an- 7817/1. 1F ISF I ll8 /201. 9 dated l3,0•t.2021 ma reproduced In the •bove psmgraph.
B. Construction words regarding num her of officia]. msidential and Check Posi buildings is permitted which hJvt been prt›vided in working plan. Construcl ion of any other building would require prior approval from Ltte Central tiovt.
9. lnfonneiion regarding the inventory of growing stock, stocli map and topti-sheets showing manob cut c'f various circles would form the part tif the workjijg plan, All worts dotv• in the iiitetvaning, period for which there was no apprmed W viking Plan, amounted to violation of L crest (Conservation) Aci 1980. The State Forest Department i.s advised riot th execute ony words in future w ithooi approved working Plan.

A feet oarcfiuI considereji‹›n nd Use working pfez\ pres viptinlts sad obseryatio0s staicd ahcvc, the worki‹1g plan ‹If Bariy8da F arcrt E3ivisinn is uyyrnvc6 t'nr \JTe j+cric›d 2021 -22 to 20?fT-3 1 uitder Scminn-2 (iv) th F"urcsf Conservation Act t9R0 as amended up tu date aud io accordance with the guidelines of" lhe Ministry u/' E»vironmcnt and hprsst.s as well cs orders of Hon'blc Supreme C"nun roFcrrcd iu above, subject to the following g<mcraI md sgecijic

£ieneral_CeadiGons:

1. 'the npprovJl shah 1 be cffccii vo form the daic ot issuance of this letter.
li. Tire approval of the working plan ñiatl be r›n1j too » period at 1 b t3'en Ycsm i.e. upio 3.1.03.2031
iii. Mid term revic- will be mandatorily done on or before 31.03.202fi
lv . A11 ftttOrtrlati0n pro*fded st1bSTt}0ent tL• Stibm ISs Mft o (worklftp plan WPuld br treft2ed as part of Working Plan aoJ would he incurpora;ndf exceed in the apptoyaxt working

v. NaNrai Iy gruwf\ ft›rert areas wll I nof he subjected to clear falling. tjear Soiling shall

by re5u}nic‹i a* per provisions ctint uiflcd iii rule 7 (3') of l-orxsi Ifi'onserv'ation) A mcndi»cni rule . Qtr 14. 'run.s any pr ›posal ct' clearing of' trees in furehi land or portion thereof shall be dealt accordingly.

vi. No forest area shall be leased out to anybody including any organization/Govt. Department/Contractors for carrying out any activity without a royal of Central Government and collection of boulder, bajri, sand stone etc. shall not be allowed without prior approval of Central Government under Forest (Conservation) Act.

vii. Boundaries of the division shall be demarcated and maintained properly. As per working plan (paragraph 10.18(4) of Chapter-10), maximum boundary pillars in the division are not present and therefore RCC/PCC pillars of size 4' above ground should be ensured on priority within working plan period and the pillars should be inscribed with latitudes and longitudes of the location along with other details. Annual target for boundary pillar s installation needs to be fixed so that at the end of plan period, forest area ‹if tire Di vision w ill be completely saturetea stter complete dernnrcation.

viii, Rudget provisions for the w‹›rk prescribed in tile wurktng plan sht›uld be provided ‹›n annual basis and fhQ fitoic Liuvl. sI1c•uTd ensure lint nu deviation \akcs place un accuu»t o f Shortage of Fund.

|x, All plan Eng ttnd rr c‹\eralit ti r›per'atiuns sh:III be dc›nc ui1lJer departlnunfally or lhr‹›Mgh Furc.,I U0v'clapmeMl t‹irpur:t\iui\ ,iod i\nt tlTroug) ie.thing o‹it t4f areas lo any private individual or organization. The species of indigenous nature shall be preferred and mono culture avoided.

x. Manopeincnt, ctiriservation and dcseltipmcnl tel lbc wildlife of lhe Divisiiitt shall be carried our as per w'i1diife IProiecti‹›ii t Act. 1'47* und guidel ices issued. by the tvlini«iry of Environment and Forests, New Delhi from time to time along with regular consultations with the Chief Wildlife Warden of the State.

xf. N\• brcci tree sl4a1 i he tcllatl \n I tic name ‹II" "petty tellings" fc›r any deParhnuntal w‹›rks which sball be met linnl other fellinpx approved end prescrif•ed in the plan.

xii. Intensive Fme Prtitcclion Measure slial I bc cn;ured. Funds to be ensured ter prevents sc iiicasures iike maintenance of' ilrc linvs and controlled borning.

stir. Mnnociiliure in pivnutfixis needs io be .si't›idrt} on,J iii*.mcd planIui*on of' *»djgimoits species should be encouraged for biodiversity concerns,

xiv. A rnid-term review of the plali shall be carried Oul rnond«ioril y.

xv, trio deviations. shall be allowed lrom the prescriptions ‹ I this working plan reed with coñditiuns sliptilatcd herein airyc without prior approval of tire Ccfllral 'fivgnulienl .

xvi. The wt›rk trip pliin t›rescripnt›os has-c io bL followed stncily and tire system ‹if annual updating of compartment 11 ixttn ies and contrtil forms should be in place.

xvii. Fhe rcmoñiil shoul‹l not excec d the increment minrally. except t(› focilitoie natural regeneration.

xviii. List ‹›t" Sunplc gJots, preset :ilit›t\ plots, scciJ plots ccc. nf the division «hound he anncxcJ with the W‹›r1 ny Plan.

xix, Thc targets ol" Co epcnsatury af'torcstsrion should be acliicvcd. Lirt o!" c‹*mpcmSatury Aflt rcstatiun mi,u‹t in lieu ‹›l" ii vcned lt›rcst land, provided to Ihis uflicc vide letwr nf I'r.'L"F I T‹ F F', tt\‹lisl a I«rcr ‹la Act *7.09.*0? I, snould he made p3rt ‹›f WurLing Plan. Annu: I pr‹›¿russ report o I' L.,1, target.s acl11C v<d against rcxpovlivc pi'ojcc1r (in which final epprcval is accorded for ‹t \'«rston of foi csi landj short lcl be submitted to this office, hol1 forest |nnd re«ei «d should be' transferred auld mutated in rhe name of Ccrrest dcpaillqent and declared as kcs<rvc Fores\ in n time hound programme and yearly sport to th s et"lert slit›n!‹I Inc Kuhn ttied to ihis office.

xx. CunsIr‹ic\irHi tyL new buildings ated i ‹›ads in li›rus\ area (if anv) will rcluitc prior aiprc›vul tr‹›tn ‹ uizjpete'n\ authnril\ t n\lcr F‹›resr r?onsci-vatinn Act . I °7¥l1.

xxl.Th'e State Eli*vt. she uld maLc an arrongoln nt for declaration of' tnmst area tinder Section 4 c'f‘ t{4t Elisha F‹›resl Act, 1973, Classification and notification of remaining lorerc area should be cun4plctcfl wlthi'n two years fr‹›ni the date nl issue of this better. A compliance report tti this cftiât will be trade available tit this tit’lice.

xxfT. Encrogchmcnt on fur'ñ.st land shc‹ ld be removed within twu yuan Atom thg date of iss e of thjs let\er. A conipl iance rspcirf lu lhia. cfTect wltl be made available tO tbis office.

xyiii.Any uhange in prescribed >ilvicuilurcl system, clear felTin• of natulgl furc8!, Formation ‹lf new falling sefiex, large suale Felling due to natural calamities which cann‹›t he adjus1utJ agt\insl Nutr\re yield etc., which perinapellrly .alter the basis nf mun4gemcnt laid down in ah‹1vc wurk ing plnn, will rcrt‹iimd priur sanction of this

xxiv.AJjy amendment irt lhu v’cr1znlj plan involving potnm nf **tcuhnical** importance lea4if›g tt› tbe chzmge it\ the proscripti‹›n should be nent wiLh necessary draft amendn›en\ to Ihis nfhcc. fry PC‘Cfi (flUFF), tJjrc+ugh State/LiT Government for apprcival.(a) Statu Ciu\’amnJcnt shall knee\re aflequate budgetary provision so that wcrLing plan prcscriptiuns crc imp1eutonted timely ai\d effectively.(h) Siatc €iuvcrnnlant shall ensure that ehcrtage ‹›f” Fund sho i1‹l not become mason for deviation.

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ii. In Rehetiititatlon Working Cirele , un Area of 21. 302.621 hn includes all the cmpqrjzrjcats and forest btucf. t›f Coppice and Rehabil itati‹›lj \v‹›rking uircle of provi‹›us working plaJl with /orcH uan‹ yy density fium i l % A above. These bToc1s and compartments were degraded aod FOduurtJ to scrub typ.e but the crcp improved due to protection by lucal pcoplu. l”hc crny included hero cannot he worked for cu\nmercia] cxplcila\iun ol” tinlbcr under aelecti‹1n s} sfcni. The future majjagcmenl pmcticc aims at thvs« rooted vsslc fomsls, scruh fnresis to rchabiliuatc by integrated reh'abilitati‹an tgLhn1que, lftc details c›f which are given i\ pafa«ranh-3 1 nf”F h• ter-DII of PM T-lj. Dead, driecl, fallen and disoaxecl tree.z would extracted. Monoc\iJture in plaMtaticn shall n‹›I be \Bk ii up a‹›d pl0rttatiun o/ uidigenou species shonid be encuuragM.

iii. **In Plunjutioa Working** C'b-cle, on area uf 2. 1029.0lg ha distctbuled among eight funclionaT Raoges which includes all those htocfis wh ch have permanent b!s *• and barren Jaljds subjected to cnntinuuus biotic inter/ercncc. Such areas are devoid of aoy *rn‹›t-sto k* wnrtl\ establishing nature) rcgoncration witf1ii\ a rcusut\sble time frame'. This citclc alsu, includes the ‹›ld cx›shng pla»tal i‹›nx raisM diJzing and ur pnor tn the outgoing pJsn period, the detai]s of whioh are given in nar:•r'ranh-4 I ‹›t‘Cfj }'A}{-Jj. PltuMati‹›n u£ ndt#onuur 5pecicS bJlould he encr›uragcd pfcfcrab!y wiLh quick growing, indigenous, site-specific, locnl ly available species with a special cnjphesis on NTFP y iclds species with am objective H› genuatc source of inconjg for the iocal population through jlantation.

\v.. tn Witilltfe laNer}apping) Working Cirete. the management r›f wi}d}ife shrill be strictly ifi acci›rdance with the provision of Wild life Protection Act, 1972 end in consultatiian with C’hiel' Wild Life Warden t›f the State. This fi’irvle has hecp allotted

with an area ›t' 29.1 U8.96 ba which inclusive *T artst* block arcas wire canopy density above f1.1 and houses wildlife/ is visited by wild animals in the Divisit›n.

v. In Nen-'Timber forest Produce t«veri«pPinei Working Ciecle. an Wren of 2†103.00 ha includes I lt0 liircst block.s with management of fruits. seeds, ienvcs and flowers, tic dctuils of which are giv;n in nacaLraDh-6 I of' £'hanter-Vt of PART'-11 NTFP species ecologically suitable for fhc division may be selected and lo<used **for special managcmcnl** incl\iding non-dcstructiv'c l+arvosring, **proccssing.** value addthon and 8•°^B ^!^^g With alt asscssmc»t nF status and **prugTamme** for **‹\plifbncn‹** nf cuttago/ small suale NTFC' indusiries anct ir«ditiunal practices.

vi. **In Joiot F‹›rest Managerricnt to erlapping) Working** Circle. **aa area of** 3036R.424 **ha includes** the **areas** «›n1ing **unJer** newly ccn.stifuied VSS and **areas** under C‹1mn1unity F'orest Rights under ForeSt kights Act, 2006 and the plantati‹›n and other ntivitics under Mziiunzt Alioiesation Programme taken up in ihe ioimt areas wilt I-›e protected by diffcreiii Van Surakhy» 4amiti, die details of which are gjvcn in q:tt-7 ñ'I1_vt_P_A&TU. The JFM shovld be promoted in critic divixi‹›o. 'file entry ptiint netivilic.s should be fJkcn hp to encourage the JFM in the

vit.Milestone foi People Riucli\ ersity R egistcr (PBR) FOm\ulation ar u'etl as Acceas uf Benefii shttring Xegularioit lfas lu be imylcmenlod **«nJ monitored.**

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i Raiszny ‹›fi **genejii:ally improved** accrtTings/c1onal **pmpagatiun needs emphasis for** timber pi'oductivity enhancement ftir fixture. Acciirdingly, year-wise raising ot eternal seedlings will ht fixed in prupnztini\ in the U vision.

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so as to keep it
. guidelines by
n the matter in fu

Youts sincerely.

Padma M

(Padma Mahanti)
Dy. Inspector Gencral of Forests(C)

Copy tn:

1. The Addl. Director £reneral of Furesis (FC'), Ministry of Enviroiviiiclii, Font & Climate Cih8Ilge. 1n‹lira Pnrya‹a(an Bhawan, Agtti Wing, Aliganj. lorbugh Road, View

2. Thu Addl. PI.'CF (P SM), Forosl Depurtment. Gr'vt. nf' tJJirh: . Aranya Bhawan.

Chandrasekharpur, Bhubaneswaz- 23 fcir kñul information md necessary actioa.

3. Thc Managing Director. Odisha Furest Development Corporation Limited, Bbubaneswar for hind information.
4. Guard Pile.

Dy. Inspector General of Forests(C)

ASPIRATION OF THIS WORKING PLAN

The Forest cover of Baripada Forest Division is 87100 ha based on satellite data as notified vide Govt. of Odisha re-organization Notification dt.21/02/2019. Forest cover is 20.43% of the geographical area of the Division. This includes the Revenue Forests and DLC forests of 29064.487 ha constituting 6.81% of the geographical area. The forest area included in working plan are distributed in 272 forest blocks totaling 50038.720 ha constituting 11.73% of geographical area. Tree outside Forest is 5805.769 ha constituting 1.36% of geographical area. This working plan is aimed at increasing the forest cover from 20.43% to 25% of the geographical area by end of this plan through commercial plantation outside the forest area through people's participation in farmer's land. Farm Forestry, Avenue Plantation and creation of more village forests are the thrust area and there is ample scope to make the goal realistic.

The quality of forest under Forest Department control is to be enhanced from Degraded Forest status to Medium Dense Forest (MDF) through protection & Silvicultural practices. The growing stock per ha is to be enhanced by 10% through forest protection. The skewed crop composition is now heavily tilted towards lower girth class i.e. 30cm-60cm & 60cm to 90cm. Through appropriate silvicultural practices, diameter growth of existing crop will be enhanced to higher girth class of 120cm in 5% of the total growing stock. Invasion of weeds to our forests will be checked completely allowing natural regeneration to establish.

Virtually there is no natural Bamboo forest in this Division. Through bamboo plantations, some bamboo forests have been created. It will be our aspiration to enhance bamboo forests through plantations not only in existing forest blocks but also through Farm Forestry, with assistance of the Odisha Bamboo Development Agency. By end of this working plan, it is contemplated to popularize bamboo through Farm Forestry and land under Bamboo may achieve at least 0.4% of the area under private ownership. This seems to be achievable as there is plenty of planted bamboos in villages in private land viz- Bambusa nutans (Badi Bamboo) Bambusa bamboo (Kanta Bamboo) & Dendrocalamus strictus (Salia Bamboo).

Wildlife management will be augmented and people's participation & cooperation to a level of "Safe Wildlife habitat" will be restored. Wildlife habitat will be developed to provide adequate fodder, water and shelter to animals living in the forest. Animal depredation, Man elephant

conflict will be managed through improvement of elephant corridor. The Elephant Corridors will have improved green cover with a changed cropping pattern. It will be ensured to have a safe elephant corridor. Migratory routes of Elephant will be in a safe zone. The buffer Zone of Similipal Tiger Reserves in Notto RF will be well protected with a better prey base. Human Resource will be adequately trained to handle wildlife management with a more professional manner.

All forest blocks as per approved working plan map will be digitized by DGPS Survey as per working plan map and will be made encroachment free by the end of this plan. Actual Reserve Forest block boundary maps are there in 1930 settlement maps. All Forest boundaries (RF/ PRF/ PF/ VF) will be secured with RCC Pillars. All plantations will be depicted on topo maps after DGPS survey.

At present about 60.69% of Forest Land has been assigned to JFM for participatory Forest management within working plan area. Another 7718.126 ha of revenue and DLC forest land are also protected by JFM committees. Our vision is to increase the level of participation to at least 85% level with qualitative participation.

Scattered nature of availability of NTFPs in forests, their short collection period, and limited individual capacity of the primary producer; makes aggregation a necessity. Hence community capacity building is a must in all NTFP enterprise as recommended for Baripada Forest Division. Inadequate storage facilities results in deterioration in quality of NTFP. Creating adequate infrastructure related to transparent and scientific collection, grading, storage, value addition etc. will be achieved by end of this plan. Collection & marketing of NTFP Species will be improved through creation of primary producers' aggregation. Harvesting and value addition of NTFP will be through scientific and sustainable method. Contribution of NTFP to people's economy especially to tribal people will increase to a level of 30% of annual income of forest fringe villagers. Forest based NTFP resources will be improved to that level so that, collection of various NTFP items will be economical and price will be competitive.

Recently modern technologies have been developed and introduced in forest management. Though tissue culture / vegetative propagation/ hybrid variety of many species has been developed, it has not been implemented in the field to a desirable extent in forestry sector. It will

be our endeavor to provide QPM (Quality Planting Materials) from Sankhabhanga Central High Tech Nursery and other nurseries of the Division. Seed orchards and Clonal orchards will be developed by end of this plan period and planting will be with advanced method and technology. Firefighting with high-tech gadgets like blower machines and use of chemical non-polluting extinguisher will eliminate forest fire.

Adequate measures will be taken to combat Climate Change and increase Carbon Sequestration. Plastic Free environment will be handed over to our future generation. By end of this plan, alternatives to Plastic will be in use and eco-friendly materials will be used in majority house hold. Forest Department will be an active agent to reach every house hold in this matter. Global temperature rise will be checked and reversed to 2013 level by end of this plan. Maintaining and restoring bio-diversity in forests promote their resilience to human-induced pressures and is therefore an essential insurance policy and safeguard against expected climate change impacts.

Conservator of Forests &
Working Plan Officer,
Working Plans Division, Balasore

CONTENTS OF THE PLAN

Introduction

Maharaja of Mayurbhanj created Forest Department in 1888 for management of Forests within present Mayurbhanj District. Reserve Forests of Mayurbhanj were under management and control of Forest Department whereas Protected Forests were under management of Revenue Department. Reserve Forests were permanent in Nature and Protected Forests were meant to fulfill the requirements of ROYATs and Residents. The management of forests of Baripada Forest Division was being undertaken by Sadar Forest Division under the Rulers of erstwhile Princely State of Mayurbhanj. The main emphasis was given on the harvest of timber, particularly Sal, mainly for use as sleeper. Major forest produces which gave 75% revenue are timber, firewood and charcoal. The minor forest produces which included Sabai grass, Tasar, Bamboo, Lac, Kachara, Kusum, Mahul and Hides etc. constituted 25% of the revenue from Forest Department of erst-while State of Mayurbhanj. One Mayurbhanj Forest Manual was published to serve as a guide in Scientific Forest Management. The boundary line of Reserve Forests were very clearly demarcated and mapped. Survey of outer boundary of Similipal RF was completed in 1914-15 and again on 1927-28. There was clearance of forest block boundary lines for proper demarcation of the forest in the field. Scientific approach for forest management was adopted by the Hon'ble Maharajathrough prohibition of felling along the Nala and propounding the fundamental principle that the first class trees (trees over a prescribed diameter) to be felled. In the beginning trees above 5.5 ft. were marked for felling by contractors, which was reduced to 5ft. and subsequently to 4.5 ft. for higher revenue Departmental exploitation continued in a small scale till 1904. In 1906 forest survey was conducted to form working circle for giving lease. In 1904 Mayurbhanj narrow gauge railway line was built with main objective to transport timbers, primarily railway sleepers. First working plan was prepared by Mr. C.C. Hart in 1896-97. Sri B.M. Das Gupta, prepared the first working plan for the Forest of this Division in 1947 for a period of 20 years from 1947-48 to 1966-67, but it was revised during 1953 in view of the merger of princely State of Mayurbhanj in the state of Odisha. This second plan authored by Sri Sripal Jee, covered the period from 1953-54 to 1972-73. Subsequently, the third plan of Sri S. Bose was also prescribed for 20 years duration

from 1973-74 to 1992-93. After a gap of three years, Sri A.O.F Bakhla, prepared working plan for the forests of both Baripada and Karanjia Forest Divisions for the period from 1996-97 to 2015-16 and the same was in vogue till 2015-16. After that five annual schemes were approved by appropriate Authority after which this working plan is proposed to be operative from 2021-22 to 2030-31.

Now-a-days, the management of forest is very challenging and cumbersome, in view of combating problems posed by the ever-rising need of increasing population, resulting in dwindling of forest resources. Meeting the bonafide need of the people with simultaneous maintenance of adequate forest cover for ecological balance and environmental stability is the call of the hour. In such scenario, a pragmatic approach needs to be adopted by the managers of forests, particularly the cutting edge forest officials. In the mean while some new legislations like PESA Act, The Minor Forest Produce Administration Rule-2002, The ST andOTFD (RoFR) Act, 2006 have been enacted. Hence, there is need to revisit the practices followed for the management of forest resources. Management is an evolving process which requires flexible and adaptable orientation to suit the ever changing situation for ensuring its effectiveness in all times.

The current exercise was undertaken with the aim of preparation of fifth Working Plan and is the fourth revision of its kind. We try to encompass the aforesaid changed scenario in the future management practices for smooth and effective implementation of forest management prescriptions. Similarly, modern techniques like use of remote sensing data and other tools have been used for preparation of digitized maps and other documents for accuracy and safe preservation.

Constraints – (1) There has been large scale encroachment of forest blocks for cultivated land and homestead land. The boundary pillars of forest blocks have been damaged completely/ partly in most of the cases, increasing chances for further encroachment

(2) Because of intolerant attitude of local people towards wildlives and regular visit within forest blocks, there is decline in number of wild animals in forest blocks.

(3) Grazing of cattle causes damage to the recruits thereby reducing chance of successive crops.

(4) Forest fire is the major cause of damage to wildlives including forest vegetation.

(5) Degradation of Revenue Forests disconnected the elephant corridor, for which elephants come inside human habitation resulting in Man-Elephant conflict

a) Vision statement

After promulgation of National Forest Policy, the management of forests has become more people centric and oriented to provide the goods and services from forests on sustained basis, with an emphasis on ecological services and harvest of usufructs as well. This working plan has attempted to be in consonance with management of forest through general planning, which is village based. Therefore the working plan encompass**es** the village as a unit and realign**s** the forest management accordingly. Proper guidelines for sustainable use of community forests; extraction, processing, marketing and trade of minor forest produce, etc. has been provided under separate working circles. After promulgation of FRA, 2006, Forest community rights related to community forest resources, minor forest produce, grazing grounds, water bodies, etc. recognized under the provision of the Forest Rights Act, 2006, can be exercised within the framework of sustainable use. Management of forests adversely affected by mining, industries, urbanization and other non-forest activities are to be restricted for increasing forest coverand getting ecological benefit.

b) Goals and objective of management

Sustainable management of forests and its biodiversity is enshrined in the National Forest Policy, encompassing the ecological (environmental), economic (production) and social (including cultural) dimensions. The objectives for attaining this goal include conservation of forests and reducing forest degradation, maintenance and enhancement of ecosystem services including ecotourism, enhancement of forest productivity together with establishment of regeneration to improve forest health and vitality as per ecological and silvicultural requirements of the species, progressively increasing the growing stock and carbon sequestration potential, maintenance of biological diversity, sustainable yield of forest produce, prevention of soil erosion and stabilization of the terrain; improvement and regulation of hydrological regime; people's involvement in planning and management of forests fulfilling socio-economic and livelihood needs of the people, albeit with simultaneous implementation of Indian Forest Act,

Wildlife (Protection) Act, Forest Conservation Act, Biological Diversity Act, PESA Act and Forest Rights Act. All these entail that the specific composition and the structure of forests must harmonize with the environment of the locality.

Specific goals of managing forest in Baripada forest Division aregiven below.

1. The forest lands are not properly protected because of paucity of funds in boundary maintenance. The goal of this working plan is to construct RCC boundary pillars in all Forest Blocks over next 10 years. The forest areas diverted under FC Act, 1980 and FR Act, 2006 are to be properly surveyed and demarcated within forest block maps to prevent further encroachment of forest land.

2. This working plan aims at conservation of natural forest resources to act as a barrier to climate change. Without extracting timber, the local people can focus on deriving minor forest produces like sal leaves, mahua flower, sal seeds, mahua seeds, char seeds etc. to earn their living.

3. The Wild Elephants move around various parts of this Division all the year round causing Human-Wildlife conflict. A systematic planning is proposed to face this new challenge through involvement of people. The forests of this Division are rich in wild animals that need protection, food and water in summer days. This can only be possible through public awareness and incentive to the people in their protection.

4. Commercial plantation in private land is proposed as thrust area in this working plan. MoU can be signed by farmers and representative of industrial units like Emami Paper Mills Ltd., Titagarh Paper Mills Ltd. etc. to raise commercial plantations in farmer's field through Forest Department with buy-back arrangement by industrial units. Farm forestry scheme in Koraput and Jeypore Forest Divisions during 2013 and 2014, which has been very successful, can be replicated.

c) SWOT analysis for prescription of strategies for achieving the goals and objectives.

- **STRENGTH**

- **Productive Functions of Forest**

Forest is a renewable resource. Timber and other important MFPs. are produced naturally in forest. The produces derived from Baripada Forest Division are:-

a. Fibre and flosses
b. Grasses
c. Essential oils
d. Oil seeds
e. Tans and dyes
f. Gums and resins
g. Drugs, spices and insecticides
h. Kendu and other leaves
i. Edible products , Fruits , Flowers and seeds
j. Tassar, Lac and other products
k. Fodder

Steps should be taken to enhance forest productivity.

- **Protective and ameliorative functions**

  Forests in Baripada Forest Division has ameliorative functions , which protects nearby environment as below:-

i. Maintain CO_2 balance
ii. Increase local precipitation
iii. Reduce temperature and increase humidity
iv. Increase soil fertility
v. Check floods by intercepting rainfall
vi. Conserve soil and water both prolonging water cycle
vii. Tree crowns reduce the violence of rains and check splash erosion
viii. Reduce wind velocity
ix. Check siltation of irrigation and hydel reservoirs
x. Store house of genetic diversity

xi. Protect from physical, chemical and noise pollution

xii. Provide shelterbelt and wind break effect

Steps should be taken to enhance environmental benefits to the people.

- **People's participation in Forest Management**

  Mayurbhanj is best known for pro-environment communities protecting forest.Budhikhamari group of Forest Protection Communities have shown wonders in converting degraded patches of forests to fully stock forests within a span of 30 years.Other Forest protection Communities also extend full cooperation to Forest Department in protection of Forest and Wildlife. Steps should be taken to increase no. of JFM Committees.

- **Rich flora**

  Baripada Forest Division has rich biodiversity because of adjacent Similipal Sanctuary. Steps should be taken to protect the forest & vulnerable plant species.

- **Rich fauna**

  Notto R.F. is under Similipal Tiger Reserve because of its rich wildlives. Because of favorable environment, wild elephants from Jharkhand and West Bengal visit Baripada Forest Division every year. Closeness to Similipal Sanctuary makes local forest rich in wild Fauna. Mayurbhanj Elephant Reserve notification on 29/09/2001. Steps should be taken to protect wild animals from hunting.

➢ WEAKNESS

- **Increased demand for agricultural land and homestead land**.

  The increase in population has an adverse effect towards forest. The increased population demand more land for cultivation and construction of house.The blank areas of forest are the first target of local people who encroach upon them and convert them as cropland. In protected forest and village forest, Power to evict is vested with Tahasildars. Steps should be taken to stop encroachment of forest land.

- **Increased demand for timber, small timber and firewood**

  Rise in population and developmental activities demand more timber for use.The farmers need small timbers for agricultural implements and house

construction. The demand for firewood @ 6 lakhs tonnes per year is responsible for degradation of natural forest. Steps should be taken to increase plantation out side forest areas.

- **Increased demand of forest land for development projects**

  Diversion of forest land for Subernarekha irrigation project and canal system, Minning and other irrigation projects used a large chunk of natural forest. The demand of forest land for road, rehabilitation and other activities are growing day by day. Steps should be taken to ensure compensatory afforestation.

➢ OPPORTUNITIES

- **Development of Sal based cottage industries**

  Sal leaf is the major NTFP of Baripada Forest Division. Unemployed poor people get employment in lean period through collection of sal leaves from nearby forest. Establishment of **S**al leaf collection, processing and trading centre at Block headquarters can be provided to increase livelihood opportunities and employment to the local people involved in forest protection. Steps should be taken to encourage Sal based cottage industries.

- **Recreational and educational opportunities**

- Forests of Baripada Forest Division have potential to be developed for improving recreation and imparting education to local public.
- Recreational facility can be improved near urban areas for the people through Eco- Tourism
- Experimental field and laboratory activities for school and collage students can be promoted.
- Healing effect of forest for many diseases encourages peoples visit to forest areas.
- Eco tourism with alternative earning opportunities to local people offers employment of community members involved in forest protection.

Steps should be taken to encourage recreational and educational opportunities.

- **Commercial Plantation outside forest block**

  Commercial/ industrial plantation can be created in non forest areas to increase income of poor farmers with Govt. assistance in raising plantation in farmer's field. Steps should be taken to encourage creation of commercial plantations out side forest.

➢ THREATS

- **Poaching of Wild animals**
  - Organized poaching / hunting of wild animals by local people pose a serious threat to wild animals in nearby forest.
  - Cultural colour for poaching of wild animals during Makar Sankranti and Pana Sankaranti needs to be altered through motivation.

Steps should be taken to stop poaching of wild animals.

- **Encrochment of Forest land**

Encroachment of forest land is going on since long. Land is taken as strength of family. So there is always a hunger for land. Blank forest lands are the easy victim for greedy encroachers.Forest area under encroachment in Mayurbhanj district is given below.

Forest Area under Encroachment (in Ha)									
DISTRICT	Year – 1961	Year - 1971	Year - 1981	Year - 1991	Year - 1999	Year - 2000	Year - 2001	Year - 2002	Year- 2003
Mayurbhanj	919.273	679.608	35077.265	3078.757	3078.757	35077.265	3078.757	3078.757	3078.757

- Encroachment of forest land for cultivation and other purposes is the most pernicious practice endangering forest resources throughout the Division.Delay in detection,Legal difficulties,Inordinate delays in settlements,Lack of coordination for joint survey,Mutation in Revenue records and Preoccupation of Revenue authorities are responsible for increasing encroachment of forest land.
- Improper maintenance of boundary pillars, Non- maintenance of boundary lines makes detection of encroachment difficult.

- Insufficient Staff, Infrastructure – no camp huts, arms and ammunitions, vehicle, TA/DA etc.are the problems of the staff engaged in forest protection.
- Less fund is earmarked for tackling encroachments/maintenance of RF boundary and pillars
- Legal incompetency of staff regarding knowledge of Rules, regulation, FIR, offence report should be improved.
- Regularization of encroachment is a big inducing factor for new encroachments. Encroachment of forest land has increased after 2006 to get undue advantage under FR Act, 2006 which needs to be curbed.
- The National Forest Policy, 1988 has also observed the increasing trend in encroachments on forest land and stated that these should not be regularised
- Encroachment of forest land has increased after 2006 to get undue advantage under FR Act, 2006 which needs to be curbed.

Steps should be taken to rectify above weaknesses.

- **Forest fire**
  - Fire management involves early warning, preparedness, prevention (including fuel management, public awareness & training) suppression & restoration.
  - Fire causes damage to ecosystem dynamics, biodiversity & productivity.
  - Fire is used as a tool for fire management
  - Forest fire results in destruction of forests, Loss of human and animal life, Economic damage and Release of CO_2 to the atmosphere.
  - Secondary Effects of forest fire are Erosion, Land slides, Flooding and Insects infestations following fires.
  - 90% of Forest Fire are man made.They are created to clear agricultural land, Collection of Mahua flower, Hunting andGrazing.
  - Forest Fire occurance and extent is Suppressed by the staff.

Steps should be taken to prevent forest fire with community co-operation.

- **Scarcity of Drinking water for wild animals in summer days**

  The water holes inside forest needs to be improved and new water holes need to be created to ensure drinking water to wild animals in summer days. Steps should be taken to create more nos. of water bodies in forest.

- **Increased Elephant-Human conflict**

  Herds of wild elephants come from Dalma Wildlife Sanctuary, West Bengal and Similipal Sanctuary to Baripada Forest Division. There is damage to crops and houses by wild animals. Human injury and death also creates law & order situation.Delegation of power of giving compassionate payments to Divisional Forest Officer, Baripada Forest Divison can help in meeting the public discontent. Steps should be taken to reduce human-elephant conflict.

d) Expected outcome

We plan to sustainably manage, conserve and utilize the forest resources in forest management planning for Baripada Forest Division. In recent years there has been a paradigm shift in the approach to the forestry sector. The focus has shifted to environmental stability, biodiversity monitoring and management, restoration of ecological balance of the disturbed areas, protective functions of the forest resources and other socio-economic benefits based on non-timber forest products (NTFPs). We expect that focus of forest management will be on conservation of trees and increased use of NTFP for alternative employment opportunities for local people.

The concept of sustainability in forest management thus implies not only sustainability of productive functions but also environmental functions (soil and water conservation, carbon sequestration etc.) and socio-economic benefits (meeting livelihood and basic needs) to forest dwellers and other forest dependent communities. Involvement of forest fringe communities in the protection and management of forest resources through micro-plans and eco-development plans has become imperative. We expect sustainable forest management with involvement of dependent communities.

Provisions have been made to integrate aspects of forest management, which are considered important for assessing sustainability, accompanied by a set of related quantitative, qualitative or descriptive attributes. We expect that these attributes when measured or assessed periodically, indicate the direction of change for each aspect of sustainable management of forests.

It has also been recognized that climate change phenomenon seriously affects and alters the distribution, type, composition, quality and mitigation potential of forests of the country especially in the realm of anthropogenic stressors. We expect to capitalize on the gains of technological advancements like remote sensing, GIS, GPS, computational and analytical systems available for real time monitoring of forest dynamics.

e) Abstract of plan prescriptions

Chapter No.	Para No./ Sub Para No.	Prescribed Activity	Remarks
A	B	C	D
Chapter-II	**2.3.1**	Boundary pillars constructed away from approved forest boundary needs to be re-constructed along forest block boundary approved by working plan.	Non- maintenance of boundary pillars makes detection of encroachment difficult.
Chapter-II	**2.3.2**	Steps to be taken to clearly demarcate the boundary lines of Forest Blocks and prepare maps in case of eligible individual title holder under FRA, 2006.	Documentation of forest rights title areas is essential to prevent further encroachment.
Chapter-II	**2.5.1**	Practice of illegal collection of firewood and fodder to be discouraged.	Collection of green branches/ leaves should be discouraged.
Chapter-II	**2.5.2**	Fresh encroachment of forest land since 13.12.2006 should be assessed through satellite maps and offenders should be booked under relevant section of the O.F. Act to discourage encroachment.	Absence of clear demarcation of forest boundary and Lack of proper boundary inspection to be corrected.
Chapter-II	**2.5.4**	Efforts to tackle Forest Fire with local people to be planned from December, every year.	
Chapter-II	**2.7**	To restock the barren area by artificial regeneration in non-forest land.	Commercial plantation in non forest land to be encouraged.
Chapter-II	**2.7.7**	The VSS members/ CFR holders will not get the benefits from forest unless they actively protect the forest and wildlife.	
Chapter-III	**3.5**	During silvicultural cleaning it is recommended to preserve medicinal plants (Tree, Shrub, Herb and Climbers) for future use.	
Chapter-III	**3.8**	It is suggested that a new Elephant corridor from Moroda – Suliapada to Phuljhari RF of Betnoti Forest Range	Elephant corridors should be stocked with plants liked by elephants and

		along all routes used by Elephant be notified and sufficient number of fodder trees to be planted in this corridor. Furthermore Elephant-friendly ponds need to be created for use of Elephants in the corridor. Special Elephant protection units with camp facilities for Elephant squad should be constructed in each section in this corridor.	water holes to be used by elephants.
Chapter-III	**3.8.1**	Sufficient numbers of artificial fire lines are to be maintained by cleaning the ground over a width of approximately 3 mtrs.	
Chapter-IV	**4.5**	Awareness among the NTFP collectors as well as the illegal grazers is necessary to check lopping of branches of trees.	
Chapter-IV	**4.6**	Regular removal of invasive weeds at intervals of 3 years in infested patches is required for healthy growth of forest.	Invasive weeds need to be uprooted before flowering.
Chapter-IV	**4.8**	Girdling of trees for theft or encroachment purpose should be checked.	
Chapter-IV	**4.8.1**	Sal leaf collectors use to cut-down the branches and top shoots of Sal tree to get more sal leaf within 2mtr height. During March-April the local people use to kindle the forests to collect Mahua flowers. These should be stopped.	Sal leaf collection procedure should be well circulated and violators need to be cautioned.
Chapter-IV	**4.8.2**	The RCC forest boundary pillars should be constructed.	
Chapter-IV	**4.8.4**	Illegal removal of murom, metal and soil from forest areas are noticed in foothills of Similipal sanctuary in Dukura Range, Bangiriposi Range, Suasari hills in Kaptipada Range and Kuliana RF in Deuli Range of the Division. This should stop.	
Chapter-V	**5.1**	Gulley plugging, construction of loose boulder check dams and plantations along contour with species like *Agave spp*., *Vetiver* etc. and contour bonding should be adopted to increase soil and water conservation.	
Chapter-V	**5.3**	The water holes used by wild animals should be maintained for their use as perennial source of drinking water.	
Chapter – VIII	**8.8**	Individual forest rights title areas needs to be shown in the forest block maps with GPS coordinates.	Maps of individual title holders should be shown in forest block maps.

PART – II			
Chapter – I	**1.2.2**	The management practices prescribed, laid special emphasis on people's participation in the process of regeneration, protection and development of forests.	
Chapter – I	**1.2.3**	Special rehabilitation treatment should be taken in the forest blocks like, Sukhuapata PF, Udala RF, Kanpura RF, Kuliana RF, Dighi RF etc. These blocks stand denuded and degraded needing special rehabilitation treatment efforts	
Chapter – I	**1.2.4**	Posting of all boundary pillars with their coordinates and signboards in forest blocks to be ensured.	
Chapter – I	**1.2.5**	Quality of storage of NTFP and quality of processing can be improved through construction of NTFP godowns.	
Chapter – I	**1.2.6**	Poaching of wildlife is very serious during Makar Sankranti and Pana Sankranti, which should be stopped.	
Chapter – I	**1.3.3.6**	Micro plan updation for VSS is required.	
Chapter – I		There should be preservation of fruit trees to ensure food availability for wild animals	
Chapter – I		JFM Micro Plan should not contradict Working Plan Prescriptions.	
Chapter – I		Soil and Moisture Conservation should be taken up in JFM forests.	
Chapter-II	**2.6.2**	The silvicultural system prescribed for Improvement Working Circle is Stand Improvement through natural re-generation with intensive soil & moisture conservation with emphasis on stability of the ecosystem. The diseased and uprooted trees, which have attained exploitable girth, can be selected for felling. Gap planting after improvement felling will be more in lower canopy density areas	
Chapter-III	**3.6.2**	The Silvicultural System to be adopted for Rehabilitation working Circle is *"Silvicultural Cleaning, Tending followed by Aided Natural Regeneration supplemented with enrichment Plantation".* *For* **Low density forest (11-40% Forest Canopy Density),** Restricted decongestion of clumps, high stump cutting and climber cutting during silvicultural cleaning, Soil & Moisture Conservation through treatment of	

		dry seasonal nalla,supplemented by planting Sal seedlings in gaps through covering of blank areas through artificial regeneration@800 seedlings/Ha. For **High density forest (>40% Forest Canopy Density),** Removal of Dead trees those are having utility and operation is economically viable, Decongestion of clumps, high stump cutting and climber cutting during silvicultural cleaning, Soil & Moisture Conservation through treatment of dry seasonal nalla.Covering of blank areas through artificial regeneration @ 200 seedlings/Ha.	
Chapter-IV	**4.6.2**	The Silvicultural System for Plantation Working Circle is "Artificial Regeneration by Planting". Silvicultural System for Teak Plantations 259.106 Ha. is thinning of trees to facilitate overall growth of the plant. Branch cutting upto 30′ height should be taken up to get clear-bole tree trunk Eucalyptus, Acacia & SFP over matured plantations (the village woodlots of erstwhile Social Forestry Plantation) will be managed with Silvicultural System "Clear felling with standard followed by Artificial Regeneration. In areas with forest canopy density less than 10% gap planting will be adopted. In areas of poor regeneration, the area should be fenced and the gap plantation will be carried out. Artificial plantation of two year old seedlings of Sal, Asan or other indigenous species will be taken up to support natural regeneration. In encroached forest areas of notified forest blocks, the areas will be recovered and planted with seedlings with co-operartion of local people. In other plantation areas inter cultural operation will be taken up. Gap planting will be taken up if the survival percentage is below 40%.	
Chapter-V	**5.6.2**	Wildlife Overlapping Working Circle Prescriptions include protection of wild animals including vulnerable species.	

		Improvement of water holes for wild animals and planting of species used by wild animals as food is prescribed. The elephant corridor needs to be improved. Poaching of wild animals needs to be prevented.	
Chapter-VI	**6.6.2**	NTFP Over Lapping Working Circle Prescriptions include:- Scientific method of collection of NTFP causing no harm to the existing vegetation. Harvesting only 30 % of medicinal plants leaving 70 % for regeneration.Regulated collection & trading with Value addition by regular training.Improve growing Stock by checking biotic interference.In-situ & Ex-situ Conservation	
Chapter-VII	**7.5**	FDA recommendation on 28.08.2015 should be implemented.	
Chapter-VII	**7.6.2**	JFM Over Lapping Working Circle Prescriptions includes updation of the micro-plan of VSS in line with prescriptions of this working plan.	
Chapter-VII	**7.6.13**	The people who don't contribute to forest protection under CFR will not get any benefit under FR Act.	
Chapter-VIII	**8.6.2**	ToF areas including private farm land are the areas proposed for raising commercial forestry plantations. The geographical area of Baripada Forest Division is 426313 ha. The forest area in Baripada Forest Division is 81294.224 ha. Balance Non-forest Govt. lands and private lands in the Division is 345018.776.	
Chapter-IX	**9.6.2**	Agroforestry, Farm Forestry, Pure Plantations can be taken up under commercial forestry scheme.	
Chapter-X	**10.5**	Reduce the emissions intensity of its GDP by 33-35% from 2005 levels by 2030 and to achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).	
Chapter-XI	**11.7**	Old plantations shall be monitored from time to time with regard to survival percentage, growth characteristics, injuries to the crop and other indicators. Observation of	

		monitoring and inspection shall be reported in the journals.	
Chapter-XII	**12.8**	Participation and Coordination Mechanisms, Fostering Information-Sharing and Exchange of information on water availability.	
Chapter-XIII	**13.2**	Undertake ambitious efforts to combat climate change and adapt to its effects.	
Chapter-XIV	**14.2**	Use of satellite imagery (MODIS Satellite) for detection of forest fire and faster communication to control forest fire	

f) Works prescribed during the Plan period.

Chapter No.	Para No./ Sub Para No.	Prescribed Activity	Year wise (Year 1-10) distribution of physical target
A	**B**	C	D
PART – I			
Chapter-II	**2.3.1**	All missing boundary pillars of forest blocks to be constructed with RCC pillars as per approved forest boundary of working plan.	From 2021-22 to 2030-31
Chapter-II	**2.3.2**	Demarcation of boundary of forest areas assigned to eligible individual title holders under FRA, 2006 within Forest Blocks and preparation of maps of forest diverted in forest block maps.	From 2021-22 to 2030-31
Chapter-II	**2.4**	The total forest area diverted for non-forestry activities under Forest Conservation Act, 1980 needs to be shown in the forest block map.	From 2021-22 to 2030-31
Chapter-II	**2.5.2**	Fresh encroachment of forest land since 13.12.2006 should be assessed through satellite maps and offenders should be booked under relevant section of the O.F. Act to discourage encroachment.	From 2021-22 to 2023-24
Chapter-II	**2.5.4**	Efforts to tackle Forest Fire with local people to be planned from December, every year.	From 2021-22 to 2030-31
Chapter-II	**2.7**	To restock the barren non-forest area by artificial regeneration wherever possible through commercial forestry scheme, where Govt. will raise the plantations in farmer's field & farmer will maintain the planatation out of his own fund.	From 2021-22 to 2030-31
Chapter-III	**3.8**	It is suggested that a new Elephant corridor from Moroda – Suliapada to Phuljhari RF of Betnoti Forest Range along all routes used by Elephant be notified and sufficient number of fodder trees to be planted in this corridor. Furthermore Elephant-friendly ponds need to be created for use of Elephants in the corridor.	From 2021-22 to 2030-31

		Special Elephant protection units with camp facilities for Elephant squad should be constructed in each section in this corridor. Elephant proof trench can be constructed around harvest yard/ grain storage godown in Elephant corridor for safety of the harvested produce.	
Chapter-III	**3.8.1**	Sufficient numbers of artificial fire lines are to be maintained by cleaning the ground over a width of approximately 3 mtrs.	From 2021-22 to 2030-31
Chapter-IV	**4.6**	Regular removal of invasive weeds at intervals of 3 years in infested patches is required for healthy growth of forest.	From 2021-22 to 2030-31
Chapter-IV	**4.8.4**	Illegal removal of murom and soil from forest areas are noticed in foothills of Similipal sanctuary in Dukura Range, Bangiriposi Range, Suasari hills in Kaptipada Range and Kuliana RF in Deuli Range of the Division. This should stop.	From 2021-22 to 2030-31
Chapter-V	**5.1**	Gulley plugging, construction of loose boulder check dams and plantations along contour with species like *Agave spp.*, *Vetiver* etc. and contour bonding should be adopted to increase soil and water conservation.	From 2021-22 to 2030-31
Chapter-V	**5.3**	The water holes used by wild animals should be maintained for their use as perennial source of drinking water.	From 2021-22 to 2030-31
PART – II			
Chapter – I	**1.2.3**	Special rehabilitation treatment should be taken in the forest blocks like, Sukhuapata PF, Udala RF, Kanpura RF, Kuliana RF, Dighi RF etc. These blocks stand denuded and degraded needing special rehabilitation treatment efforts with plantations.	From 2021-22 to 2030-31
Chapter – I	**1.2.5**	Construction of NTFP godown in each section.	From 2021-22 to 2030-31
Chapter – I	**1.3.3.6**	Micro plan preparation for VSS to be initiated.	From 2021-22 to 2030-31
Chapter-II	**2.6.2**	The silvicultural system prescribed for Improvement Working Circle is Stand Improvement through natural re-generation with intensive soil & moisture conservation with emphasis on stability of the ecosystem. The diseased and uprooted trees, which have attained exploitable girth, can be selected for felling. Gap planting after improvement felling will be more in lower canopy density areas	From 2021-22 to 2030-31

Chapter-III	**3.6.2**	*For* **Low density forest (11-40% Forest Canopy Density),** Restricted decongestion of clumps, high stump cutting and climber cutting during silvicultural cleaning, Soil & Moisture Conservation through treatment of dry seasonal nalla,supplemented by planting Sal seedlings in gaps through covering of blank areas through artificial regeneration@800 seedlings/Ha. For **High density forest (>40% Forest Canopy Density),** Removal of Dead trees those are having utility and operation is economically viable, Decongestion of clumps, high stump cutting and climber cutting during silvicultural cleaning, Soil & Moisture Conservation through treatment of dry seasonal nalla.Covering of blank areas through artificial regeneration @ 200 seedlings/Ha.	From 2021-22 to 2030-31
Chapter-IV	**4.6.2**	Teak Plantations 259.106 Ha. needs thinning of trees to facilitate overall growth of the plant. Branch cutting upto 30′ height should be taken up to get clear-bole tree trunk. Eucalyptus, Acacia & SFP over matured plantations (the village woodlots of erstwhile Social Forestry Plantation) will be managed with Silvicultural System "Clear felling with standard followed by Artificial Regeneration. In areas with forest canopy density less than 10%, gap planting will be adopted. In areas of poor regeneration, the area should be fenced and the gap plantation will be carried out. Artificial plantation of two year old seedlings of Sal, Asan or other indigenous species will be taken up to support natural regeneration. In encroached forest areas of notified forest blocks, the areas will be recovered and planted with seedlings with co-operartion of local people. In other plantation areas inter cultural operation will be taken up. Gap planting will be taken up if the survival percentage is below 40%.	From 2021-22 to 2030-31
Chapter-V	**5.6.2**	Protection of wild animals including vulnerable species, Improvement of water holes for wild animals and planting of species used by wild animals as food, improvement of the elephant corridors and prevention of poaching of wild animals.	From 2021-22 to 2030-31

Chapter-VI	**6.6.2**	Scientific method of collection of NTFP causing no harm to the existing vegetation. Harvesting only 30 % of medicinal plants leaving 70 % for regeneration.Regulated collection & trading with Value addition by regular training.Improve growing Stock by checking biotic interference.In-situ & Ex-situ Conservation	From 2021-22 to 2030-31
Chapter-VII	**7.6.2**	Updation of the micro-plan of VSS in line with prescriptions of this working plan.	From 2021-22 to 2030-31
Chapter-VIII	**8.6.2**	ToF areas including private farm land are the areas proposed for raising commercial forestry plantations. The geographical area of Baripada Forest Division is 426313 ha. The forest area in Baripada Forest Division is 81294.224 ha. Balance Non-forest Govt. lands and private lands in the Division are 345018.776.	From 2021-22 to 2030-31
Chapter-IX	**9.6.2**	Agroforestry, Farm Forestry, Pure Plantations to be taken up under commercial forestry scheme	From 2021-22 to 2030-31
Chapter-X	**10.5**	Reduce the emissions intensity of its GDP by 33-35% from 2005 levels by 2030 and to achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).	From 2021-22 to 2030-31
Chapter-XI	**11.7**	Old plantations shall be monitored from time to time with regard to survival percentage, growth characteristics, injuries to the crop and other indicators. Observation of monitoring and inspection shall be reported in the journals.	From 2021-22 to 2030-31
Chapter-XII	**12.8**	Participation and Coordination Mechanisms, Fostering Information-Sharing and Exchange of information on water availability.	From 2021-22 to 2030-31
Chapter-XIII	**13.2**	Undertake ambitious efforts to combat climate change and adapt to its effects.	From 2021-22 to 2030-31
Chapter-XIV	**14.2**	Use of satellite imagery (MODIS Satellite) for detection of forest fire and faster communication to control forest fire	From 2021-22 to 2030-31

II. GLOSSARY OF TERMS

NTFP – Non-timber Forest Produce

JFM – Joint Forest Management

ToF – Tree outside Forest

SWC – Selection Working Circle

IWC – Improvement Working Circle

RWC – Rehabilitation Working Circle

PLWC – Plantation Working Circle

WL (O) WC – Wildlife over lapping Working Circle

NTFP (O) WC - Non-timber Forest Produce Over lapping Working Circle

JFM (O) WC - Joint Forest Management Over lapping Working Circle

III. List of Flora (including RET and unique species)

GLOSSARY OF ODIA AND BOTANICAL NAMES OF TREES, SHRUBS, HERBS, CLIMBERS AND GRASSES AVAILABLE IN BARIPADA DIVISION

Table No.1
List of Trees

Sl. No.	Oriya Name	Classifications	Botanical Name	Family
1	Amba	Large tree	*Mangifera indica*	Anacardiaceae
2	Ambada	Medium tree	*Spondias pinnata*	Anacardiaceae
3	Achhu	Small tree	*Morinda tomentosa*	Rubiaceae
4	Ankula	Small tree	*Alangium salviifolium*	Cornaceae
5	Amla	Small tree	*Phyllanthus emblica*	Phyllanthaceae
6	Arjuna	Large tree	*Terminalia arjuna*	combretaceae
7	Asan / Sahaja	Large tree	*Terminalia tomentosa*	combretaceae
8	Aswastha	Large tree	*Ficus religiosa*	Moraceae
9	Ata / Ramphal	Small tree	*Annona reticulata*	Anonaceae
10	Agasti	Small tree	*Sesbania grandiflora*	Leguminosae
11	Baula	Medium tree	*Mimusops elengi*	Sapotaceae
12	Bija / Piasal (U)	Large tree	*Pterocarpus marsupium*	Leguminosae
13	Badhial/ Sitaphal	Small tree	*Annona squamosa*	Anonaceae
14	Bada chakunda	Large tree	*Senna siamea*	Leguminosae
15	Bandhan (R)	Medium tree	*Desmodium oojeinense*	Leguminosae
16	Bara	Large tree	*Ficus benghalensis*	Moraceae
17	Babul	Small tree	*Acacia nilotica*	Leguminosae
18	Bahada	Large tree	*Terminalia belerica*	Combretaceae
19	Bahal	Large tree	*Melia dubia*	Meliaceae
20	Barabakulia	Large tree	*Dalbergia paniculata*	Leguminosae
21	Benta	Medium tree	*Naringi crenulata*	Rutaceae
22	Buro	Small tree	*Ziziphusmauritiana*	Rhamnaceae
23	Barun	Medium tree	*Crateva religiosa*	Capparaceae
24	Bela (U)	Small tree	*Aegle marmelos*	Rutaceae
25	Bhalia (U)	Medium tree	*Semecarpus anacardium*	Anacardiaceae
26	Bheru (U)	Small tree	*Chloroxylon swietenia*	Rutaceae
27	Bhurkunda	Medium tree	*Hymenodictyon orixense*	Rubiaceae
28	Batra	Small tree	*Melia composita*	Meliaceae
29	Bhersunga	Small tree	*Murraya koenigii*	Rutaceae
30	Badam (Deshi)	Large tree	*Terminalia catappa*	Combretaceae
31	Chadeigudi	Medium tree	*Vitex peduncularis*	Lamiaceae
32	Chakundi	Large tree	*Cassia siamea*	Ceasalpiniaceae
33	Char	Small tree	*Buchanania lanzan*	Anacardiaceae
34	Chauli	Small tree	*Elaeodendron glaucum*	Celastraceae

Sl. No.	Oriya Name	Classifications	Botanical Name	Family
35	Chatian	Large tree	*Alstonia scholaris*	Apocynaceae
36	Choari	Medium tree	*Bauhinia retusa*	Fabaceae
37	Champa	Large tree	*Magnolia champaca*	Magnoliaceae
38	Chaladhua	Small tree	*Erythrina suberosa*	Leguminosae
39	Dalsingha	Small tree	*Canthium dicoccum*	Rubiaceae
40	Damkurudu	Small tree	*Gardenia latifolia*	Rubiaceae
41	Dhaman	Large tree	*Grewia tiliaefolia*	Tiliaceae
42	Dhamani	Large tree	*Xylia xylocarpa*	Leguminosae
43	Dhaura	Large tree	*Anogeissus latifolia*	Combretaceae
44	Dimri	Small tree	*Ficus glomerata*	Moraceae
45	Dhuanla	Small tree	*Cordia obliqua*	Boraginaceae
46	Eucalyptus	Large tree	*Eucalyptus spp.*	Myrtaceae
47	Gamhari	Medium tree	*Gmelina arborea*	Lamiaceae
48	Gangasiuli	Small tree	*Nyctanthes arbortristis*	Oleaceae
49	Ghanta	Small tree	*Zizyphus xylopyra*	Rhamnaceae
50	Ghodalanja	Large tree	*Albizzia stipulata*	Mimosaceae
51	Genduli	Large tree	*Sterculia urens*	Malvaceae
52	Gohira	Large tree	*Acacia leucophloea*	Leguminosae
53	Giridi	Small tree	*Casearia graveolens*	Salicaceae
54	Giringa	Large tree	*Pterospermum heyneanum*	Sterculiaceae
55	Gotha	Small tree	*Ziziphus xylopyrus*	Rhamnaceae
56	Gua	Small tree	*Areca catechu*	Arecaceae
57	Gumbati	Small tree	*Bauhinia malabarica*	Leguminosae
58	Gundi	Medium tree	*Celastrus timorensis*	Celastraceae
59	Halada	Small tree	*Diospyros montana*	Ebenaceae
60	Harida	Large tree	*Terminalia chebula*	Combretaceae
61	Hentala	Small tree	*Licuala peltata*	Arecaceae
62	Hinjal	Medium tree	*Barringtonia acutangula*	Lecythidaceae
63	Haldu(kurum)(U)	Large tree	*Haldina cordifolia*	Rubiaceae
64	Jamu	Large tree	*Syzygium cumini*	Myrtaceae
65	Jari	Large tree	*Ficus retusa*	Moraceae
66	Jhara champa	Small tree	*Actinodaphne angustifolia*	Lauraceae
67	Jiala	Medium tree	*Lannea coromandelica*	Anacardiaceae
68	Kadamba	Large tree	*Neolamarckia cadamba*	Rubiaceae
69	Kaitha	Large tree	*Limonia acidissima*	Rutaceae
70	Kaju	Small tree	*Anacardium occidentale*	Anacardiaceae
	Kalakendu	Medium tree	*Diospyros malabarica*	Ebenaceae
71	Kalchua	Small tree	*Glochidion zeylanicum*	Phyllanthaceae

Sl. No.	Oriya Name	Classifications	Botanical Name	Family
72	Kanchan	Small tree	*Bauhinia purpurea*	Leguminosae
73	Kanja kanjia	Small tree	*Cayratia auriculata*	Vitaceae
74	Kansa	Medium tree	*Hymenodictyon excelsum*	Rubiaceae
75	Kapasia	Medium tree	*Kydia calycina*	Malvaceae
76	Karada	Medium tree	*Cleistanthus collinus*	Phyllanthaceae
77	Karamanga	Small tree	*Averrhoa carambola*	Oxalidaceae
78	Kasi	Medium tree	*Bridelia retusa*	Phyllanthaceae
79	Katakala	Small tree	*Strychnos potatorum*	Loganiaceae
80	Kharkhari	Small tree	*Clerodendrum indicum*	Lamiaceae
81	Khakada	Small tree	*Casearia elliptica*	Salicaceae
82	Kurei	Small tree	*Holarrhena antidysenterica*	Apocynaceae
83	Kuruma	Large tree	*Schleichera oleosa*	Sapindaceae
84	Kamalagundi	Small tree	*Mallotus philippinensis*	Euphorbiaceae
85	Karanj	Medium tree	*Pongamia pinnata*	Leguminosae
86	Kendu	Medium tree	*Diospyros melanoxylon*	Ebenaceae
87	Khair (R)	Small tree	*Acacia catechu*	Leguminosae
88	Khajuri	Medium tre	*Phoenix sylvestris*	Arecaceae
89	Kochila	Large tree	*Strychnos nuxvomica*	Longaniaceae
90	Kangada	Large tree	*Xylia xylocarpa*	Leguminosae
91	Kodala	Large tree	*Sterculia villosa*	Malvaceae
92	Kumbhi (R)	Medium tree	*Careya arborea*	Lecythidaceae
93	Kusum (U)	Large tree	*Schleichera oleosa*	Sapindaceae
94	Lankavalia	Small tree	*Anacardium occidentale*	Anacardiaceae
95	Lodha	Large tree	*Symplocos racemosa*	Symplocaceae
96	Mahanimba	Large tree	*Ailanthus excelsa*	Simaroubaceae
97	Madhurgudia	Small tree	*Vitex peduncularis*	Lamiaceae
98	Manda	Medium tree	*Schrebera swietenioides*	Oleaceae
99	Mitikinia	Medium tree	*Mitragyna parvifolia*	Rubiaceae
100	Mahula	Large tree	*Madhuca indica*	Sapotaceae
101	Mankada kendu	Large tree	*Diospyros embryopteris*	Ebenaceae
102	Mai	Large tree	*Lannea coromandelica*	Anacardiaceae
103	Mundi	Large tree	*Mitragyna parvifolia*	Rubiaceae
104	Narguni	Small tree	*Atlantia malabarica*	Rutaceae
105	Neem	Large tree	*Azadirachta indica*	Meliaceae
106	Nadia	Large tree	*Cocos nucifera*	Arecaceae
107	Nageswar	Large tree	*Mesua ferrea*	Calophyllaceae
108	Paldhua	Small tree	*Erythrina indica*	Leguminosae
109	Palas	Small tree	*Butea monosperma*	Leguminosae

Sl. No.	Oriya Name	Classifications	Botanical Name	Family
110	Panasa	Medium tree	*Artocarpus integrifolia*	Moraceae
111	Panigamhar	Medium tree	*Trewia nudiflora*	Euphorbiaceae
112	Patuli (U)	Medium tree	*Lagerstroemia speciosa*	Lythraceae
113	Phasi (R)	Large tree	*Anogeissus acuminata*	Combretaceae
114	Phanphana (R)	Medium tree	*Oroxylum indicum*	Bignoniaceae
115	Rai (U)	Large tree	*Dillenia pentagyna*	Dilleniaceae
116	Rajmohi	Large tree	*Bursera serrata*	Burseraceae
117	Rubber	Medium tree	*Ficus elastica*	Moraceae
118	Ritha	Medium tree	*Sapindus emarginatus*	Sapindaceae
119	Rohini	Large tree	*Soymida febrifuga*	Meliaceae
120	Sal	Large tree	*Shorea robusta*	Dipterocarpaceae
121	Salai	Large tree	*Boswellia serrata*	Burseraceae
122	Salapa	Large tree	*Caryota urens*	Arecaceae
123	Salia baunsa	Large tree	*Dendrocalamus strictus*	Poaceae
124	Saguan	Large tree	*Tectona grandis*	Lamiaceae
125	Semal	Large tree	*Bombax ceiba*	Malvaceae
126	Sidha	Large tree	*Lagerstroemia parviflora*	Lythraceae
127	Siris	Large tree	*Albizzia lebbeck*	Leguminosae
128	Sisoo	Large tree	*Dalbergia latifolia*	Leguminosae
129	Sunari	Small tree	*Cassia fistula*	Leguminosae
130	Sajana	Small tree	*Moringa oleifera*	Moringaceae
131	Sahada	Small tree	*Streblus asper*	Moraceae
132	Simakayan	Small tree	*Pithecellobium dulce*	Leguminosae
133	Tala	Large tree	*Borassus flabellifer*	Arecaceae
134	Tentuli	Large tree	*Tamarindus indica*	Leguminosae
135	Tangini	Small tree	*Xylia xylocarpa*	Leguminosae
136	Telko	Small tree	*Randia uliginosa*	Rubiaceae
137	Tinia	Large tree	*Albizia odoratissima*	Leguminosae
138	Udambari	Large tree	*Ficus amplissima*	Moraceae

NB.: - U – Unique Sps. and R – RET Sps.

Table No.2

List of Shrubs

Sl. No.	Oriya Name	Botanical Name	Family
1	Arakha	*Calotropis procera*	Apocynaceae
2	Amari	*Ipomea fistulosa*	Convolvulaceae
3	Aswagandha	*Withania somnifera*	Solanaceae
4	Anantamula	*Hemidesmus indicus*	Apocynaceae
5	Anku koli	*Carissa spinarum*	Apocynaceae
6	Arguna	*Cycas circinalis*	Cycadaceae
7	Baincha	*Flacourtia sepiaria*	Salicaceae

Sl. No.	Oriya Name	Botanical Name	Family
8	Baramasi	*Agave americana*	Asparagaceae
9	Basanga	*Justicia adhatoda*	Acanthaceae
10	Bhanga	*Cannabis sativa*	Cannabaceae
11	Bana khajuri	*Phoenix acaulis*	Arecaceae
12	Bana sorisa	*Sonchus wightianus*	Compositae
13	Baunsa	*Saccharum munja*	Poaceae
14	Begunia	*Vitex negundo*	Lamiaceae
15	Bhaincha	*Flacourtia jangomas*	Salicaceae
16	Chireigudia	*Vitex leucoxylon*	Lamiaceae
17	Dhatuki	*Woodfordia fruticosa*	Lythraceae
18	Dudhi koli	*Hemidesmus indicus*	Apocynaceae
19	Firika	*Benkara malabarica*	Rubiaceae
20	Gila	*Caesalpinia decapetala*	Leguminosae
21	Girili	*Indigofera pulchella*	Leguminosae
22	Ghurudu	*Gardenia gummifera*	Rubiaceae
23	Gaba	*Ricinus communis*	Euphorbiaceae
24	Gandha palas	*Miliusa velutina*	Annonaceae
25	Guakoli	*Maba buxifolia*	Ebenaceae
26	Hentala	*Licuala peltata*	Arecaceae
27	Indrajab	*Holarrhena pubescens*	Apocynaceae
28	Jajangi	*Phyllanthus collinus*	Phyllanthaceae
29	Jhumpuri	*Streblus taxoides*	Moraceae
30	Karabir	*Nerium indicum*	Apocynaceae
31	Barkoli	*Ziziphus mauritiana*	Rhamnaceae
32	Kaniara	*Cascabela thevetia*	Apocynaceae
33	Kanta baula	*Ziziphus xylopyrus*	Rhamnaceae
34	Kanta kapali	*Allophylus cobbe*	Sapindaceae
35	Kanteikoli	*Ziziphus oenoplia*	Rhamnaceae
36	Khajuri	*Phoenix spp.*	Arecaceae
37	Khiri koli	*Carissa spinarum*	Apocynaceae
38	Korunha	*Holarrhena pubescens*	Apocynaceae
39	Kukurchhelia	*Pavetta crassicaulis*	Rubiaceae
40	Mamuri	*Antidesma diandrum*	Phyllanthaceae
41	Nagairi	*Lantana camara*	Verbenaceae
42	Naguari	*Lippia javanica*	Verbenaceae
43	Panairi	*Artemisia nilagirica*	Compositae
44	Pani anla	*Flacourtia jangom**a**s*	Salicaceae
45	Patha	*Cissampelos pareira*	Menispermaceae
46	Ranidantakathi	*Flemingia chappar*	Leguminosae
47	Siju	*Euphorbia nivulia*	Euphorbiaceae
48	Sagar batua	*Eugenia bracteata*	Myrtaceae
49	Salara	*Catunaregam spinosa*	Rubiaceae
50	Sugandhi	*Ocimum canum*	Lamiaceae
51	Telkoruan	*Ixora parviflora*	Rubiaceae

Table No.3
List of Herbs

Sl. No.	Oriya Name	Botanical Name	Family
1	Ankaranti	*Solanum xanthocarpum*	Solanaceae
2	Anantamula	*Hemidesmus indicus*	Apocynaceae
3	Ada (Ambakasi)	*Curcuma amada*	Zingiberaceae
4	Apamaranga	*Achyranthes aspera*	Amaranthaceae
5	Aparajita	*Clitoria ternatea*	Leguminosae
6	Baghanakhi	*Martynia diandra*	Martyniaceae
7	Bhuinimba	*Andrographis paniculata*	Acanthaceae
8	Bhurngaraj	*Wedelia calendulacea*	Compositae
9	Badiamala	*Phyllanthus paraternus*	Phyllanthaceae
10	Bajramuli	*Sida acuta*	Malvaceae
11	Balikhai	*Symphorema polyandrum*	Lamiaceae
12	Bamboo grass	*Saccharum bengalense*	Poaceae
13	Bana alu	*Dioscorea pentaphylla*	Dioscoreaceae
14	Bana bhendi	*Abelmoschus moschatus*	Malvaceae
15	Bana durlava	*Tephrosia purpurea*	Fabaceae
16	Bana haladi	*Curcuma aromatica*	Zingiberaceae
17	Bana harada	*Cajanus cajan*	Leguminosae
18	Bana kadali	*Corchorus aestuans*	Malvaceae
19	Bana phula	*Mirabilis jalapa*	Nyctaginaceae
20	Bana piaja	*Urginea indica*	Liliaceae
21	Bana rasuna	*Daucus carota*	Apiaceae
22	Bana saru	*Colocasia spp.*	Araceae
23	Bana sebati	*Tridax procumbens*	Compositae
24	Bana tulasi	*Ocimum canum*	Lamiaceae
25	Bari anla	*Phyllanthus fraternus*	Phyllanthaceae
26	Bena	*Chrysopogon zizanioides*	Poaceae
27	Bhuin patali/Thalkudi	*Centella asiatica*	Apiaceae
28	Bisalya karani	*Tridax procumbens*	Asteraceae
29	Brahmi	*Bacopa monnieri*	Plantaginaceae
30	Chitaparu	*Plumbago zeylanica*	Plumbaginaceae
31	Cheliantua	*Psychotria adenophylla*	Rubiaceae
32	Chhana grass	*Imperata cylindrica*	Poaceae
33	Dudura	*Datura stramonium*	Solanaceae
34	Daskerenta	*Barleria prionitis*	Acanthaceae
35	Duba grass	*Cynodon dactylon*	Poaceae
36	Fulari	*Grewia rothii*	Malvaceae
37	Ganjei	*Cannabis sativa*	Cannabaceae
38	Ghikuari	*Aloe vera*	Xanthorrhoeaceae
39	Gaigendalia	*Costus speciosus*	Costaceae
40	Gaigobara	*Costus speciosus*	Costaceae
41	Gharpodia	*Hedyotis corymbosa*	Rubiaceae
42	Guguchia	*Chrysopogon aciculatus*	Poaceae
43	Haladi	*Curcuma longa*	Zingiberaceae

Sl. No.	Oriya Name	Botanical Name	Family
44	Hatisundha	*Heliotropicum indicum*	Boraginaceae
45	Indramarish	*Acalypha indica*	Euphorbiaceae
46	Jata jatia	*Pavonia repanda*	Malvaceae
47	Jhumuka	*Passiflora foetida*	Passifloraceae
48	Juani	*Trachyspermum ammi*	Apiaceae
49	Juilata	*Pogostemon plectranthoides*	Lamiaceae
50	Juna grass	*Crotalaria juncea*	Leguminosae
51	Kakudia grass	*Dactyloctenium aegyptium*	Poaceae
52	Kanduli	*Atylosia cajanifolia*	Fabaceae
53	Kansiri lata	*Ipomea biloba*	Convolvulaceae
54	Kashi koli	*Diospyros montana*	Ebenaceae
55	Kashtandi	*Saccharum spontaneum*	Poaceae
56	Kasunda	*Casia sophera*	Fabaceae
57	Khadika grass	*Aristida setacea*	Poaceae
58	Khadika phula	*Ixora coccinea*	Rubiaceae
59	Kolathia	*Tephrosia purpurea*	Fabaceae
60	Kujiparna	*Carmona retusa*	Boraginaceae
61	Kusa grass	*Desmostachya bipinnata*	Poaceae
62	Lajakuli	*Mimosa pudica*	Leguminosae
63	Madan mostok	*Hybanthus enneaspermus*	Violaceae
64	Madanga	*Dendrophthoe falcata*	Loranthaceae
65	Mayurchulia	*Elephantopus scaber*	Compositae
66	Mutha	*Cyperus rotundus*	Cyperaceae
67	Nagapheni	*Opuntia vulgaris*	Cactaceae
68	Olua	*Amorphophallus paeoniifolius*	Araceae
69	Patalagaruda	*Rauvolfia serpentina*	Apocynaceae
70	Palua	*Curcuma aromatica*	Zingiberaceae
71	Pani noi	*Ipomoea eriocarpa*	Convolvulaceae
72	Panua	*Merremia umbellata*	Convolvulaceae
73	Pasan vedi	*Polycarpaea aurea*	Caryophyllaceae
74	Patala garuda	*Rauvolfia serpentina*	Apocynaceae
75	Paunsia	*Aerva lanata*	Amaranthaceae
76	Pedipedika	*Abutilon indicum*	Malvaceae
77	Pita saga	*Glinus oppositifolius*	Molluginaceae
78	Pokasunga	*Ageratum conyzoides*	Asteraceae
79	Rangani	*Ixora coccinea*	Rubiaceae
80	Salaparni	*Desmodium gangeticum*	Leguminosae
81	Saptapheni	*Opuntia dillenii*	Cactaceae
82	Sabai grass	*Eulaliopsis binata*	Poaceae
83	Saketa	*Curcuma montana*	Zingiberaceae
84	Sinkula	*Heteropogon contortus*	Poaceae
85	Srigunthia	*Saccharum bengalense*	Poaceae
86	Tulasi (dhala)	*Ocimum basilicum*	Lamiaceae
87	Tulasi (kala)	*Ocimum sanctum*	Lamiaceae

Sl. No.	Oriya Name	Botanical Name	Family
88	Tandaghasha	*Saccharum spontaneum*	Poaceae
89	Talamuli	*Curculigo orchioides*	Hypoxidaceae

Table No.4

List of Climber

Sl. No.	Oriya Name	Botanical Name	Family
1	Atundi	*Combretum decandrum*	Combretaceae
2	Ambalata	*Bauhinia racemosa*	Leguminosae
3	Asadhua	*Capparis zeylanica*	Capparaceae
4	Anantamuli	*Hemidesmus indicus*	Apocynaceae
5	Arsi / Gila	*Entada scandens*	Leguminosae
6	Akan bindhi	*Cissampelos pareira*	Menispermaceae
7	Akandi	*Calycopteris floribunda*	Combretaceae
8	Anti Loi	*Tylophora asthmatica*	Apocynaceae
9	Atundi	*Combretum roxburghii*	Combretaceae
10	Banamali	*Jasminum arborescens*	Oleaceae
11	Beta	*Calamus tenuis*	Arecaceae
12	Baidhanka	*Mucuna pruriens*	Leguminosae
13	Bainchi	*Flacourtia jangomas*	Salicaceae
14	Bana lati/Khalua	*Finlaysonia obovata*	Apocynaceae
15	Bana malati	*Jasminum auriculatum*	Oleaceae
16	Bhada bhadalia	*Olax scandens*	Olacaceae
17	Bichhuati	*Tragia involucrata*	Euphorbiaceae
18	Bileikhoji/Bileilanja	*Acalypha hispida*	Euphorbiaceae
19	Boduli loi	*Pentapetes phoenicea*	Malvaceae
20	Bruddha taraka	*Argyreia nervosa*	Convolvulaceae
21	Chanapata	*Elaeagnus kologa*	Elaeagnaceae
22	Chemeri barmul	*Hemidesmus indicus*	Apocynaceae
23	Cheranga	*Dioscorea aculeata*	Dioscoreaceae
24	Dantari	*Acacia pennata*	Leguminosae
25	Desialu	*Dioscorea alata*	Dioscoreaceae
26	Dhudhiali	*Cryptolepis buchanani*	Apocynaceae
27	Dahidahia	*Cocculus hirsutus*	Menispermaceae
28	Danti	*Baliospermum montanum*	Euphorbiaceae
29	Dudhi	*Cryptolepis buchananii*	Apocynaceae
30	Enturidi	*Argyreia nervosa*	Convolvulaceae
31	Gudmari	*Gymnema sylvestre*	Apocynaceae
32	Gulichi	*Tinospora cordifolia*	Menispermaceae
33	Gaja pippali	*Scindapsus officinalis*	Araceae
34	Gilla	*Caesalpinia decapetala*	Leguminosae
35	Girli	*Entada scandens*	Leguminosae
36	Gopakanu	*Cryptolepis buchananii*	Apocynaceae
37	Gudamari	*Pygmaeopremna herbacea*	Lamiaceae
38	Hadabhanga	*Cissus quadrangularis*	Vitaceae
39	Indrajal	*Holarrhena malaccensis*	Apocynaceae

Sl. No.	Oriya Name	Botanical Name	Family
40	Kaincha	*Abrus precatorius*	Leguminosae
41	Kalama	*Ipomea aquatica*	Convolvulaceae
42	Karaba	*Dioscorea pentaphylla*	Dioscoreaceae
43	Kakudi	*Cucumis sativus*	Cucurbitaceae
44	Kalabati	*Anamirta cocculus*	Menispermaceae
45	Kaliboiti	*Thunbergia fragrans*	Acanthaceae
46	Kanisiri lata	*Ipomea biloba*	Convolvulaceae
47	Kanjia loi	*Ampelocissus latifolia*	Vitaceae
48	Kankada	*Momordica dioica*	Cucurbitaceae
49	Kanta alu	*Dioscorea glabra*	Dioscoreaceae
50	Kanta malli/Kula	*Ventilago denticulata*	Rhamnaceae
51	Kasa kanda	*Dioscorea puber*	Dioscoreaceae
52	Kerenda koli	*Carissa carandas*	Apocynaceae
53	Kuradhia gachha	*Desmodium triflorum*	Leguminosae
54	Lata palas	*Butea superba*	Leguminosae
55	Lai beheda	*Celastrus paniculatus*	Celastraceae
56	Lajakuli	*Mimosa pudica*	Leguminosae
57	Lekhan koli	*Uvaria hamiltonii*	Annonaceae
58	Lodha	*Symplocos racemosa*	Symplocaceae
59	Lotar loi	*Cayratia auriculata*	Vitaceae
60	Luhagunia	*Eragrostis nutans*	Poaceae
61	Malati	*Aganosma caryophyllata*	Apocynaceae
62	Mardalai	*Millettia auriculata*	Leguminosae
63	Muturi	*Smilax macrophylla*	Smilacaceae
64	Modanga	*Loranthus longiflorus*	Loranthaceae
65	Mardal	*Ionidium suffruticosum*	Violaceae
66	Muturi	*Smilax zeylanica*	Smilacaceae
67	Nirmuli	*Cuscuta reflexa*	Convolvulaceae
68	Palasa	*Butea superba*	Leguminosae
69	Paniri	*Aristolochia bracteolata*	Aristolochiaceae
70	Pengulai	*Pavetta indica*	Rubiaceae
71	Pichuli	*Ventilago denticulata*	Rhamnaceae
72	Pitakanda	*Xylocarpus gangeticus*	Meliaceae
73	Pitamasia/Pita alu	*Dioscorea wallichii*	Dioscoreaceae
74	Prasaruni	*Paederia foetida*	Rubiaceae
75	Rakta pichali	*Gouania leptostachya*	Rhamnaceae
76	Ramadantari	*Smilax lancifolia*	Smilacaceae
77	Siali	*Bauhinia vahlii*	Leguminosae
78	Sakta	*Curcuma montana*	Zingiberaceae
79	Sapaduleri	*Fumaria vaillantii*	Papaveraceae
80	Satabari	*Asparagus racemosus*	Asparagaceae
81	Suam loi	*Ichnocarpus frutescens*	Apocynaceae
82	Syamalata	*Ichnocarpus frutescense*	Apocynaceae
83	Thalkudi	*Centella asiatica*	Apiaceae
84	Tunga	*Dioscorea pentaphylla*	Dioscoreaceae
85	Uturudi	*Pergularia daemia*	Apocynaceae

Table No. 5			
List of Grasses			
Sl. No.	**Oriya Name**	**Botanical Name**	**Family**
1	Baunsa (salia)	*Dendrocalamus strictus*	Poaceae
2	-do- (daba)	*Bambusa bambos*	Poaceae
3	Bena	*Chrysopogon zizanoides*	Poaceae
4	Broom	*Thysanolaena maxima*	Poaceae
5	Duba	*Cynodon dactylon*	Poaceae
6	Kasatandi	*Saccharum spontaneum*	Poaceae
7	Sabai	*Eulaliopsis binata*	Poaceae
8	Sinkula	*Hetropogon contortus*	Poaceae

TREES GROWING (EPIPHYTE) SPECIES (ORCHIDS)

Table No. 6			
List of Trees Growing (Epiphyte)			
Sl. No.	**Name**	**Sl. No.**	**Name**
1	*Acampecarinata*	29	*Diploprora Championii*
2	*Acampeochracea*	30	*Eria bambusifolia*
3	*Acampepraemorasa*	31	*Flickingeria macraei*
4	*Acampe rigida*	32	*Gastrochilus inconspicuus*
5	*Aerides multiflora*	33	*Kingidium deliciosum*
6	*Aerides odorata*	34	*Liparia elliptica*
7	*Bulbophyllum cariniflorum*	35	*Liparia viridiflora*
8	*Bulbophyllum macraei*	36	*Liparia rapinata*
9	*Bulbophyllum panigrahianum*	37	*Luisia brachystachys*
10	*Bulbophyllum polyrrhizum*	38	*Luisia teatifolia*
11	*Bulbophyllum Umbullatum*	39	*Luisia trichcorrhiza*
12	*Bulbophyllum triste*	40	*Luisia zeylanica*
13	*Chiloschista Parishii*	41	*Oberonia ensiformis*
14	*Cleisostoma appendiculstem*	42	*Oberoniafalconeri*
15	*Cymludium bicolor*	43	*Oberonia gammiei*
16	*Cymludium aloifolium*	44	*Oberonia dobticulata*
17	*Dendrobium aphyllum*	45	*Oberonia proudlocki*
18	*Dendrobiumbicameratum*	46	*Pelatantheria insectifera*
19	*Dendrobium cathcartii*	47	*Pholidota imbricate*
20	*Dendrobiumcrepidatum*	48	*Pomatocalpa ramsum*
21	*Dendrobium fimbriatam*	49	*Rhynchocstylis retusa*
22	*Dendrobium formosum*	50	*Smitinandia micrantha*
23	*Dendrobium herbaceum*	51	*Thunia bracteata*
24	*Dendrobium macrostachyum*	52	*Vanda tessellata*
25	*Dendrobium moschatum*	53	*Vanda testacea*
26	*Dendrobium Nolile*		
27	*Dendrobiumpeguanum*		
28	*Dendrobiumtransparens*		

FERNS

Table No. 7			
List of Ferns			
Sl. No.	**Name**	**Sl. No.**	**Name**
1	*Cyathea spp.*	5	*Cyclosorus spp.*
2	*Adiantum lunulatum*	6	*Doryopteris ludens*
3	*Adiantum caudatum*	7	*Alsophila glabra*
4	*Lycopodium squarrosum*	8	*Cyathea spinulosa*

EARTH GROWING PLANTS (TERRESTRIAL ORCHIDS)

Table No. 8			
List of Terrestrial			
Sl. No.	**Name**	**Sl. No.**	**Name**
1	*Acanthophippium sylhetense*	15	*Nervilia aragoana*
2	*Geodorum densiflorum*	16	*Nervilia infundibulifolia*
3	*Goodyera fumata*	17	*Nervilia plicata*
4	*Goodyera hispida*	18	*Nervilia prainiana*
5	*Goodyeraprocera*	19	*Pecteilis gigantea*
6	*Goodyera thailandica*	20	*Peristylus constrictus*
7	*Habenaria commelinifolia*	21	*Peristylus goodyeroides*
8	*Habenaria crassifolia*	22	*Spiranthes sinensis*
9	*Habenaria furcifera*	23	*Tainia hookeriana*
10	*Habenaria gibsopiwar*	24	*Tropidia angulosa*
11	*Habenaria plantaginea*	25	*Tropidia curculigoides*
12	*Habenaria reniformis*		
13	*Malaxis latifolia*		
14	*Malaxis rheudic*		

IV. LIST OF FAUNA

GLOSSARY OF ORIYA, ENGLISH AND LATIN NAME OF ANIMALS, BIRDS, SNAKES, LIZARDS, TUTLES AND FISHES FOUND IN BARIPADA DIVISION

Table No. 9

List of Animals

Sl. No.	Oriya Name	English Name	Latin Name	Family	Schedule No
1	Bajra kapta	Pangolin	*Manis crassicaudata*	Manidae	I
2	Badudi	Bat	*Rousettus leschenaultii*	Pteropodidae	V
3	Badudi	Short nosed fruit bat	*Cynopterus sphinx*	Pteropodidae	V
4	Badudi	Indian flying Fox	*Pteropus giganteus*	Pteropodidae	V
5	Banabiradi	Wild cat	*Felis chaus affinis*	Felidae	I
6	Barah	Wild boar	*Sus scrofa cristatus*	Suidae	III
7	Belera Musa	Indian giant squirrel	*Ratufa indica*	Sciuridae	II
8	Bilua	Jackal	*Canis latrans*	Canidae	V
9	Bhalu	Black bear	*Ursus thibetanus*	Ursidae	II
10	Bhalu	Sloth bear	*Melursus ursinus*	Ursidae	II
11	Chital	Spotted deer	*Axis axis*	Cervidae	III
12	Chita Biradi	Leopard cat	*Prionailurus bengalensis*	Felidae	I
13	Chemani	House bat	*Cynopterus sphinx*	Pteropodidae	V
14	Gunduchimusa	Squirrel	*Funambulus pennanti*	Sciuridae	V
15	Gurandi	Mouse deer	*Tragulus meminna*	Tragulidae	I
16	Hati	Elephant	*Elephas maximus*	Elephantidae	I
17	Heta	Hyena	*Hyaena striata*	Hyaenidae	I
18	Jinka	Porcupine	*Hystrix leucura*	Hystricidae	IV
19	Kalarapatriya	Leopard	*Panthera pardus fusca*	Felidae	I
20	Katasa	Big wild cat	*Paradoxurus hermaphroditus*	Felidae	II
21	Kattas	Large Indian civet	*Viverra zibetha*	Viverridae	II
22	Kokisiali	Fox	*Vulpes bengalensis*	Canidae	II
23	Kutura	Barking deer	*Cerulus muntjac*	Cervidae	III
24	Lenkeda	Panther	*Panthera pardus*	Felidae	I
25	Mahabala Bagha	Tiger	*Panthera tigris*	Felidae	I
26	Mankada (hanu)	Black-faced monkey	*Semnopithecus entellus*	Cercopithecidae	II
27	Mankada (pati)	Red-faced monkey	*Macaca mulatta*	Cercopithecidae	II
28	Musa	Mouse	*Rattus rattus*	Muridae	V
29	Musa	House rat	*Rattus blanfordi*	Muridae	V
30	Musa (Nepali)	Flying squirrel	*Petaurista philippensis*	Muridae	V
31	Neula	Mongoose	*Herpestes bengalensis*	Viverridae	II

Sl. No.	Oriya Name	English Name	Latin Name	Family	Schedule No
32	Odha	Otter	*Lutra lutra*	Mustelidae	III
33	Olei budi	Common giant flying squirrel	*Lutra perspicillata*	Mustelidae	II
34	Samber	Deer	*Cervus unicolor*	Cervidae	I
35	Saliapatini	Civet	*Viverricula indica*	Viverridae	II
36	Thekua	Hare	*Lepus ruficaudatus*	Leporidae	III

Table No. 10

List of Birds

Sl. No.	Oriya Name	English Name	Latin Name	Family	Schedule No
1	Bani	Common myna	*Acridotheres tristis*	Sturnidae	IV
2	Baya chadhei	Weaver bird	*Ploceus philippinus*	Ploceidae	IV
3	Bajapakhi	Hawk	*Astur badius*	Accipitridae	I
4	Banakukuda	Jungle fowl	*Gallus gallus*	Phadianidae	IV
5	Baja	Falcon	*Egretta garzetta*	Accipitridae	I
6	Bhadabhadalia	Blue jay bird	*Coracias benghalensis*	Muscicapidae	I
7	Bahadakhai	Grey hornbill	*Ocyceros birostris*	Bucerotidae	I
8	Gunduri	Bastard gull	*Turnix suscitator*	Turnicidae	IV
9	Chataka	Swifty	*Micropus affinis*	Apodidae	IV
10	Chila	Kite	*Milvus migrans*		IV
11	Dahuka	Water hen	*Metopidius indicus*	Jacanidae	IV
12	Gendalia	Grey crane	*Anastomus oscitans*	Ciconidae	IV
13	Gharchatia	Sparrow	*Passer domesticus*	Ploceidae	IV
14	Ghukalika	Raven myna	*Acridotheres ginginianus*	Sturnidae	IV
15	Haldibasant	Golden oriole	*Oriolus xanthornus*	Orididae	IV
16	Hansa	Gander	*Anas poecilorhyncha*	Podicipedidae	IV
17	Koeli	Cuckoo	*Cuculus canorus*	Cuculidae	IV
18	Kajalapati	King crow	*Dicrurus monocerus*	Dicruridae	IV
19	Kau	Crow	*Corvus splendens*	Corvidae	V
20	Kochilakhai	Hornbill	*Anthracoceros coronatus*	Bucerotidae	I
21	Kumbhatua	Red crow	*Centropus sinensis*	Cuculidae	IV
22	Mayura	Peacock	*Pavo cristatus*	Phadianidae	I
23	Machharanka	King-fisher	*Ceryle rudis*	Alcedinidae	IV
24	Panikua	Little cormorant	*Phalacrocorax niger*	Anatidae	IV
25	Pecha	Owl	*Athene brama*	Strigidae	IV
26	Para	Pigeon	*Columba livia*	Columbidae	IV
27	Sua	Parrot	*Psittacula krameri*	Sturnidae	IV
28	Sankachila	Brahmin kite	*Haliastur Indus*	Muscicapidae	I
29	Kapota	Dove	*Spilopelia chinensis*	Columbidae	IV
30	Bulbul	Persian/	*Pycnonotus luteolus*	Pycnonotidae	IV

Sl. No.	Oriya Name	English Name	Latin Name	Family	Schedule No
		Nightingale			
31	Baga (kanti)	Pond heron	*Ardeola grayii*	Ardeidae	IV
32	Baga (rani)	Cattle egret	*Bubulcus ibis coromandus*	Ardeidae	IV
33	Baga (rati)	Night heron	*Nycticorax nycticorax*	Ardeidae	IV
34	Kathahana	Ceylon hoopoe	*Upupa ceylonensis*	Upupidae	IV

Table No. 11

List of Snakes

Sl. No.	Oriya Name	English Name	Latin Name	Family	Schedule No
1	Ahiraj	King cobra	*Ophiophagus hannah*	Elapidae	II
2	Ajagara	Indian python	*Python molurus*	Boidae	I
3	chiti	Painted krait	*Bungarus caeruleus*	Elapidae	IV
4	Dhamana	Rat snake	*Ptyas mucosus*	Colubridae	II
5	Boda	Rusell's viper	*Daboia russelli*	Viperidae	II
6	Dhulia naga	Sand viper	*Echis carinatus*	Viperidae	IV
7	Domundia	John's sandboda	*Eryx conicus*	Boidae	IV
8	Gokhar	Cobra	*Naja naja*	Elapidae	II
9	Kananoli	Grass snake	*Ahaetulla spp.*	Colubridae	IV
10	Laudankia	Arboreal adder	*Dryophis nasutus*	Elapidae	IV
11	Dhanda	Water snake	*Natrix piscator*	Colubridae	IV
12	Rana	Banded krait	*Bungarus fasciatus*	Elapidae	II
13	Tampa	Monocellate cobra	*Naja naja kauothia*	Elapidae	II
14	Hata sapa	Common wolf snake	*Lycodon aulicus*	Colubridae	--
15	Talia sapa	Common worm snake	*Indotyphlops barminus*	Typhlopidae	--

Table No. 12

List of Lizards

Sl. No.	Oriya Name	English Name	Latin Name	Family	Schedule No
1	Bahurupi	Indian chamleon	*Chameleon zeylanicus*	Chmaeleonidae	IV
2	Champeineula	Mabuya	*Mabuya bibro*	Sciencidae	IV
3	Endua	Garden lizard	*Calotes versicolor*	Agamidae	IV
4	Godhi	Guana	*Varanus monitar*	Varanidae	I
5	Jhitipiti	Lizard	*Hemidactylus flaviviridis*	Gekkonidae	IV

Table No. 13					
List of Turtles					
Sl. No.	**Oriya Name**	**English Name**	**Latin Name**	**Family**	**Schedule No**
1	Pathuria kaincha	Land tortoise	*Testudo elongute*	Trionychidae	IV
2	Pani kaincha	Water turtle	*Lissemys punctata granosa*	Emydidae	IV

Table No. 14				
List of Fishes				
Sl. No.	**Oriya Name**	**English Name**	**Latin Name**	**Family**
1	Balia	Trout / Wallago	*Wallago attu*	Siluridae
2	Baligarada	Sandeel	*Glossogobius giuris*	Gobidae
3	Bhakur	Carp	*Catla catla*	Cyprinidae
4	Chenga	Gilt head	*Ophiocephalus gachus*	Channidae
5	Chitala	Flat fish	*Notopterus chitala*	Notopteridae
6	Dandikiri	Grig	*Esomus danrica*	Cyprinidae
7	Gadisa	Gudgeon	*Ophiocephalus punctatus*	Channidae
8	Jalanga	Ground fish	*Pangasius pangasius*	Pangasidae
9	Jahlla	Floating fish	*Chela argentea*	Cyprinidae
10	Kantia	Nail fish	*Mystus cavasius*	Bagridae
11	Karandi	Minnow	*Barbus ambassis*	Cyprinidae
12	Magura	Cat fish	*Clarias batrachus*	Claridae
13	Mirkali	Mrigal	*Cirrihinus mrigala*	Cyprinidae
14	Neuli	Small sand fish	*Gobiopterus chuno*	Gobidae
15	Pohala	Water fish	*Cirrhinus reba*	Cyprinidae
16	Pabata	Callichrous	*Callichrous bimaculatus*	Siluridae
17	Phalli	Flounder	*Notopterus notopterus*	Notopteridae
18	Rohi	Breeding fish	*Labeo rohita*	Cyprinidae
19	Serana	Minnows	*Barbus sarana*	Cyprinidae
20	Seula	Big gudgeon	*Ophiocephalus striatus*	Channidae
21	Singi	Scorpion fish	*Heteropneustesfossilis*	Pneustidae
22	Todi	Eel	*Mastacembelus armatus*	Cembelidae
23	Chungudi	Shrimp / Prawn	*Palaemon malcolmsonii*	Palaemonidae

V. Others

Mushroom and Lichen

1. Rutka edible mushroom
2. Mayura edible mushroom
3. Kukuda edible mushroom
4. Bada bali edible mushroom
5. Kala edible mushroom
6. Parban edible mushroom
7. Nadi edible mushroom
8. Baranda edible mushroom
9. Poisonous jungle wood mushrooms
10. Jungle tree trunk lichen

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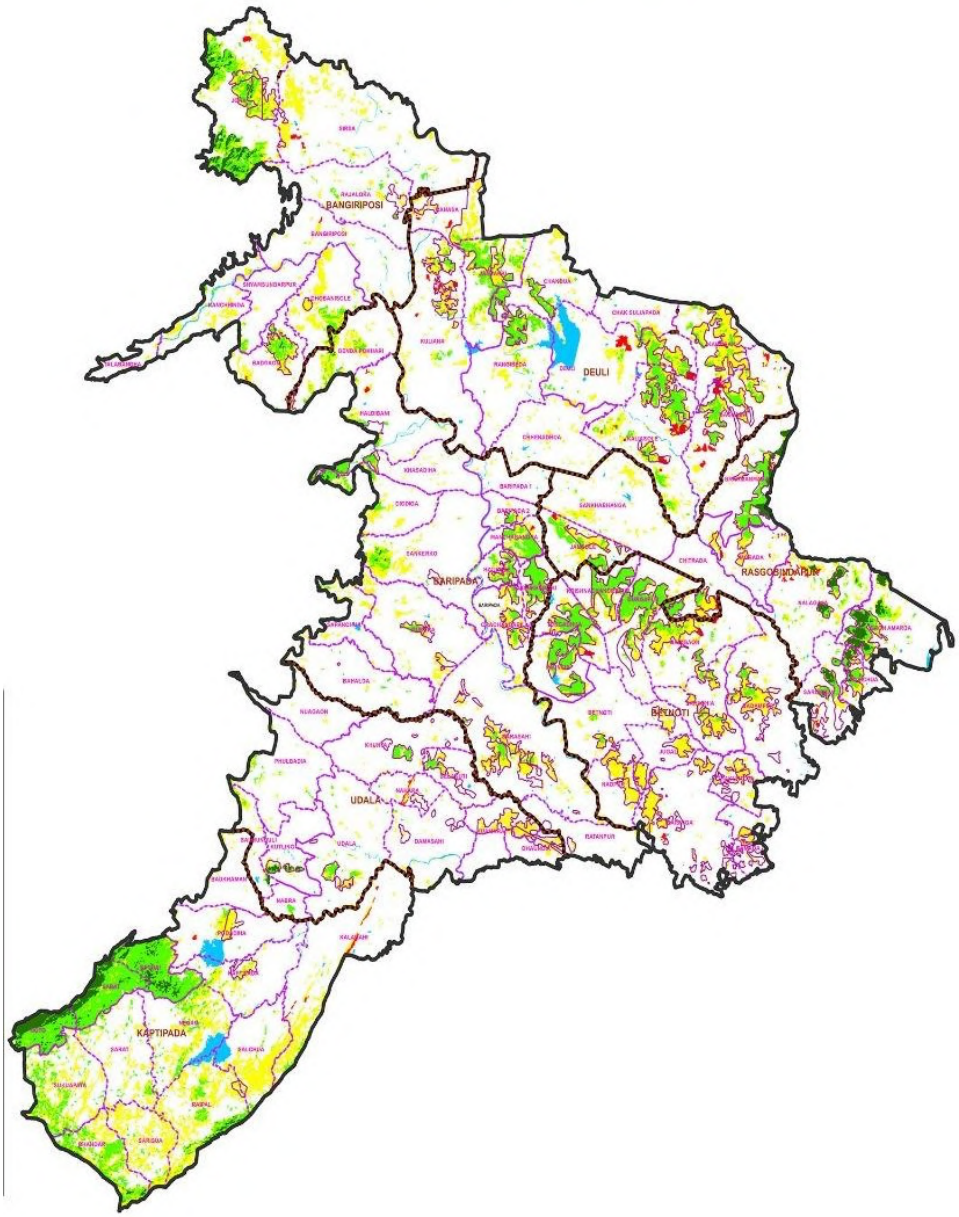
DLC FOREST LIST OF BARIPADA FOREST DIVISION

PART - I

SUMMARY OF FACTS ON WHICH PROPOSALS ARE MADE

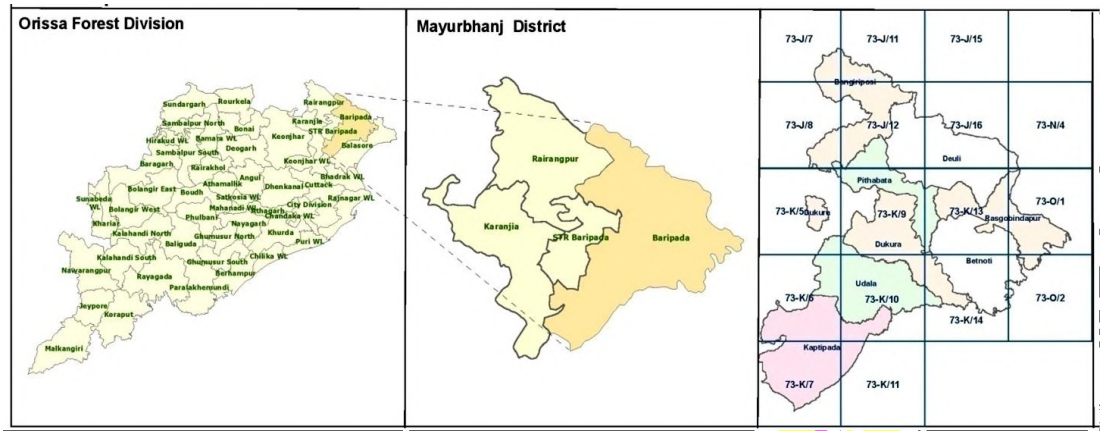
1. CHAPTER – I

THE TRACT DEALT WITH



1. THE TRACT DEALT WITH

Odisha-Mayurbhanj-Baripada Forest Division

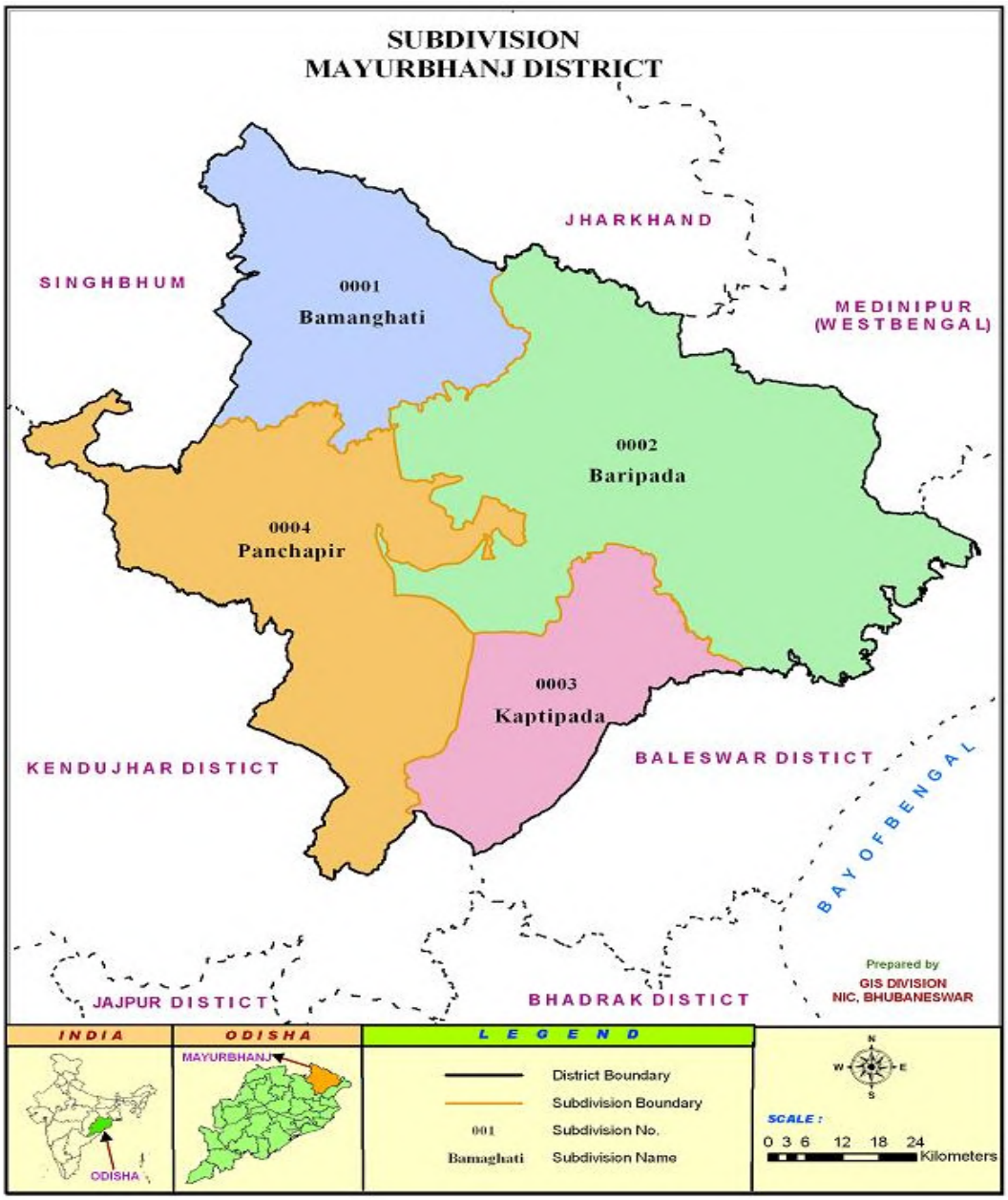


Baripada Forest Division extends over three revenue sub-Divisions in Mayurbhanj district, i.e. Baripada, Kaptipada and Karanjia and 15 CD Blocks, the details of which are furnished below-

Name of Sub-Division	Sl. No.	Name of CD Block	Remarks
Kaptipada	1	Khunta	Completely covered
	2	Kaptipada	Completely covered
	3	Udala	Completely covered
	4	Gopabandhunagar	Completely covered
Baripada (Part)	5	Badasahi	Completely covered
	6	Rasgovindpur	Completely covered
	7	Morada	Completely covered
	8	Betnoti	Completely covered
	9	Suliapada	Completely covered
	10	Baripada	Completely covered
	11	Kuliana	Completely covered
	12	Saraskana	Completely covered
	13	Bangiriposi (P)	Partly covered
Panchpir (Part)	14	Jashipur (P)	Partly covered
	15	Thakurmunda (P)	Partly covered

The headquarters of the Division is at Baripada which is also the District Headquarter. As narrated above the extent of geographical area of Baripada Forest Division is calculated as 4263.13 Km^2 (21.02.2019 reorganization notification), which has 20.43% i.e. 871 Km^2 of forest vegetation, 812.9422 Km^2 of forest area, out of which 504.88 Km^2 (11.84%) forest area is under the control and management of Forest

Department and 308.0549 Km^2 (7.22%) of Revenue Forest & DLC Forest and 58.0577 Km^2 (1.36%) are tree outside Forest.



1.1. Name and Situation

Forest Department of Odisha has been re-organized vide Notification No.13228 / F and E dt.08.8.2003 with effect from dt.01.10.2003. After 2003 re-organization the entire area of Baripada Forest Division is situated between Longitude - E - 86° 15‘ 00.0‖ to E - 87° 15‘ 00.0‖ and Latitude N - 21° 15‘ 00.0‖ to N - 22° 20‘ 00.0‖. The Baripada Forest Division covers the following topo-sheets.

Topo sheet: 73J8 (P), 73J11 (P), 73J12 (P), 73J16 (P), 73K5 (P), 73K6 (P), 73K7 (P), 73K9(P), 73K10 (P), 73K11 (P), 73K13 (F), 73K14 (P), 73N4 (P), 73O1 (P), 73O2 (P)

Out of the aforesaid topo sheets, 73K13 is completely covered by Baripada Forest Division and the remaining topo sheets are partly covered by the Division.

(F: Fully covered, P: Partly covered)

Baripada Forest Division shares common boundary with seven Forest Divisions in the following manner.

* North –Kharagpur Division and Bardhaman Forest Division of W.B. State
* South – Balasore Wildlife Division and Keonjhar Wildlife Division
* East - Balasore Wildlife Division
* West - S.T.R Division, Karanjia Forest Division and Rairangpur Forest Division

1.1.1 Boundary of Baripada Forest Division

The total boundary length of Baripada Forest Division is 640.10 km. The details of common boundary length with adjoining Divisions are given in the table below.

Table 1: Division Boundary

Sl. No	Name of Divisions	Length of common boundary in km.
1	Kharagpur Division (WB)	79.30
2	Balasore Wildlife Division	224.10
3	Karanjia Division	51.95
4	Rairangpur Division	73.90
5	Keonjhar Wildlife Division	14.33
6	Bardhaman Forest Division (JH)	47.75
7	S.T.R.	148.77
	Total	**640.10**

1.1.2 Administrative Unit

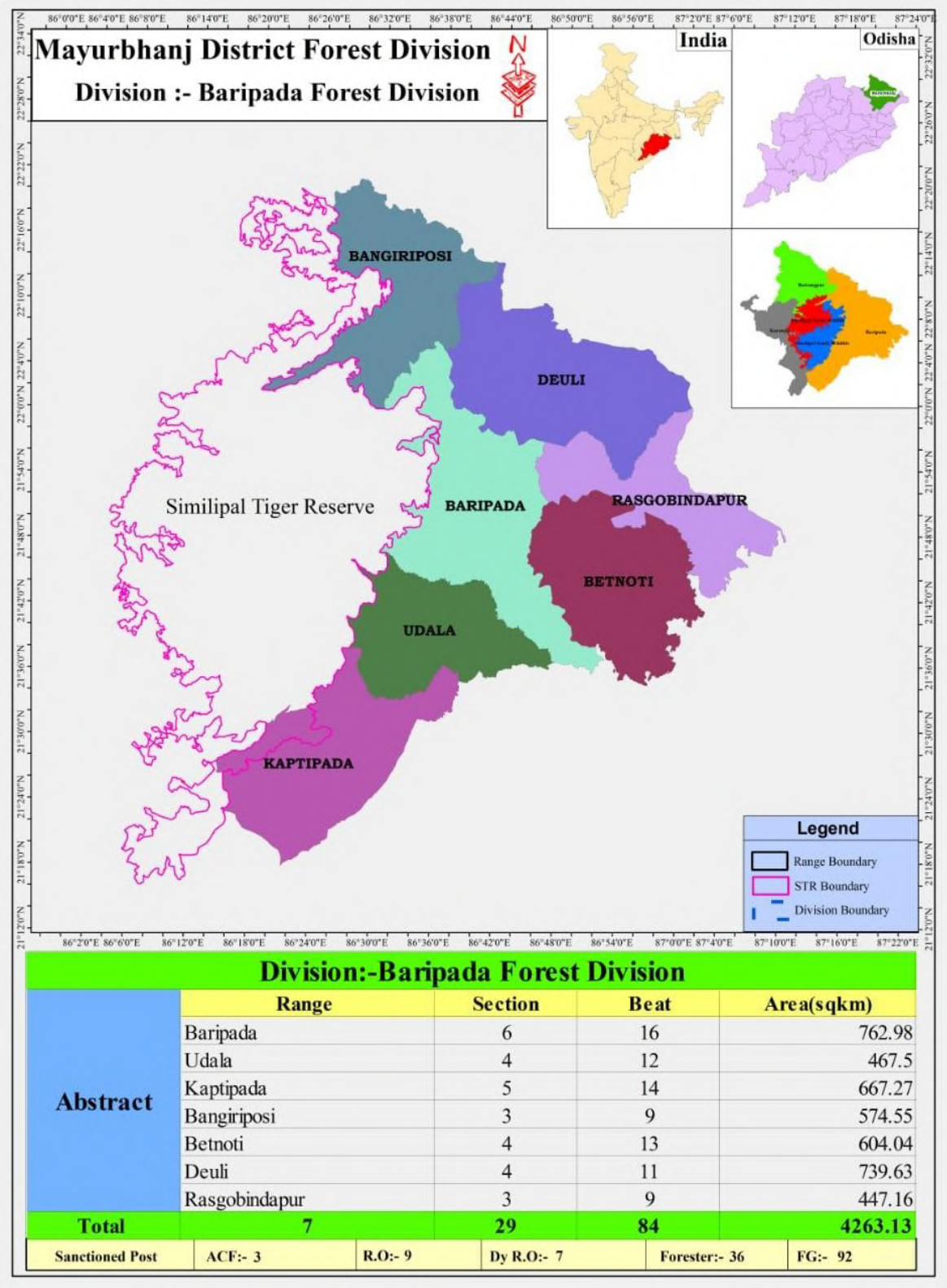
After re-organization, some changes have been made in the administrative unit of Baripada Forest Division**.** The changes made in the numbers of Ranges, Sections and Beats are given in the table below.

Table 2: Administrative unit

Sl. No.	Name of administrative unit	Number before reorganization (2002)	Number after reorganization (2003) *	Number after reorganization (2019)
1	Range	08	08	07
2	Section	32	32	29
3	Beat	68	96	84
4	Forest Check gates	12	04	04
Source – Divisional Forest Officer, Baripada				

* Administrative unit as per 2003 reorganization has been referred in working plan as directed by Conservator of Forests (Working Plan) vide Memo No. 25670 dt.24/12/2018.

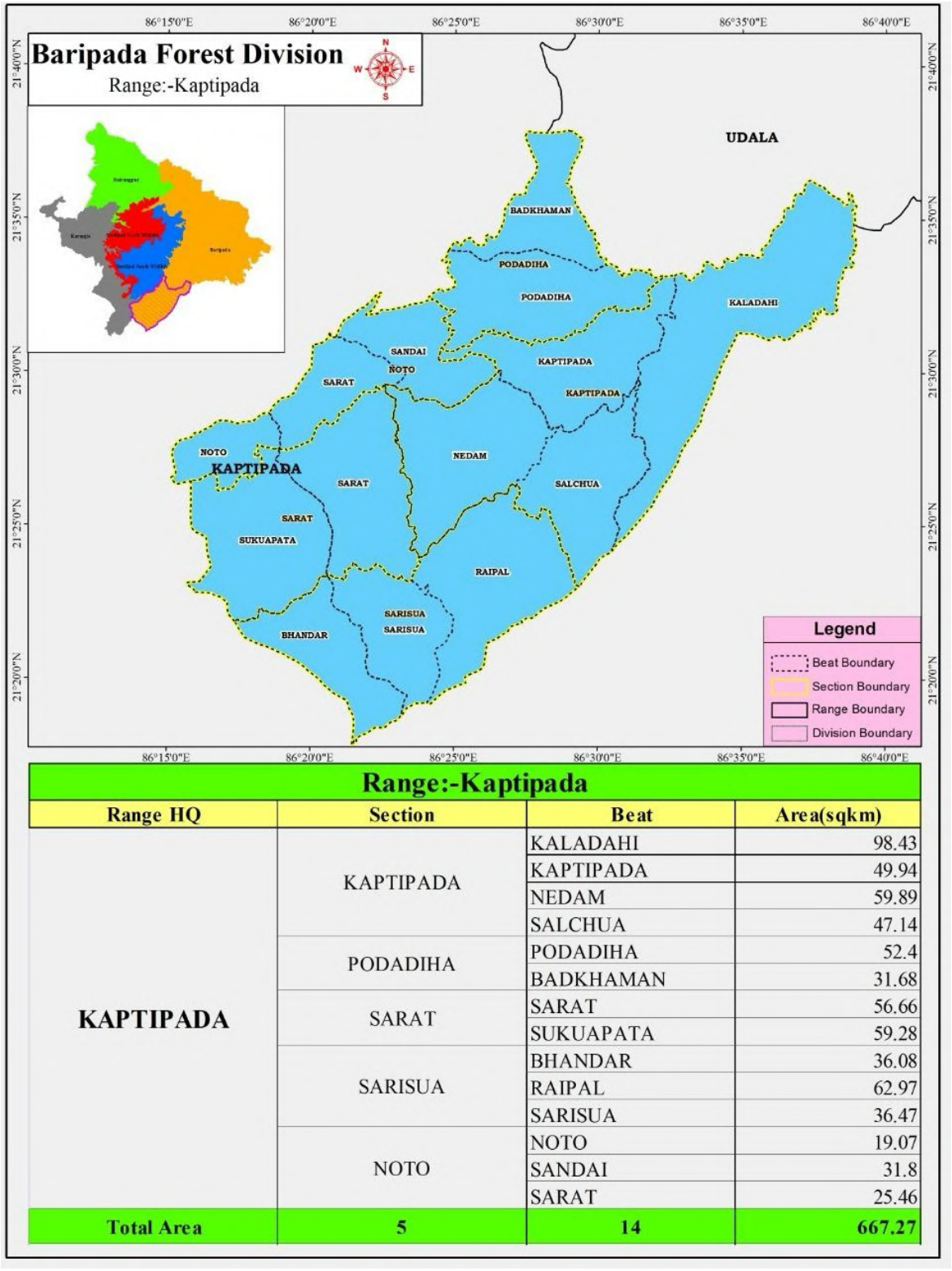
Administrative Boundaries of Baripada Forest Division, Ranges, Sections and Beats with area assigned as per 2019 reorganization.



Division:-Baripada Forest Division				
	Range	Section	Beat	Area(sqkm)
Abstract	Baripada	6	16	762.98
	Udala	4	12	467.5
	Kaptipada	5	14	667.27
	Bangiriposi	3	9	574.55
	Betnoti	4	13	604.04
	Deuli	4	11	739.63
	Rasgobindapur	3	9	447.16
Total	7	29	84	4263.13

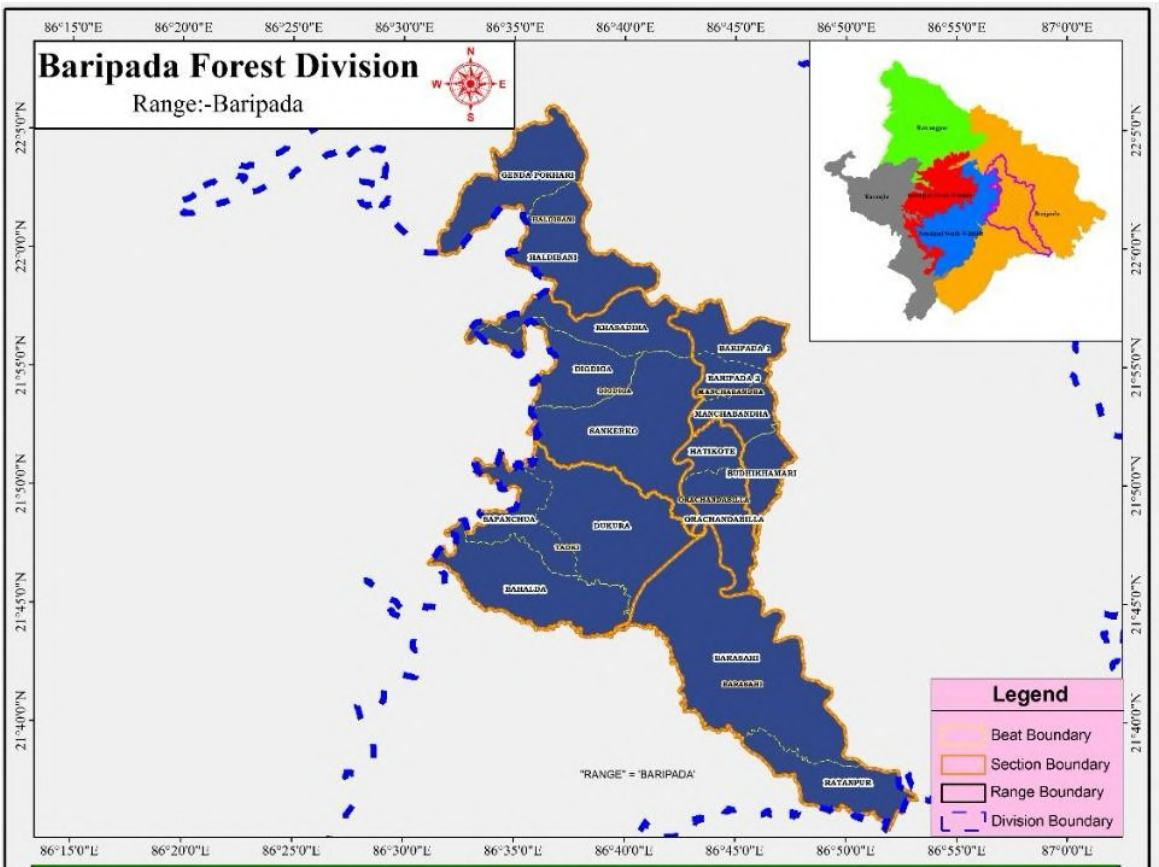
Sanctioned Post	ACF:- 3	R.O:- 9	Dy R.O:- 7	Forester:- 36	FG:- 92

Map 1: Administrative map of Baripada Forest Division



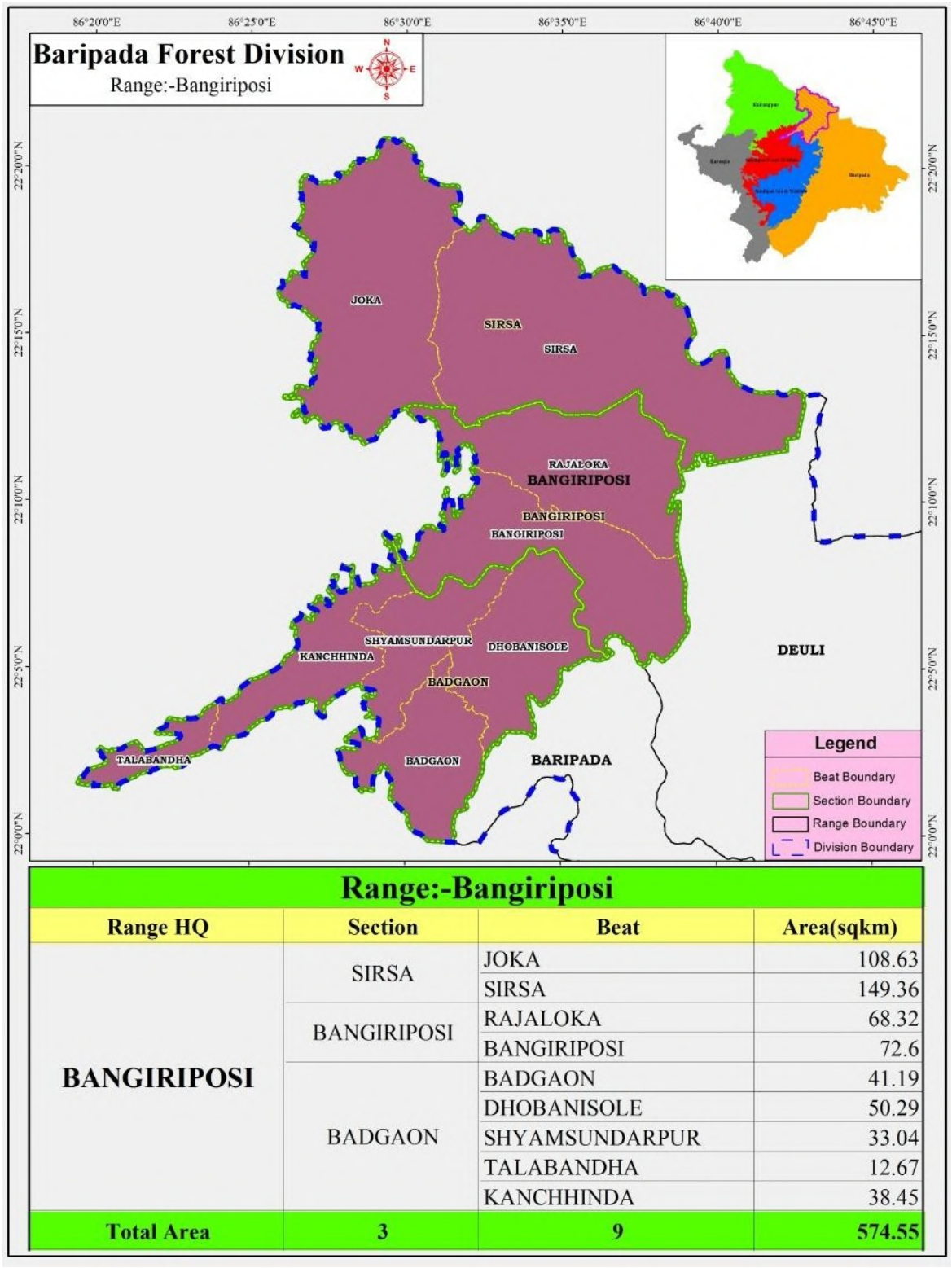
Range:-Kaptipada			
Range HQ	**Section**	**Beat**	**Area(sqkm)**
KAPTIPADA	KAPTIPADA	KALADAHI	98.43
		KAPTIPADA	49.94
		NEDAM	59.89
		SALCHUA	47.14
	PODADIHA	PODADIHA	52.4
		BADKHAMAN	31.68
	SARAT	SARAT	56.66
		SUKUAPATA	59.28
	SARISUA	BHANDAR	36.08
		RAIPAL	62.97
		SARISUA	36.47
	NOTO	NOTO	19.07
		SANDAI	31.8
		SARAT	25.46
Total Area	**5**	**14**	**667.27**

Map 2: Administrative map of Kaptipada Range



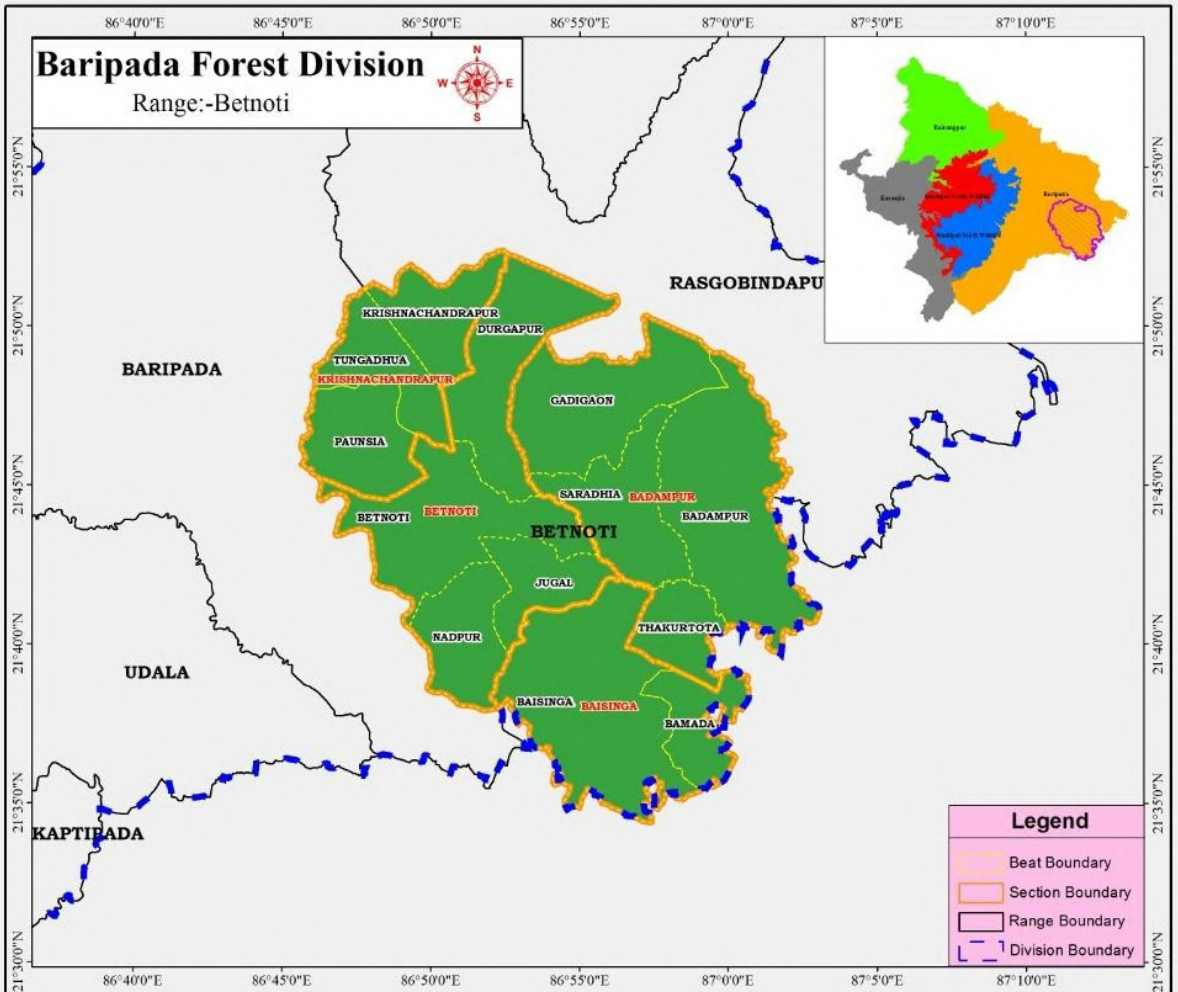
Range:-Baripada			
Range HQ	**Section**	**Beat**	**Area(sqkm)**
BARIPADA	BARASAHI	BARASAHI	144.94
		RATANPUR	38.48
	DIGDIGA	KHASADIHA	42.66
		SANKERKO	89.95
	HALDIBANI	DIGDIGA	38.06
		GENDA POKHARI	52.44
		HALDIBANI	55.31
	MANCHABANDHA	BARIPADA 1	26.15
		BARIPADA 2	13.43
		BUDHIKHAMARI	18.22
	ORACHANDABILLA	MANCHABANDHA	18.79
		HATIKOTE	14.96
		ORACHANDABILLA	33.08
	DUKURA	DUKURA	80.6
		SAPANCHUA	30.85
		BAHALDA	65.06
Total area	**6**	**16**	**762.98**

Map 3: Administrative map of Baripada Range



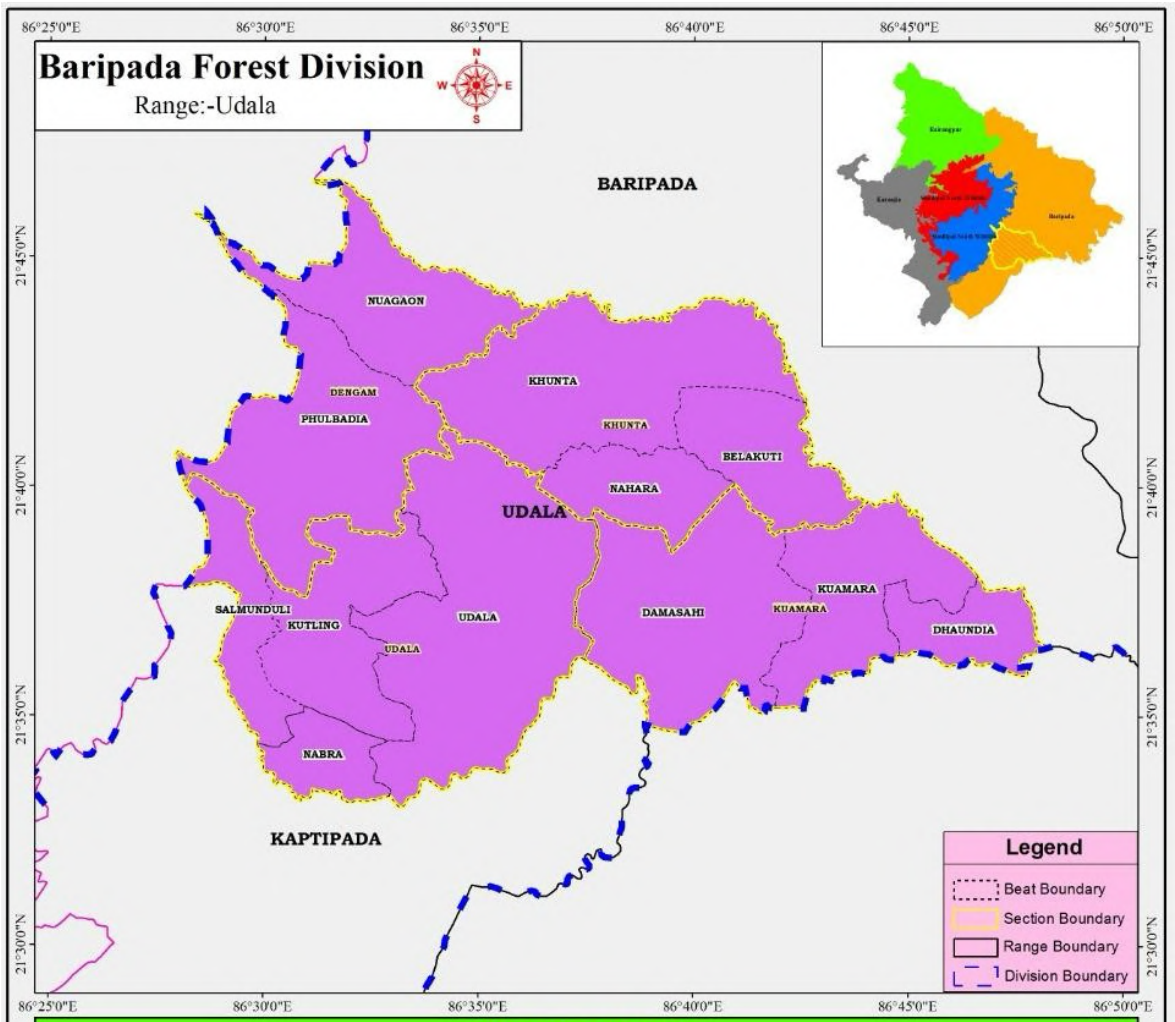
Range:-Bangiriposi			
Range HQ	**Section**	**Beat**	**Area(sqkm)**
BANGIRIPOSI	SIRSA	JOKA	108.63
		SIRSA	149.36
	BANGIRIPOSI	RAJALOKA	68.32
		BANGIRIPOSI	72.6
	BADGAON	BADGAON	41.19
		DHOBANISOLE	50.29
		SHYAMSUNDARPUR	33.04
		TALABANDHA	12.67
		KANCHHINDA	38.45
Total Area	**3**	**9**	**574.55**

Map 4: Administrative map of Bangiriposi Range



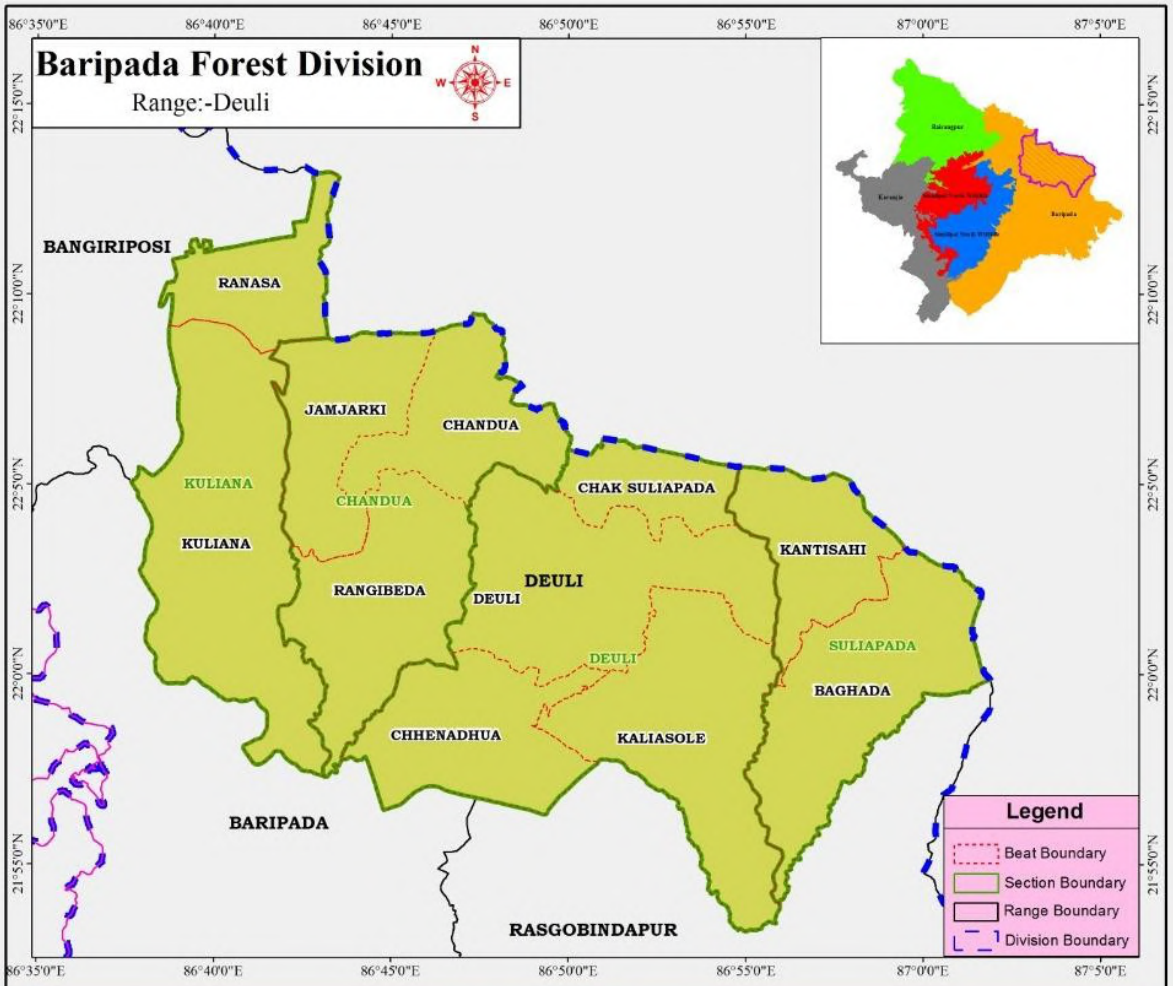
Range:-Betnoti			
Range HQ	**Section**	**Beat**	**Area(sqkm)**
BETNOTI	BADAMPUR	BADAMPUR	88.52
		GADIGAON	61.95
		SARADHIA	42.56
		THAKURTOTA	21.79
	BAISINGA	BAISINGA	92.72
		BAMADA	23.43
	BETNOTI	BETNOTI	65.91
		DURGAPUR	54.19
		JUGAL	25.43
		NADPUR	32.57
	KRISHNACHANDRAPUR	KRISHNACHANDRAPUR	30.08
		PAUNSIA	35.22
		TUNGADHUA	29.67
Total Area	**4**	**13**	**604.04**

Map 5 Administrative map of Betnoti Range



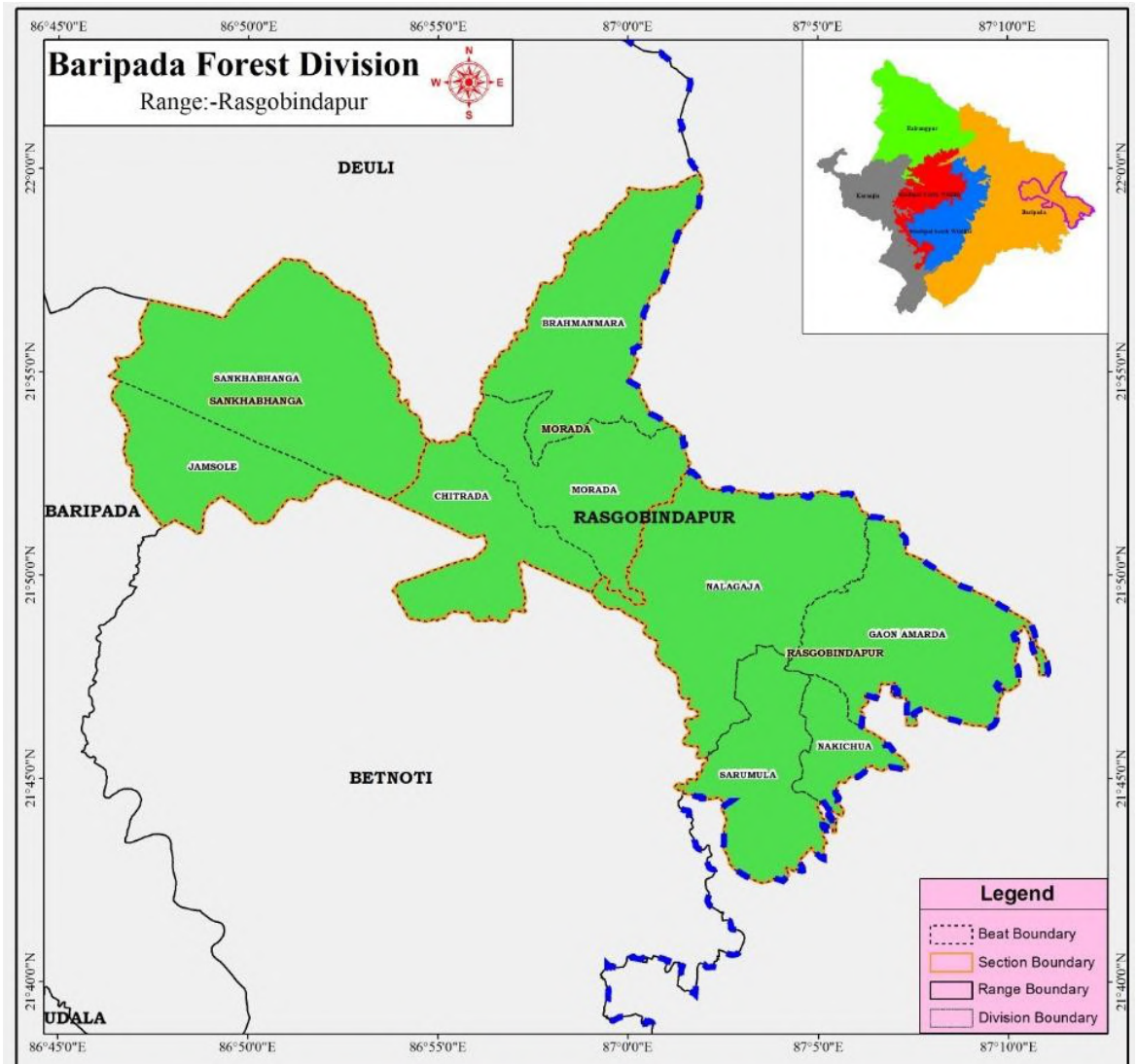
Range:-Udala			
Range HQ	**Section**	**Beat**	**Area(sqkm)**
UDALA	DENGAM	PHULBADIA	57.01
		NUAGAON	36.93
	KHUNTA	BELAKUTI	25.81
		KHUNTA	64.1
		NAHARA	19.41
	KUAMARA	DAMASAHI	58.79
		DHAUNDIA	15.68
		KUAMARA	35.46
	UDALA	KUTLING	36.75
		NABRA	12.34
		SALMUNDULI	19.54
		UDALA	85.68
Total Area	**4**	**12**	**467.5**

Map 6: Administrative map of Udala Range



Range:-Deuli			
Range HQ	**Section**	**Beat**	**Area(sqkm)**
DEULI	CHANDUA	CHANDUA	51.6
		JAMJARKI	50.48
		RANGIBEDA	73.4
	DEULI	CHAK SULIAPADA	27.31
		CHHENADHUA	62.33
		DEULI	96.21
		KALIASOLE	92.4
	KULIANA	KULIANA	121.45
		RANASA	36.48
	SULIAPADA	BAGHADA	84.16
		KANTISAHI	43.81
Total Area	**4**	**11**	**739.63**

Map 7: Administrative map of Deuli Range



Range:-Rasgobindapur			
Range HQ	**Section**	**Beat**	**Area(sqkm)**
RASGOBINDAPUR	MORADA	BRAHMANMARA	57.98
		CHITRADA	39.07
		MORADA	43.01
	RASGOBINDAPUR	GAON AMARDA	58.37
		NAKICHUA	14.41
		NALAGAJA	78.27
		SARUMULA	38.44
	SANKHABHANGA	JAMSOLE	33.89
		SANKHABHANGA	83.72
Total Area	**3**	**9**	**447.16**

Map 8: Administrative map of Rasgovindpur Range

Table 3: List of FRH and Check Gate of Baripada Forest Division:

Name of Range	Name of Section	Name of Beat	Name of FRH	Name of Check gate
Pithabata	Manchabandha	Manchabandha	Salabani	
	Balidiha	Balidiha, Khasadiha		Astia
Deuli	Kuliana	Kuliana, Nuagaon	-	Jamsola
Rasgovindpur	Moroda	Moroda, Brahamanmara, Chitrada		Nuagaon
Udala	Udala	Udala, Kutling, Salamundali, Nabra	Udala	
Kaptipada	Kaptipada	Kaptipada, Salchua, Kaladihi, Nedam		Nedam

Table 4: Forest Road

Name of the Range	Name of Forest road	Length in km	Type of Road	Remarks
Pithabata	Astia- Champagarh	28.00	Blacktop & Murrom	Partly transferred to other Division
Udala	Bholgadia- Sunpokhari	21.00	Murrom	
	Taldiha-Deokund	8.50	Murrom	
Kaptipada	Sandei- Podadiha	6.00	Murrom	
Betnoti	K.C.Pur- Paunsia	9.60	Murrom	
Rasgovindpur	Chitroda- Gadigan	3.26	Murrom	

1.1.3 Roads, Paths, Bridges and Buildings:

1.1.3.1 Road

Creation of new forest road is not prescribed. The existing forest road in this Division can be improved subject to allotment. The specific locations on the Forest Road which get cut-off in rainy season should be repaired with Cement Concret to make the Road usable during all weather. All forest roads shall be closed to traffic for one day (24 hours) once a year. In case new roads are required to be constructed, application under the Forest (Conservation) Act, 1980 may be submitted to Appropriate Authority.

1.1.3.2 Extraction Path

Construction of new extraction path is not prescribed during this Plan period. However the working agent will improve the existing extraction path at the time of extraction of timber from the annual coupe if necessary.

1.1.3.3 Bridges

In some existing forest road, bridges are required on streams. It is proposed to construct small bridges on the streams in forest roads where ever necessary, so that communication system by forest roads will be improved during rainy season. All developmental works in the forest block or in the adjoining forest area will be carried out as per prescription of this Plan. It is necessary to construct bridges on the existing forest roads across all streams.

1.1.3.4 Cause-way and Culvert

All forest roads are crossing many small nalas. It is necessary to construct cause-way or culvert, which is applicable across the nala for better communication. The Divisional Forest Officer is advised to propose the construction of one cause-way and one culvert along each forest road every year during the Plan period till all the vulnerable points are covered. He will estimate the expenditure to be incurred for construction of cause-way and culvert and add the expenditure in the Annual Action Plan.

Fire Line:

Fire Lines are created along the Forest Paths near the habitations/ two sides of the main road/ forest boundries adjacent to villages so that in case the Forest Fires strating from the village/ Road side, will not reach the Forest. Each Range is clearing 50 RKM of fire line every year. The clearing of Fire Line needs improvements. The width of the Fire Line should be 3 mtr. where all grasses or debrishes should be cleaned. Fire Lines should be created at vulnerable points for maximum efficiency.

Table 5: Fire Line

Name of the Range	Length of fire line in RKM
Pithabata	50
Dukura	50
Udala	50
Kaptipada	50
Betnoti	50
Rasgovindpur	50
Deuli	50
Bangiriposi	50
Source-DFO, Baripada	

1.1.3.5 Building and Well

Many buildings have been constructed for official and residential purposes since inception of this Division. Some of the buildings have been transferred to Similipal South Division after 2019 reorganization. The present habitable buildings need maintenance. In case residential houses are lying vacant, those should be allotted to staff.

1.1.3.6 Rest House and Shed

This Division is very poor in camping facilities. There are two Nos. of rest houses in this Division at Salbani and at Udala. The improvement of these rest houses can be usuful for Forest staff during tour and will help the Elephant monitoring team in controlling Elephant depredation. The list of proposed locations for construction of new FRHs is given in the table below.

Table 6: List of Proposed Rest Houses

SL No.	Proposed Forest Rest Houses
1	Betnoti
2	Bangiriposi
3	Morada
4	Suliapada

1.1.4 Forest Land Diverted

The forest blocks in this revision of Working Plan comprises of 124 RF, 15 PRF, 06 PF and 127 VF. The total area of the above RF, PRF, PF and VF are 46373.740 ha, 2484.450 ha, 989.230 ha and 588.314 ha, respectively as per notification. The said area has been analyzed for future scientific management. The Range wise Forest Blocks with diverted Forest land in Baripada Forest Division included in the revision has been displayed in **Appendix –I** . Project proposal wise forest land diverted has been shown in **Appendix –II**.

1.1.5 Proposal for Diversion

There are two proposals, pending at different levels for diversion. The details of pending proposals are given in the table below.

Table 7: Proposal for diversion of forest land

Sl. No.	Name of Project	Area for Diversion in ha	Date of Receipt
1	Sono Barrage Project, EE, Mayurbhanj investigation Division, Udala, Mayurbhanj	12.274	29.10.2015
2	Widening 2- lane to 4- Lane of NH-16 from Baharagora to Sambalpur NHAI	3.853	23.07.2015

1.2 Configuration of the Ground

The entire working plan area is situated mainly on the Eastern side of Similipal Sanctuary where Similipal Sanctuary is its eastern border. The whole tract is generally plain area but in Kaptipada and Bangiriposi Range the topography of the area is undulating and has bigger hills with steep slopes interspersed with winding strips of valleys. The valleys are namely Aswakuti, Katuria and Haridachua in Kaptipada Range and Budhapahad of Bangiriposi Range of this Division. The tract covered under this plan has no sharp features to divide it into different physiographical zones.

1.2.1 Hills and Slopes

Majority of forest blocks in Baripada Forest Division outside Kaptipada and Bangiriposi Range are plain forests with slope less than 10%. The altitude of hills lying within the geographical jurisdiction of different forest blocks above mean sea level is given in the table below.

Table 8: Altitude of hills

Sl. No.	Name of Forest Blocks	Name of the hills	Altitude in mt.
1	Notto RF	Notto Hill	779
2	Nachhipur RF	Nachhipur Hill	155
3	Thakurani RF	Chakdar Hill	338
4	Rangahudi RF	Rangahudi Hill	271
Sources - Field Staff.			

1.3 Geology, Rock and Soil

1.3.1 Geomorphology

Geological formations found in the Baripada Forest Division is divided into 2 units -

* Alluvial plain in Rasgobindpur, Morada, Shamakhunta, Betnoti and Badasahi Blocks.

* Tertiary plain in the rest of the Division.

1.3.2 Geology and Rock

The relationship between geology, soil and minerals on the distribution of forest types is complex and depends on several factors. The physical conditions of the soil, moisture supply, soil aeration and availability of chemical nutrients influence the distribution of species and forest types. Depth and soil moisture are more important than the nature of rock. Lateritic soils exercise a marked effect on the vegetation. Generally Teak avoids lateritic soils but Sal is tolerant to it. The associate species of Sal are *Xylia* and *Cleistanthus*. Most of the forests on the hills are found to occur on the hill slopes, many of them being steep having shallow soil and sometimes extremely rocky. Consequently, the hill slopes carry a poor quality Sal forest and at places dry miscellaneous forest.

The older metamorphic, Singhbhum granites, Iron ore, super group of rocks and tertiary formations constitute the main rock units of Baripada Forest Division.

Mineral Resources

The major minerals available in the jurisdiction of this Division are as under.

1. Quartz and quartzite

Million tonnes of quartz and quartzite, containing 96% of silica, has been estimated around Balimundali.

2. Soap stone

Soap stone and steatites occur in Lulung.

3. Pyrophyllite

Occurrence of Pyrophyllite of green gray and yellowish colour is seen towards South East of Bangiriposi.

4. Copper

Occurrence of copper has been reported at some locations. Mineralization is marked within the granite-granophyre of older metamorphic. Surface indications of chalcopyrite, malachite and Azurite stains are well noticed in the area.

5. Galena

Occurrence of galena is noticed towards east of Pithabata.

6. Kyanite

Occurrence of kyanite associated with quartz found near Panijia of Chandua Tahasil.

7. Mica

Small occurrence of mica is recorded near Sirsa and Bangiriposi.

8. Kankar

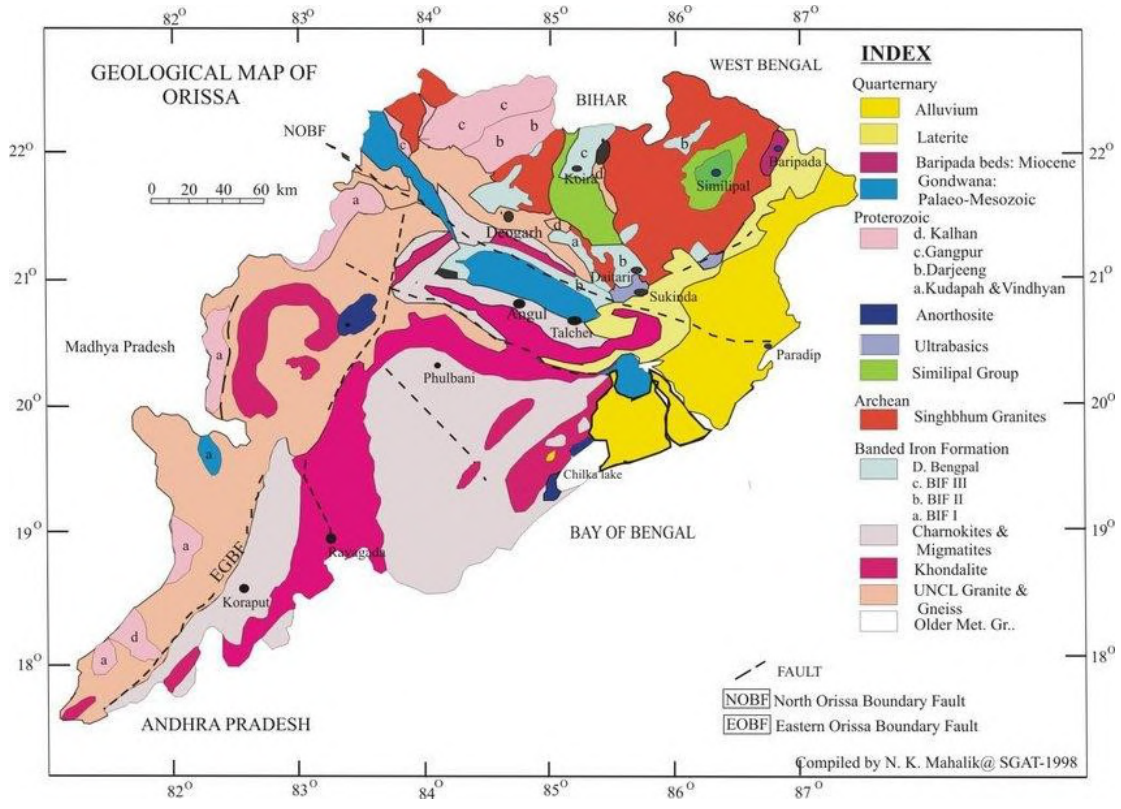
Occurrences of Lime kankar have been marked near Balidiha and Udala.

9. Road metal / Decorative stones

Road metals are mainly obtained from rocks like dolerite, gabbro, basics and ultrabasic available all over the Division.

Blocks of granites, dolerites, quartzite, quartz-schists, Phyllites are utilized as building materials.

Some of the granites, gabbros, dolerites and ultra basics reported around Udala-Kaptipada are suitable for use as decorative stones.



Map 9: The Geological Map of Odisha

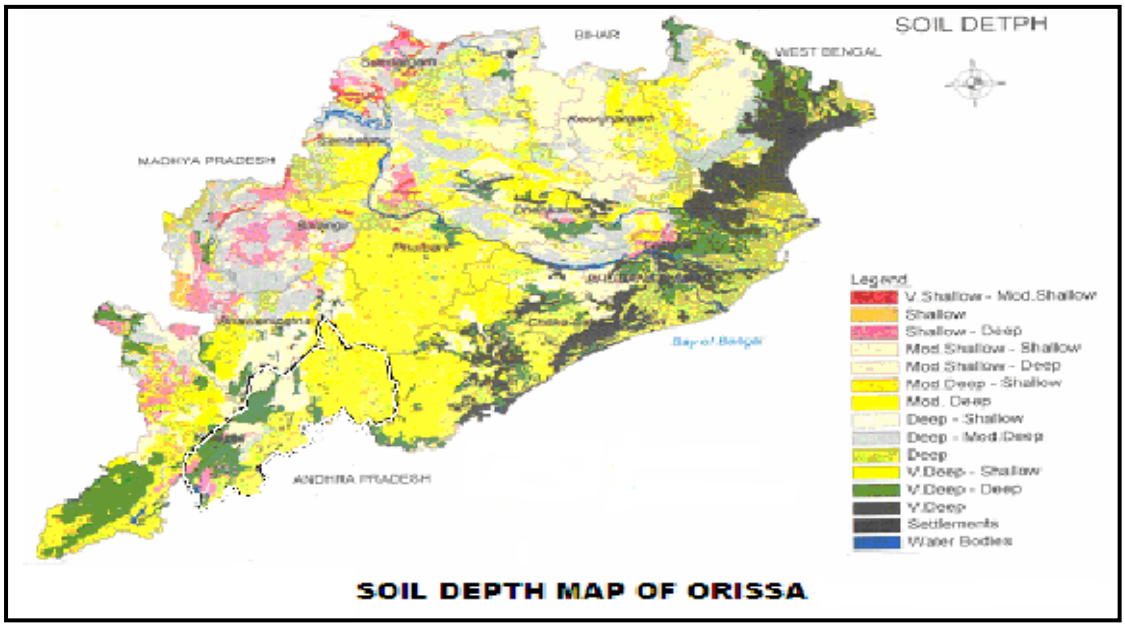
1.3.2.1 Description of Rocks

The description of different rocks and their availabilities in the forest blocks have been discussed briefly as follows.

Table 9: Description of rock

Sl. No.	Name of rocks	Description	Location
1	Quartz	The band of syenite occurs within band of granular Quartzite. It is medium to course grained in texture and white in colour. It is composed mainly of feldspar with minor amount of hornblende. It is quite big in size and contains Quartz. It is marked along the foliation plains.	Balimundali, Baldiha, Panijia, Kusunpur.
2	Road Metals/ Decorative Stone	Road metals are mainly obtained from rocks like, dolerite, gabbros, basics and ultrabasic available all over the district. Blocks of granite, dolerites, quartzite, basics, quartz-schist, and phyllites are utilized as building materials.	Some of the granites, gabbros, dolerites and ultrabasic reported around Udala and Kaptipada.

Sl. No.	Name of rocks	Description	Location
3	Shale	The shale corresponded to the needle shale of Talcher. It is the youngest group of rocks belonging to the Gondwana group. It is found in isolated low hills.	Nearby area of Kuliana and Bangiriposi.
4	Soap Stone	Soap stone occur in Lulung, Betguda, and Fulkan.	Lulung
Source : Field Staff			

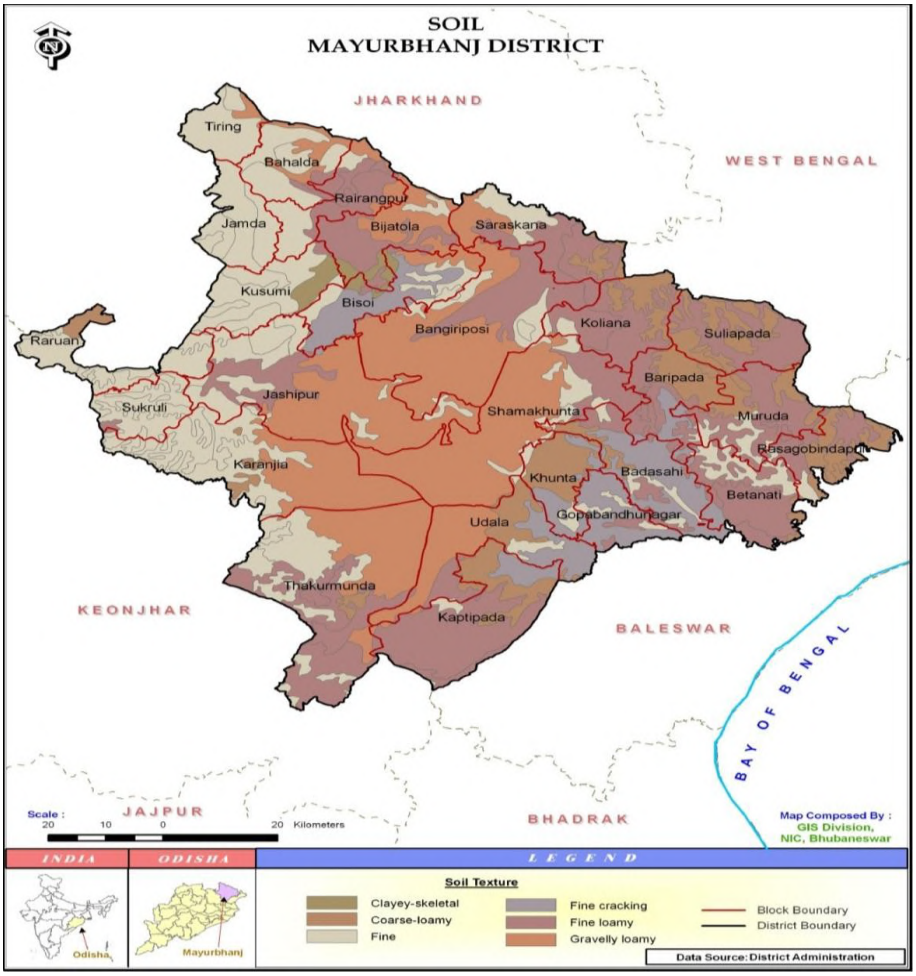


Map 10: The Soil Depth Map of Odisha

1.3.2.2 Soil

The various sub-soil rocks, enumerated above give rise to soil differing in chemical and physical properties which extend considerable influences on the growth of trees in forests. Two main type of forest soils are met within the areas. The most important of them are loam and sandy loam. This is well drained, deep and ideally suited for the growth of the Forest species. The depth of soil of course varies from locality to locality. This type of soil is mostly confined to the valleys and lower slopes of the hills.

The second type of soil, which is extensively seen in the plain forest, is the laterites. It is a red clay or clay loam and often shallow. At places it is deep. As laterite is not favourable to species other than Sal, Sal forms a pure crop. The detail block wise soil types are enclosed as **Appendix -III**.



Map 11: Soil Map of Mayurbhanj District

1.3.2.3 Soil Profile

The soil of the Baripada Forest Division may be broadly classified into Matured Red, Lateritic soil (Alfisols) and Mixed Grey Soil (Inceptisols) with coarse parent materials (Entosols). The red soil is further classified into three subgroups namely, typical soil, Red loamy soil and Clay - loam soil. Red loamy soil is found near riverbanks. The clay- loam type is found in the sub-Divisions of Kaptipada and Baripada. Laterite soil is found in the hill and plateau regions. Two types of laterites namely; Laterite murom and laterite rocks have so far been identified in the Division. These serve no productive value for tree growth.

1.3.2.4 Types of Soil

The different types of soil noticed in this tract have been discussed below.

Table 10: Analysis of soil

Sl. No.	Name of soil	Description and Analysis of Soil	Distribution into Forest blocks	Suitable to trees
1	Black Cotton	This is derived from the alteration of Basaltic rock (Igneous Volcanic), Deccan Trap, Dharwar Schist, Lime Stone and Granites. It is predominately seen at number of places as patchy occurrences. This is heavy and clay in nature during rainy season but pronounced cracks appear on the surface during dry months. It is neutral to alkaline, poor in nitrogen and phosphorus but rich in potash and lime content. pH varies from 7.4 to 7.7. The depth of the soil extends up to 122 cm.	Hatikot RF of Pithabata Range, Pundala RF of Dukura Range	Babul, Palas, Gohira, Khair
2	Calcareous Soil	Calcareous soil containing nodular lime ghosting occurs mainly on the foot hills towards the west of the valleys and in the eroded areas seen in lower catchment of the nalas. This soil is generally stiff clays with nodules of limestone carrying a poor crop of calcareous plants. Sal wherever it occurs on such soil is very stunted and sparse.	Itamundia RF, Dukura RF,	Khair Neem Sisoo Karanja Jamun
3	Brown	The soil originated from charnockite, Khondalite, Granite and Pegmatite is grayish to reddish in colour. It is plastic in nature and has good water holding capacity. This type of soil is very fertile and support luxuriant growth of vegetation. The pH value varies from 4.0 to 5.8. The depth varies up to 183 cm.	Reserve Forest of K.C. Pur, Gandigada, Budhikhamar, Asanabani, Sukhilakhali, Chandua, Patpur, Jamsole, Khanua	Sal, Bija, Sisoo, Asan, Harida, Bahada
4	Lateritic	The Talchir formation contains mostly Shale and Sandstone, which are easily weathered and soil originated from them impart a clayey loam texture. Due to presence of clay, the water retaining	Reserve Forest of Asanabani, Kerko	Sal, Asan, Neem, Bela, Gambhari, Teak

Sl. No.	Name of soil	Description and Analysis of Soil	Distribution into Forest blocks	Suitable to trees
		power of loamy sandy soils are quite good. Stream and nalas passing through the talchir formation are perennial and semi-perennial. The pH value varies from 5.2 to 5.9.		
5	Reddish	It is mainly associated with acidic granites, gneisses and schist. These are typically coarse, often with ferric concentration, neutral or acidic reaction, poor in mineral nutrients and organic matter. This type of soil exercises great influence on vegetation and usually carries miscellaneous species. It has medium water holding capacity. The pH varies from 4.9 to 7.2. The depth is up to 165 cm.	Chengua-Mangalpur RF	Sal, Bija, Asan, Dhaura, Sisoo, Teak
Sources – Deputy Director Mines and Outgoing Plan				

1.3.2.5 Soil Structure:

The soil samples collected from the representative forest blocks of Baripada Forest Division shows low organic carbon besides mostly low potassium and phosphorous contents as well implying that the plantations to be raised, will need application of fertilizers to some extent. The parameters for assessment of these nutrient values are given at Table No. 11. The soil analysis has been done at Soil Testing Laboratory of OUAT, Bhubaneswar.

Table No.11:Parameters for Nutrient Value Assessment

CONTENT	LOW	MEDIUM	HIGH
Organic Carbon	Up to 0.50%	0.51 to 0.75%	0.76% and above
Phosphorous(P_2O_5)	0 to 14 kg/ha	14 to 40 kg/ha	More than 40 kg/ha
Potassium(K_2O)	up to 118 kg/ha	118 to 280 kg/ha	More than 280 kg/ha

Distribution of Micronutrient of Pedon Soils

Micronutrients play vital role in plant growth production and quality of produced through their participation in metabolic process biochemical reactions and increase in the utility of major and secondary nutrient in plants. So far, there are 8 elements in

number i.e. Fe, Mn, Cu, Zn, B, Mo, Cl and Ni. There is plenty of Cl and Ni, supplied to plant from soil water and air source. So, there analysis was avoided. The profile samples were analyzed for Fe, Mn, Cu, Zn and B.

Table No.12: Distribution of Micronutrient of Pedon Soils						
Block	**Soil Depth in cm**	**Zn (ppm)**	**Fe (ppm)**	**Cu (ppm)**	**Mn (ppm)**	**B (ppm)**
Saraskana	0-20	0.13	59.90	0.98	29.70	1.05
	20-50	0.25	39.40	0.42	17.10	0.91
	50-70	0.50	24.20	0.32	16.60	0.71
	70-100	0.60	13.50	0.06	16.20	0.44
Baripada	0-12	0.57	68.54	0.97	15.70	0.52
	12-32	0.38	51.04	0.45	14.60	0.46
	32-57	0.15	40.30	0.25	12.60	0.34
	57-100	0.14	29.80	0.17	9.10	0.31
Shamakhunta	0-20	0.49	55.60	0.56	20.80	0.67
	20-46	0.31	61.30	0.49	16.10	0.58
	46-67+	0.20	75.60	0.26	14.50	0.31
Source- KBK, Mayurbhanj-1, Shamakhunta						

Soil Organic Carbon (SOC %)

The Soil Organic Carbon (SOC) is considered life-line of soil health. It influences many physical, chemical and biological properties of soil. It is the principal source of nutrition for plant microbes. It has lot of bearing on production and productivity of forest trees. It is important criteria for taxonomic classification of soil.

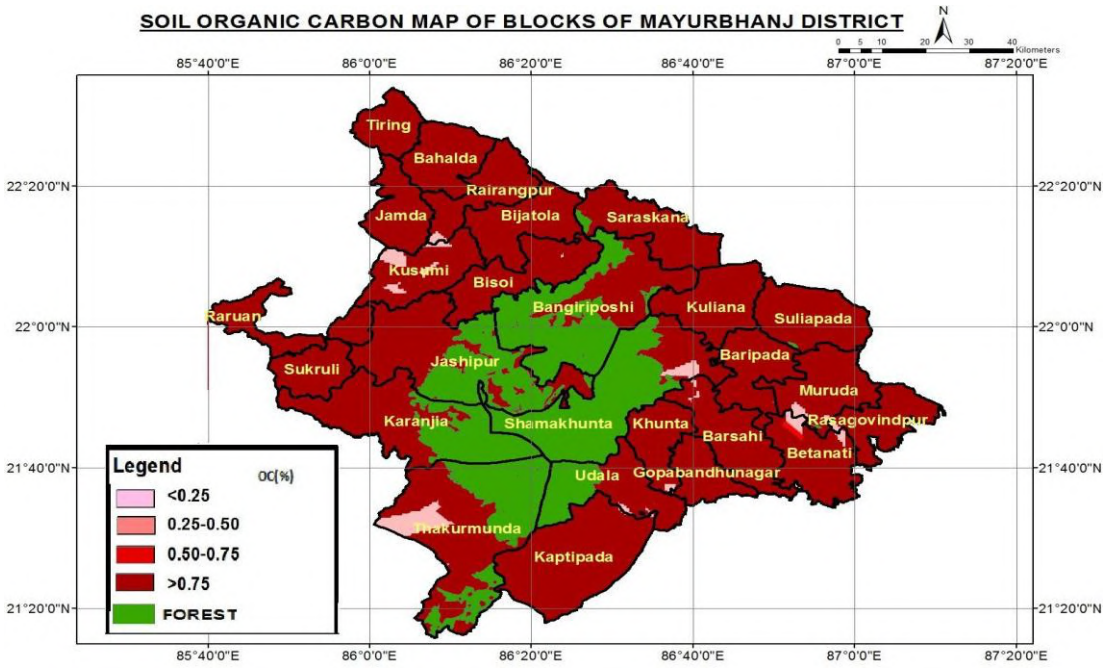


Table No.13: Organic Carbon, pH and EC distribution in surface soils

Sl. No.	Name of Block	Organic Carbon %	pH	EC (dS/ m)
1	Muruda	1.608	4.93	0.08
2	Rasagovindpur	1.540	5.21	0.09
3	Bangiriposi	1.228	5.36	0.08
4	Kuliana	0.819	5.53	0.17
5	Suliapada	0.800	4.94	0.08
6	Shamakhunta	1.173	5.36	0.05
7	Baripada	0.812	5.09	0.07
8	Saraskana	0.713	5.68	0.12
9	Kaptipada	1.253	5.16	0.12
10	Gopabandhunagar	0.968	4.67	0.10
11	Udala	1.513	4.76	0.09
12	Khunta	1.540	4.59	0.05
13	Badasahi	1.555	4.45	0.11
14	Betnoti	0.958	4.51	0.07
Source- KBK, Mayurbhanj-1, Shamakhunta				

The soil in Baripada Forest Division is slightly acidic to neutral in nature though mineralogically, it is a mixed soil with practically nil calcareous contents.

1.3.2.6 Soil Texture

The relative proportion of the various size groups of individual soil particles are referred to as soil separation. Depending on the size of the particles of the soil, it can be grouped as given in the table below.

Table 14: Soil group

Sl. No.	Name of Soil Group	Size of Particles in mm
1	Clay	< 0.002
2	Silt	0.002 to < 0.02
3	Fine Sand	0.02 to < 0.2
4	Coarse Sand	0.2 to < 2.0
5	Gravel	2.0 and above

In Baripada Forest Division sand % in various soils decrease with depth from 87% sand in top 20cm soil to 50% sand in 70 to 100 cm depth. Silt % in various soils increase with depth from 4% silt in top 20cm soil to 14% silt in 70 to 100 cm depth. Clay % in various soils increase with depth from 10% clay in top 20 cm soil to 35% clay in 70 to 100 cm depth.

1.3.2.7 Soil Classes

Soil is a dynamic weathered layer of the Earth‘s crust and its composition varies in different soil classes.

1.3.2.8 Sandy Soils

Sand is a naturally occurring granular material composed of finely divided rock and mineral particles. It is defined by size, being finer than gravel and coarser than silt. Sand can also refer to a textural class of soil or soil type; i.e., a soil containing more than 85 percent sand-sized particles by mass.

The composition of sand varies, depending on the local rock sources and conditions, but the most common constituent of sand in inland continental settings and non-tropical coastal settings is silica (Silicon dioxide or SiO_2), usually in the form of quartz. The second most common type of sand is Calcium carbonate, for example, aragonite, which has mostly been created, over the past half billion years, by various forms of life, like coral and shell-fish. For example, it is the primary form of sand apparent in areas where reefs have dominated the ecosystem for millions of years.

Sandy soils are present in foot hill of Baripada Forest Division. The water holding capacity is very less and the soil reaction is acidic. The soil is also poor in nutrients.

1.3.2.9 Laterite Soil

Lateritic soils in Baripada Forest Division are characterized by compact vesicular structure and rich in hydrated oxides of iron and aluminum with small amounts of manganese, titanium and quartz. Degraded laterites are honey-combed structure. These soils are loamy sand to sandy loam in the surface having hard clay pan in the subsoil. Crusting is problem in upland laterite. Presence of higher amount of exchangeable aluminum and manganese results in slightly acidic to strongly acidic soil with pH ranging between 4.5 to 5.8. These soils are poorly fertile with low organic matter. Available nitrogen and phosphorus are low and potash is medium. Nitrogen is lost due to leaching and phosphate becomes unavailable due to fixation by Fe and Al oxides. Cation exchange capacity of the soil is low. Sulphur is absorbed as pyrites or zinc sulphide. Medium and low land soils adjacent to uplands suffer from iron toxicity due to lateral movement of soluble iron from upper ridges.

1.3.2.10 Soil Erosion

All types of soil erosion such as, sheet erosion, rill erosion, gully erosion and stream bank erosion are observed in this Division. The factors contributing to erosion are formation of extraction paths and roads, permanent opening of canopy, overgrazing, practicing podu cultivation, quarrying and forest fire. The soil erosion is observed to be very high in the degraded forest areas in the foot hills of Similipal. Soil erosion is equally present in plain forest blocks such as Betnoti and Deuli Range.

Table 15: Soil Class and Texture

Sl. No.	Soil Class	% Limits of mixture			Remarks
		Sand	Silt	Clay	
1	Clay	< 10	< 50	> 30	Homogeneous to feel with finger, very sticky and plastic when wet; can be made into ring, compact and hard when dry. This is grouped under Heavy Soil.
2	Sandy	> 85	< 15	< 15	This is grouped under Light Soil.
3	Sandy loam	50-80	20-25	20-25	Heterogeneous to feel; slightly plastic when wet; can be made into thread with difficult. This is grouped under Light Soil.
4	Loamy sand	80-85	15-20	15-20	Sandy to touch; cannot be made into thread. This can be grouped under Medium Soil.
5	Silt Loam	< 50	> 50	< 20	Contains hydrated iron and aluminum oxide; having a cellular structure.
6	Silt Clay	<20	50-70	30-50	It contains mostly the residue of organic materials. It is not plastic in nature. It has good water retaining capacity.
7	Sandy Clay	50-70	<20	30-50	The soil originating from some of the Khondalite rocks of the Eastern Ghat Group are sandy clay. It has medium water retaining capacity.
8	Clayey Loam	20-50	20-50	20-30	Contains shale and sandstones, the water retaining capacity are quite good.
9	Loam	30-50	30-50	< 20	Not homogeneous to feel with finger; Plastic when wet; does not make long thread and cannot be made into rings.

1.3.2.11 pH Value

The acidity and alkalinity of a soil solution is due to an excess of Hydrogen ions (H^+) and Hydroxyl ions (OH^-) respectively. Pure water, being the neutral body, when percolates through soil; it dissolves salt immediately and forms a very dilute solution. The extremely low concentration of ions is expressed by pH value. If the negative logarithm of the reciprocal of H ion concentration is 7 then it is called neutrality, higher values indicate alkalinity and lower values acidity. pH value does not remain constant and it has a profound influence on the distribution and growth of vegetation.

The trees that will grow better in different pH ranges have been given in the table below.

Table 16: Growth of trees in different pH value

Sl. No.	pH value	Name of the trees
1	4.5 to 5.5	Sal (best quality)
2	5.6 to 7.0	Sal (poor quality)
3	6.5 to 7.6	Teak
4	Up to 9.0	Eucalyptus hybrid
5	Up to 9.5	Khair, Sisoo
6	Up to 9.8	Neem, Karanja, Arjun

pH value of soil in Baripada Forest Division from 3.98 to 8.29. The pH value increases downwards. pH value in Saraskana Block is 4.16 in top 20cm soil to 7.92 in 70 to 100 cm depth. pH value in Baripada Block is 4.55 in top 20cm soil to 5.90 in 70 to 100 cm depth. pH value in Samakhunta is 4.38 in top 20cm soil to 6.65 in 70 to 100 cm depth.

Table 17: CD Block wise Soil pH Value

Sl. No.	Name of Block	pH
1	Muruda	4.2-6.13
2	Rasagovindpur	3.99-8.29
3	Bangiriposi	4.53-6.72
4	Kuliana	4.42-8.12
5	Suliapada	4.13-6.40
6	Shamakhunta	4.38-6.65
7	Baripada	4.55-5.90
8	Saraskana	4.16-7.92
9	Kaptipada	4.36-7.19
10	Gopabandhunagar	4.00-6.09
11	Udala	4.08-6.40
12	Khunta	4.14-5.69
13	Badasahi	3.98-6.28
14	Betnoti	4.02-5.5
Source- KBK, Mayurbhanj-1, Shamakhunta		

1.3.2.12 Mineral Resources

Minerals – The area under Baripada Forest Division has been visited from time to time since 1943-44 by several geologists of the Geological Survey of India and the State Directorate of Mines for investigation of minerals. Their investigation revealed

that the Mineral deposits of this zone are not highly significant for commercial exploitation.

The important Minerals noticed in this tract along with their description and distribution has been discussed in brief as follows.

Table 18: Description of Minerals

Sl. No.	Name of Minerals	Description	Name of Blocks
1	Quartz and quartzites	Reserve of 2.53 million tons of quartz and quartzites containing +96% of silica has been estimated around Balidiha Bandha and Kusunpur.	Near Betnoti and Kuliana.
2	White Clay	The result of disintegration and decomposition of the feldspar elements of the Gondwana formation developed White Clay. The development of this White Clay on the top of the Gondwana grits has been noticed in different nala of this tract. These minerals have considerably developed near East Deo river.	Near East Deo river.
3	Mica	The pegmatite is composed of muscovite transparent Quartz and plagioclase feldspar. Muscovite bearing pegmatite dykes have been found intrusive into the gneissic formation. Mica bearing pegmatites of cream colours are fairly numerous in rocky tracts. The materials as judged from the surface indication are not of commercial important.	Small occurrences of mica are recorded near Sirsa, Bangiriposi.
Source : Baripada Forest Division			

1.4 Climate Parameter

Baripada Forest Division is characterized by tropical to sub tropical climate with hot summer, high and well distributed rainfall during the monsoon and a cold winter. May is the hottest month with maximum temperature of 40.6^0C and January is the coldest month with minimum temperature of 5^0C. The annual rainfall is 1600.6 m.m. The monsoon generally breaks during the month of June.

The parameters like rainfall, temperature, humidity, wind, cloud and sunlight play a deciding role in shaping the climate of an area. In addition to the proximity of the sea elevation, direction of the prevailing winds and configuration of the ground are to be

borne in mind. The south eastern point of the Division is 40 kms and northern- most point (Paktia of Bangiriposi Range) is about 85 kms from the Bay of Bengal. The prevailing winds are the south-west monsoon which gives the rain to the area. The climate of this Division is Warm and humid. It is by and large good except the hazard of Malaria. Three distinct seasons are felt in this Division, these are the following.

* Summer season - Mid February to Mid-June.
* Rainy season - Mid June to October
* Winter season - November to Mid-February

There is some variation between the hill portion and plain area of the Division with regard to the climate. The hill portion receives more rainfall than the plain tract due to the perpendicular position of the hills to the direction of southwest monsoon wind. With receding of monsoon, the temperature increases during the day while decreases at the night. The winter is experienced earlier in the hill portions than the plains. Hilly area has both, more rainfall and severity of winter in comparison to the plain portion. The plain area experiences extreme temperature during summer. The abnormal rise in the temperature during the summer poses a great challenge to congenial climate of the area.

1.4.1 Climate

The average weather condition prevalent in this locality depends on solar radiation (Light, Heat and Temperature), Moisture and Wind. The climatic conditions of this locality for the year have been discussed below.

Table 19: Climatic Condition of the Locality.

Sl. No.	Climatic condition	Month	Descriptions
1	Summer	March to June	The summer season is more pronounced from mid-March to nearly end of June. The highest temperature is felt in the month of May-June. The highest temperature goes up to 48.9°C. Occasional showers with thunderstorms are a common feature experienced in this locality which is locally called Kala Baishakhi.
2	Rain	July to September	Uniform precipitation occurs mainly during June to September. But rain starts from 15th June. Practically there is no rain from December to January. Occasional shower occur during February and March. It has been observed that unusual heavy precipitation occurs, sometimes causing floods in the river systems of this Division.

Sl. No.	Climatic condition	Month	Descriptions
3	Post Monsoon	October to November	Medium to heavy shower occurs in places, which plays an important role for the vegetation.
4	Winter	December to February	Practically cold season start from mid-November and last till the end of February. But in the higher altitudes cold winter is felt till the middle of March. The continuity of dense vegetation imparts a distinct cold weather for a longer period.

1.4.2 Rainfall

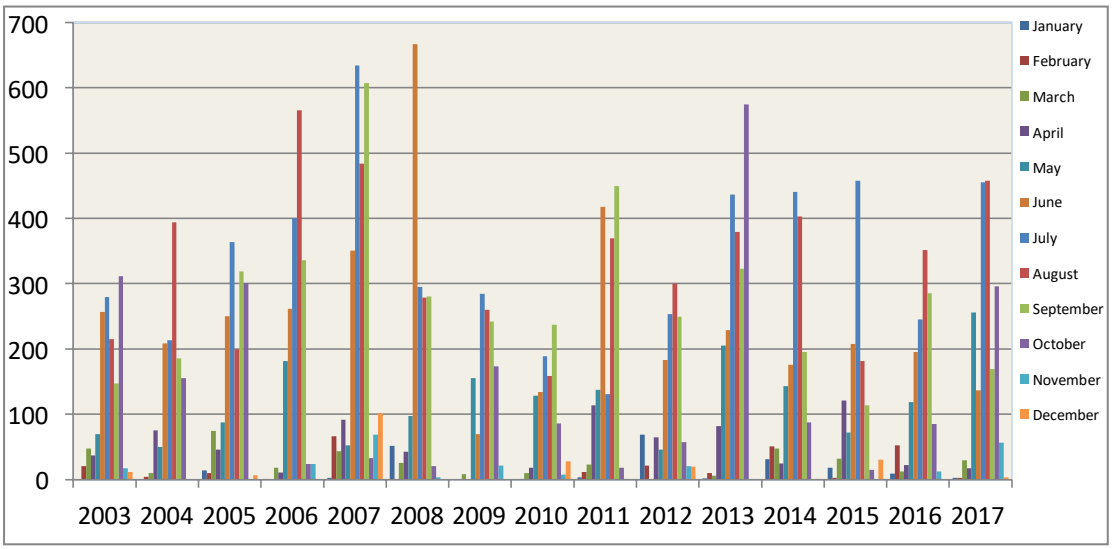
Distribution pattern of rainfall experienced in the Division is given in following statement indicating month-wise rainfall for recent years.

Table 20: Monthly Rainfall Data of Mayurbhanj District in mm

Year	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
2003	0	20.1	47.4	36.8	69.8	256.7	279.9	214.9	147.3	311.5	17.6	11.2	1413.2
2004	0	4.0	9.6	75.2	49.8	208.4	213.2	394.1	185.2	155.2	0	0	1294.7
2005	13.8	9.6	74.3	45.7	87.6	249.9	363.9	199.2	318.4	300.9	1.0	6.3	1670.6
2006	0.4	0	18.0	10.3	181.4	261.7	400.6	565.8	335.9	23.8	23.4	0	1821.3
2007	2.6	66.6	43.4	91.6	52.7	351.0	634.6	483.8	607.2	33.0	68.6	101.6	2536.7
2008	51.7	0.9	25.4	42.3	97.2	666.8	295.1	278.8	280.0	20.2	3.6	0	1762
2009	0	0	8.2	0	155.4	69.7	284.3	259.6	241.8	173.0	21.3	0	1213.3
2010	0	0.5	9.5	18.0	128.4	134.3	189.0	158.2	236.7	85.5	7.8	27.7	995.6
2011	3.3	11.1	23.3	113.6	137.5	417.7	130.5	369.7	449.8	17.7	0.2	0	1674.4
2012	69.06	20.97	0.00	64.65	45.68	183.09	253.25	299.97	249.10	57.06	20.58	19.93	1283.34
2013	1.55	9.78	5.57	82.12	205.15	228.69	436.12	379.26	323.03	574.83	0.02	0.00	2246.12
2014	30.91	50.91	47.17	24.23	143.37	175.61	440.39	403.36	195.51	87.79	0.00	0.19	1599.44
2015	18.37	2.19	31.83	121.14	72.24	207.97	457.87	181.19	113.60	15.14	0.00	30.46	1252
2016	9.23	52.61	12.29	22.38	118.73	195.46	245.28	351.25	285.27	85.39	12.10	0.00	1389.99
2017	2.2	2.2	29.4	17.2	256.2	136.8	455.1	457.4	169.4	296.0	56.2	3.5	1881.6
Total	203.12	251.46	385.36	765.22	1801.17	3743.82	5079.11	4996.53	4138.21	2237.01	232.4	200.88	24034.29

Sources – District Planning and Monitoring Unit. Mayurbhanj, Baripada

Monthly Rainfall Figure of Mayurbhanj District in mm



1.4.2.1 Observation and study of exceptional rainfall in May, 1995

On study of the rainfall data of the year 1995, it is observed that this Division had received unprecedented torrential rainfall in the month of May. Not only this Division but also the entire State had been affected by such unprecedented rains by a series of depressions created in the Bay of Bengal.

1.4.2.2 Analysis of Rainfall

Since the monsoon wind flows directly from Bay of Bengal and interrupted by the Similipal hill range, the precipitation is generally higher near Similipal hill areas and lesser in plains. From the topography of the area and direction of the prevailing winds, it can be seen that the rainfall is under declining trend from the Southwest to Northeast with exceptions in some patches caused by the direction of hill ranges. The average rainfall is about 1602mm / annum having maximum downpour extending from June-September, which is the rainy season of the area.

Maximum rainfall occurs during July and August. There is well distribution pattern of rainfall experienced in the Division.

1.4.2.3 Cloudiness

During the southwest monsoon season, the sky remains very cloudy but during the post monsoon months it is moderately cloudy. During summer months occasional cloud is noticed.

1.4.2.4 Hail

The freezing of raindrops into pellets of ice varying in diameter occur during the pre-monsoon period of May and June. Hailstorms occur along with high velocity wind and thunders in this zone.

1.4.3 Temperature

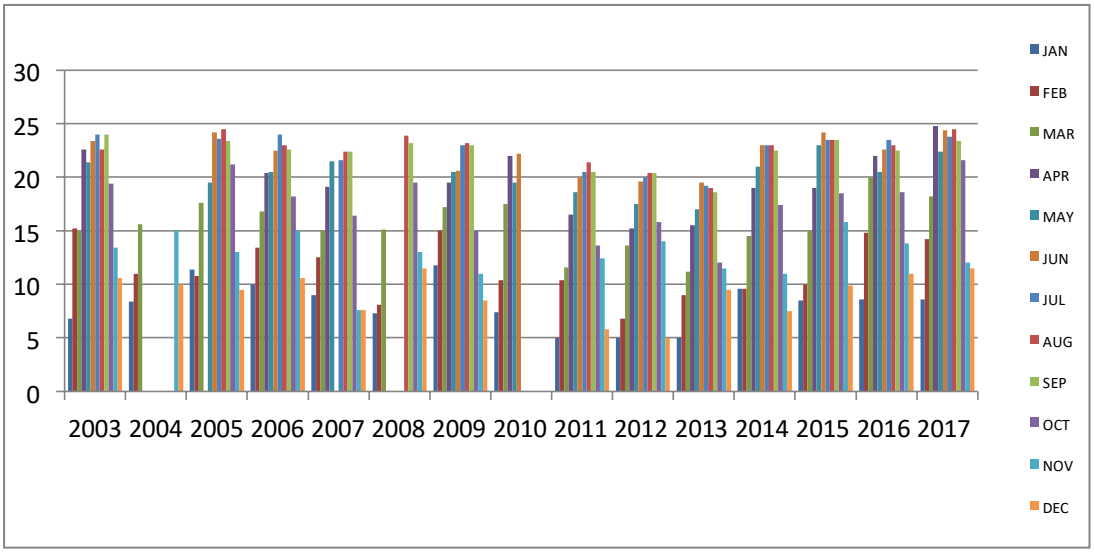
As already narrated earlier, summer season prevails from Mid-February to June. During this period temperature is quite high and sometimes unbearable. May is the hottest month of the year while January is the coldest. The temperature recorded at Baripada, the District Headquarter is furnished year wise and month wise for last fifteen years indicating the mean monthly minimum and maximum temperature. The maximum temperature during hot weather rises up to 48.9° C (120° F), while the minimum temperature during cold weather comes near about 4.4° C (40° F).

Table 21: Temperature of Mayurbhanj District in Degree Celsius

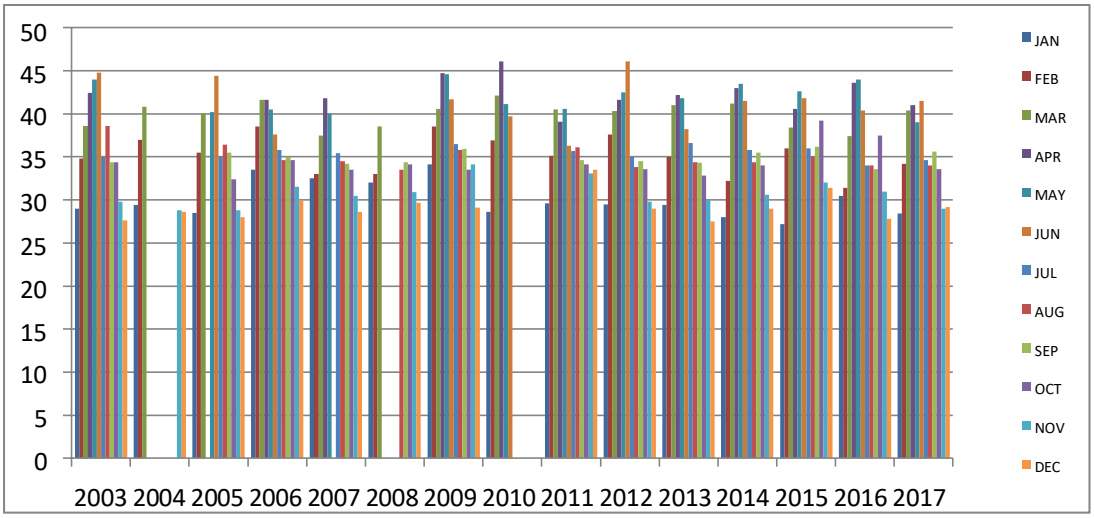
Year	Min/ Max	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2003	Min	6.8	15.2	15.0	22.6	21.4	23.4	24.0	22.6	24.0	19.4	13.4	10.6
	Max	29.0	34.8	38.6	42.4	44.0	44.8	35.0	38.6	34.4	34.4	29.8	27.6
2004	Min	8.4	11.0	15.6	NA	NA	NA	NA	NA	NA	NA	15.0	10.0
	Max	29.4	37.0	40.8	NA	NA	NA	NA	NA	NA	NA	28.8	28.6
2005	Min	11.4	10.8	17.6	NA	19.5	24.2	23.6	24.5	23.4	21.2	13.0	9.5
	Max	28.5	35.5	40.1	NA	40.2	44.4	35.0	36.4	35.5	32.4	28.8	28.0
2006	Min	10.0	13.4	16.8	20.4	20.5	22.5	24.0	23.0	22.6	18.2	15.0	10.6
	Max	33.5	38.5	41.6	41.6	40.5	37.6	35.8	34.6	35.0	34.6	31.5	30.0
2007	Min	9.0	12.5	15.0	19.1	21.5	NA	21.6	22.4	22.4	16.4	7.6	7.6
	Max	32.5	33.0	37.5	41.8	40.0	NA	35.4	34.5	34.2	33.5	30.5	28.6
2008	Min	7.3	8.1	15.1	NA	NA	NA	NA	23.9	23.2	19.5	13.0	11.5
	Max	32.0	33.0	38.5	NA	NA	NA	NA	33.5	34.4	34.1	30.9	29.7
2009	Min	11.8	15.0	17.2	19.5	20.5	20.6	23.0	23.2	23.0	15.0	11.0	8.5
	Max	34.1	38.5	40.6	44.7	44.6	41.7	36.5	35.8	35.9	33.5	34.1	29.1
2010	Min	7.4	10.4	17.5	22.0	19.5	22.2	NA	NA	NA	NA	NA	NA
	Max	28.6	36.9	42.1	46.1	41.1	39.7	NA	NA	NA	NA	NA	NA
2011	Min	5.0	10.4	11.6	16.5	18.6	20.0	20.5	21.4	20.5	13.6	12.4	5.8
	Max	29.6	35.1	40.5	39.1	40.6	36.3	35.7	36.1	34.6	34.1	33.1	33.5
2012	Min	5.0	6.8	13.6	15.2	17.5	19.6	20.0	20.4	20.4	15.8	14.0	5.0
	Max	29.5	37.6	40.3	41.6	42.5	46.1	35.0	33.8	34.5	33.6	29.8	29.0
2013	Min	5.0	9.0	11.2	15.5	17.0	19.5	19.2	19.0	18.6	12.0	11.5	9.5
	Max	29.4	35.0	41.0	42.2	41.8	38.2	36.6	34.4	34.3	32.8	30.0	27.5
2014	Min	9.6	9.6	14.5	19.0	21.0	23.0	23.0	23.0	22.5	17.4	11.0	7.5
	Max	28.0	32.2	41.2	43.0	43.5	41.5	35.8	34.4	35.5	34.0	30.6	29.0
2015	Min	8.5	10.0	15.0	19.0	23.0	24.2	23.5	23.5	23.5	18.5	15.8	9.9
	Max	27.2	36.0	38.4	40.6	42.6	41.8	36.0	35.0	36.2	39.2	32.0	31.4
2016	Min	8.6	14.8	20.0	22.0	20.5	22.6	23.5	23.0	22.5	18.6	13.8	11.0
	Max	30.5	31.4	37.4	43.6	44.0	40.4	34.0	34.0	33.6	37.5	31.0	27.8
2017	Min	8.6	14.2	18.2	24.8	22.4	24.4	23.8	24.5	23.4	21.6	12.0	11.5
	Max	28.4	34.2	40.4	41.0	39.0	41.5	34.6	34.0	35.6	33.6	29.0	29.2

Sources – Director Metrological Centre, Bhubaneswar

Minimum Temperature of Mayurbhanj District in Degree Celsius



Maximum Temperature of Mayurbhanj District in Degree Celsius



Climatic Parameters of Baripada Forest Division from 1991 to 2002 is given below:-

Year	Average Mean Monthly Temp.Max.(oC)	Average Mean Monthly Temp.Min.(oC)	Rainfall(mm)	Relative Humidity
1991	32	24	1318.7	76
1992	32	25	1071	74
1993	32	25	1468.2	79
1994	33	26	1671.2	75
1995	31	25	1530.5	81
1996	32	25	1184.5	77
1997	34.7	18.1	1533.1	25
1998	36.6	17.3	1233.5	27
1999	36.3	18.5	1670.9	79.5

Year	Average Mean Monthly Temp.Max.(oC)	Average Mean Monthly Temp.Min.(oC)	Rainfall(mm)	Relative Humidity
2000	35	18.1	1290.3	81.5
2001	36.9	18	1720.3	80.5
2002	31.1	21.1	1153.7	84.6
Source - State of Odisha Report				

1.4.4 Wind

It is light to moderate but slightly increases during summer and monsoon season. In addition to the proximity of the sea, elevation, direction of the prevailing winds and configuration of the ground also impacts wind speed. The prevailing winds are the south-west monsoon which gives the rain to the area.

1.4.5 Humidity

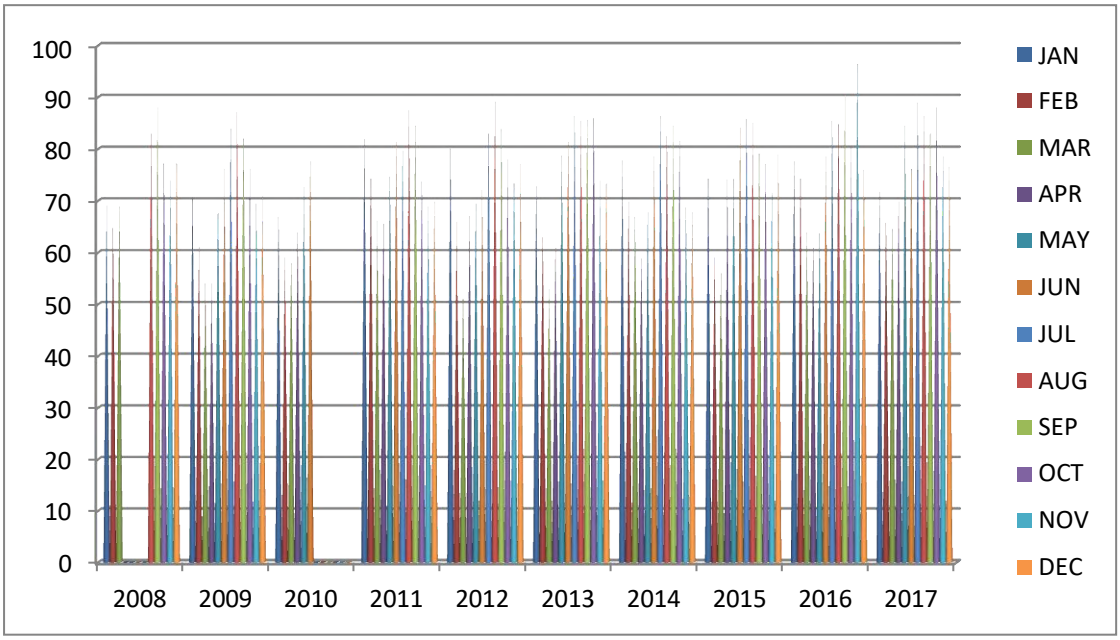
Humidity plays a definite role in determining the type of vegetation in the area under the influence of the sea, as it has been described in the fore-going paragraph under climate. The intensity of the heat is lowered in the area as a result of which the actual vapour pressure remaining the same, the relative humidity goes up because the maximum vapour pressure decreases with fall in temperature. Heavy dews occur in the area throughout the winter till the month of February. The type of vegetation it carries gives the indication of their association with the coastal climate. The up-to-date relative humidity figure is given below.

Table 22: Average relative humidity of Mayurbhanj District from 2008-2017

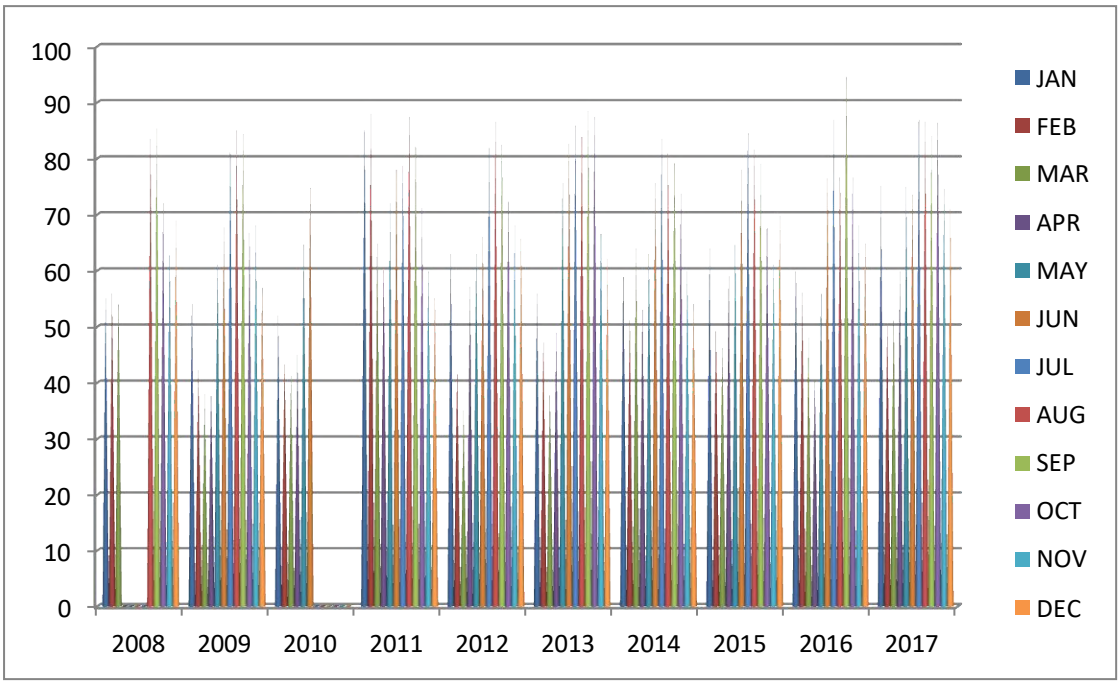
Year	8:30 am/ 17:30 pm	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	8:30 am	69	67	69	NA	NA	NA	NA	86	88	80	74	80
	17:30 pm	56	56	56	NA	NA	NA	NA	85	87	72	65	69
2009	8:30 am	73	61	56	54	70	76	87	87	85	76	72	71
	17:30 pm	55	43	38	39	62	69	84	85	86	68	68	59
2010	8:30 am	68	60	59	65	74	79	NA	NA	NA	NA	NA	NA
	17:30 pm	52	44	42	45	67	76	NA	NA	NA	NA	NA	NA
2011	8:30 am	82	77	66	68	76	83	81	89	86	75	70	71
	17:30 pm	88	88	66	61	72	81	80	89	85	71	61	56
2012	8:30 am	83	66	53	67	72	72	86	89	87	78	76	77
	17:30 pm	64	43	35	58	64	66	85	88	84	75	68	67
2013	8:30 am	74	64	54	62	80	83	88	87	87	89	74	76
	17:30 pm	57	48	39	49	77	84	86	87	90	89	69	62
2014	8:30 am	79	71	68	60	69	80	88	84	86	83	70	69
	17:30 pm	61	52	65	55	63	77	85	81	82	75	61	56
2015	8:30 am	77	59	58	74	77	84	89	85	82	77	74	79
	17:30 pm	64	51	47	60	67	78	86	83	79	70	62	71

Year	8:30 am/ 17:30 pm	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016	8:30 am	79	77	65	62	66	80	87	88	90	82	100	76
	17:30 pm	61	57	48	41	58	78	87	78	98	78	68	66
2017	8:30 am	73	67	67	71	86	79	89	88	86	88	80	78
	17:30 pm	75	51	53	61	75	75	90	88	84	88	76	71
Sources – Director Metrological Centre, Bhubaneswar													

Average relative humidity of Mayurbhanj District from 2008-2017 at 8.30am



Average relative humidity of Mayurbhanj District from 2008-2017 at 17.30pm



1.4.6 Floods

Minor floods are common phenomenon in the tributaries and sub-tributaries of Budhabalanga and Subarnarekha. During 2009, 2011 and 2013 Division suffered from flood due to heavy rain fall and many people were affected and houses were damaged.

River system of Baripada Forest Division

Name of rivers: Subarnarekha, Sunei, Budhabalanga, Jambhira, Gangahar, Kalo, Deo

Important Nalla: Jarali, Sarali, Muruni, Naluha, Palpala.

List of irrigation projects: Kalo, Sunei, Badjor, Jambhira, Haldia, Subarnarekha.

Cause of deterioration of watershed: Degradation of forest vegetation, Irregular agricultural practices are major cause of soil erosion leading to deterioration of watersheds.

Soil types: 1. Lateritic, 2. Sandy loam, 3. Clayey loam.

Water table: Pre-monsoon : 1.5m-12.85m Below Ground Level (BGL)

Post-monsoon: 1.3 m- 8.6 m BGL

Major River System:
1. Budhabalanga
2. Subarnarekha
3. Jambhira
4. Gangahar
5. Sone
6. Deo
7. Kansha- Bansha

1.4.7 Drought

Drought poses a serious problem in this tract, in years of low rainfall. Cultivation mainly depends on rain and failure of rain at the time of need brings disaster to the farmers. The drought during the year 2010 was quite severe and it hit the forest and non-forest areas equally. The drought of 2010 caused small-scale death of trees, poles, saplings and seedlings in patches. People had to obtain drinking water from river bed

by digging temporary wells. Wild Life became easy prey as they came out from the forest in search of drinking water.

1.4.8 Cyclone

Severe damage by cyclone was noticed during the year 2013. But every year some trees are uprooted by high velocity wind. Low scale damage was noticed to the thatched houses in different villages.

2. CHAPTER – II

MAINTENANCE/ INCREASE IN THE EXTENT OF FOREST AND TREE COVER

2.1 Area of Forest under Different Legal Classes (RF, PF, UF and Others):

The Revised Working Plan of Baripada Forest Division prepared for the period 1996-97 to 2015-16 by Sri A.O.F. Bakhla, IFS includes all the Reserve Forests, Demarcated Protected Forests and Proposed Reserved Forests except Similipal R.F. Further, part of notified Village Forests has also been included in the Revised Working plan of Baripada Forest Division.

The total Forest in Baripada Forest Division is **50488.734** ha of forest land, which comprises 124 RFs of **46373.740** ha of 06 Nos. PFs of **989.230** ha, 15 PRFs of **2484.450** ha, 127 VFs of **588.314** ha and UF of **53** ha, the area of which has been given in **Appendix – I**. For preparation of Revised Working Plan, out of total forest land of 50488.734 ha, unclassed forest of 53 ha has been omitted for convinence.

The area statements of different categories of Forests of Baripada Forest Division, included in the Revision of Working Plan, are given here.

Distribution of Forest and Area:

2.1.1 Reserve Forest (R.F.)

The revised Working Plan is prescribed for 124 numbers of Reserve Forests. The area is 46373.740 ha. The detail of RFs is given below.

Table No.23: Reserve Forests of Baripada Forest Division

Sl. No.	Name of Range	Name of RF Block	Area (in ha.)
1	PITHABATA	Baldiha R.F.	110.130
2		Bhagabat Chandrapur R.F.	806.280
3		Budhikhamari R.F.	863.100
4		Dungurusahi R.F.	10.950
5		Hatikote R.F.	556.840
6		Lulung-Purunapani R.F.	223.310
7		Manchabandha R.F.	1020.920

Sl. No.	Name of Range	Name of RF Block	Area (in ha.)
8	DUKURA	Aghasole R.F.	37.550
9		Badsahi R.F.	340.740
10		Bidhyadharpur R.F.	238.760
11		Chakradharpur R.F.	141.310
12		Chengua-Mangalpur R.F.	79.640
13		Deulia R.F.	241.670
14		Gojodi-Damodarpur R.F.	33.020
15		Haldia R.F.	52.000
16		Itamundia R.F.	111.370
17		Jarkani R.F.	10.680
18		Kanpura R.F.	533.850
19		Kuldiha R.F.	25.250
20		Pundala R.F.	17.970
21		Purunapani R.F.	42.730
22		Belpal R.F.	110.600
23		Dukura R.F.	162.750
24		Itamundia-Jamuna R.F.	111.250
25		Khanua R.F.	113.680
26		Kerko R.F.	110.070
27	RASGOVINDPUR	Amarda R.F.	1512.200
28		Betnasia R.F.	110.230
29		Baghajharan R.F.	147.950
30		Baldiha R.F.	95.830
31		Chitrada R.F.	422.640
32		Jamsole R.F.	434.300
33		Moroda R.F.	1479.140
34		Nalagaja R.F.	260.290
35		Nichuapada R.F.	52.280
36		Nuajhalia R.F.	50.500
37		Nunchatia R.F.	148.270
38		Sarumula R.F.	330.220
39		Sukhilakhali R.F.	231.310
40		Bharadasole R.F.	50.670
41	UDALA	Anantasahi R.F.	7.120
42		Belakuti R.F.	223.380
43		Bhandagaon R.F.	122.210
44		Charada R.F.	7.120
45		Dhaundia R.F.	524.790
46		Dimgadia R.F.	6.960
47		Dugdha R.F.	35.290
48		Ghantasila R.F.	5.340
49		Jaypur R.F.	27.800
50		Khunta R.F.	427.990
51		Kuamara R.F.	229.530
52		Kuriakhunta R.F.	7.450
53		Marsigaon R.F.	263.320
54		Nahara R.F.	161.870
55		Naupada R.F.	324.380
56		Mundhakata R.F.	20.400
57		Phuljhari – (A) R.F.	315.650
58		Purunabaripada R.F.	25.850

Sl. No.	Name of Range	Name of RF Block	Area (in ha.)
59	UDALA	Sialia R.F.	34.320
60		Sunduria R.F.	2.430
61		Sirathali R.F.	74.140
62		Udala R.F.	533.930
63	BETNOTI	Asanabani R.F.	810.170
64		Asankhali R.F.	12.950
65		Badampur R.F.	952.290
66		Badguma R.F.	28.970
67		Baisinga R.F.	108.440
68		Balka R.F.	23.960
69		Bartana R.F.	194.890
70		Basantapur R.F.	113.800
71		Beldiha R.F.	41.600
72		Bhimpur R.F.	18.290
73		Bishrampur R.F.	42.250
74		Chhatnna R.F.	393.510
75		Daldali R.F.	71.220
76		Dalki R.F.	827.970
77		Dumapada R.F.	224.350
78		Durgapur R.F.	961.840
79		Gad-deulia R.F.	58.730
80		Gandigadha R.F.	1085.180
81		Garudabasa R.F.	71.870
82		Gopalpur R.F.	10.880
83		Gobindapur R.F.	11.820
84		Haripur R.F.	41.280
85		Hatijhuri R.F.	109.110
86		Hempur R.F.	290.790
87		Ajadiha R.F.	2.100
88		Jagannathpur R.F.	452.590
89		Jarka R.F.	6.630
90		Jugal R.F.	305.290
91		Kalma R.F.	24.360
92		Kapoi R.F.	109.260
93		Ketakisole R.F.	39.330
94		Khadikapada R.F.	75.110
95		Khetrapatana R.F.	4.210
96		Khiripada R.F.	420.540
97		Krushnachandrapur R.F.	1272.070
98		Kochilakhunta R.F.	259.320
99		Machhapada R.F.	62.810
100		Mantapal R.F.	222.730
101		Merda R.F.	495.820
102		Mohanpur R.F.	35.130
103		Nuagaon R.F.`	39.330
104		Phuljhari R.F.	217.420
105		Purunia R.F.	442.300
106		Raikama R.F.	191.340
107		Rautra R.F.	119.460
108		Sarbana R.F.	41.120
109		Thakurtota R.F.	73.330

Sl. No.	Name of Range	Name of RF Block	Area (in ha.)
110	BETNOTI	Bhalukchua R.F.	199.430
111		Totapada R.F.	65.070
112		Tikayatpur R.F.	160.960
113		Patpur RF	141.480
114	DEULI	Andhari R.F.	731.630
115		Chandua R.F.	3073.120
116		Deuli R.F.	2379.260
117		Kuliana R.F.	1203.680
118		Suliapada R.F.	2889.560
119	KAPTIPADA	Asanabani (A) R.F.	262.560
120		Nachhipur R.F.	229.000
121		Notto R.F.	7707.080
122	BANGIRIPOSI	Dighi R.F.	515.940
123		Rangahudi R.F.	86.670
124		Thakurani R.F.	497.020
		TOTAL	**46373.740**

2.1.2 Proposed Reserve Forest (P.R.F.) and Protected Forest-

The revised Working Plan included 15 Proposed Reserve Forests extended over an area of 2484.450 ha. The details of PRFs in Baripada Forest Division are given below.

Table No.24: Proposed Reserve Forests of Baripada Forest Division

Name of Range	Name of Forest Block		Area in	Notification No.
PITHABATA	1	Asanabani PRF	57.030	No.604/72 dt.18.09.1972
DUKURA	2	Nigirdha-(A) PRF	15.750	No.1704/78 dt.22.12.1978
	3	Nigirdha-(B) PRF	37.120	No.1705/78 dt.22.12.1978
	4	Kukurbhuka-(I) PRF	122.820	No.274/80 dt.26.02.1980
	5	Kukurbhuka-(II) PRF	124.580	No.277/80 dt.27.02.1980
	6	Sanmokabadi PRF	129.000	No.512/79 -14564/R dt.28.02.1980
	7	Budhabalanga-(A) PRF	46.560	No.1703/78 dt.22.12.1978
	8	Budhabalanga-(B) PRF	76.000	No.1700/78 dt.21.12.1978
	9	Gopinathpur PRF	566.400	No.1702/78 dt,22.12.1978
BETNOTI	10	Kochilakhunta PRF	99.000	No.19968/Rdt.18.03.1980
	11	Bhalia PRF	340.160	No.246240/RE dt.12.07.1984
DEULI	12	Badsole PRF	227.030	No.30934/8 dt.04.04.1981
	13	Tangasole PRF	236.800	No.14524/R dt.27.02.1980
	14	Kaliasole PRF	320.160	No.17013/R dt.10.03.1980
BANGIRIPOSI	15	Juha PRF	86.040	No.14214/R dt.26.02.1980
		TOTAL	**2484.450**	

2.1.3 Protected Forest (P.F.)

There are 6 Protected Forests in Baripada Forest Division. The revised Working Plan included these 06 numbers of Protected Forests extended over an area of 989.230 ha. The detail of notified Protected Forests in Baripada Forest Division is given below.

Table No.25: Protected Forests of Baripada Forest Division

Name of Range	Name of Forest Block		Area in ha.	Total area in ha.	Notification No.
KAPTIPADA	1	Sukhuapata hill	92.320	92.320	No.10F(TR) Misc.-4/2003/8269/F&E dt.15.06.2004
BANGIRIPOSI	2	Pimpudijharan	60.970	896.910	No.10F(Prot)-3/2005 10846/F&E dt.21.06.2005
	3	Kopadiha	10.730		
	4	Ambadiha	14.030		
	5	Hill Block	712.750		
	6	Maheshpur	98.430		
		TOTAL		**989.230**	

2.1.4 Village Forest (V.F.)

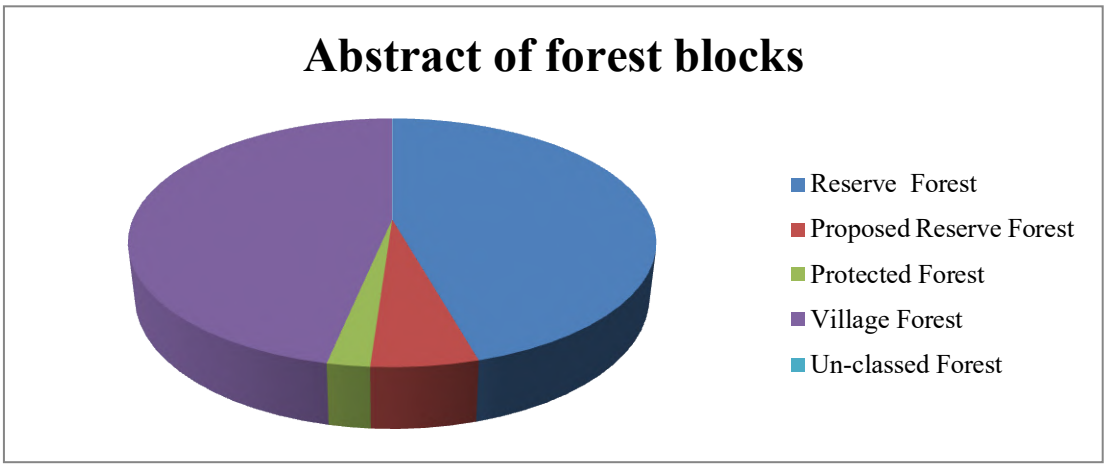
There are 127 Village Forests notified under the Odisha Forest Act, 1972 in Baripada Forest Division. The Notification No. of 127 village Forest with area (total area of 588.314 ha) is given in **Appendix –VI.**

2.1.5 The Abstract of Forest Blocks Including Un-classed Forest (U.F.)

The abstract of legal status of Forest Block and UF is furnished below.

Table 26: Abstract of forest blocks

Sl. No.	Category	Total blocks	Area in ha
01	Reserve Forest	124	46373.740
02	Proposed Reserve Forest	15	2484.450
03	Protected Forest	06	989.230
04	Village Forest	127	588.314
05	Un-classed Forest	--	53.000
	Total	**272**	**50488.734**
Sources - Divisional Forest Officer, Baripada.			



However, the forest area diverted for non-forestry purpose and forest area over which title rights have been issued under Forest Right Act, 2006 has been excluded from the prescription of this Working Plan.

Table 27: Legal Status of Forest in Baripada Forest Division (excluding U.F.)

Name of Range	RF (in ha.)	PRF (in ha.)	PF (in ha.)	VF (in ha.)	Total (in ha.)
Pithabata	3591.530	57.030	0.000	13.920	3662.480
Dukura	2514.890	1118.230	0.000	47.028	3680.148
Rasgovindpur	5275.160	0.000	0.000	40.784	5315.944
Udala	3381.270	0.000	0.000	105.368	3486.638
Betnoti	12035.370	439.160	0.000	174.060	12648.590
Deuli	10277.250	783.990	0.000	13.544	11074.784
Kaptipada	8198.640	0.000	92.320	3.832	8294.792
Bangiriposi	1099.630	86.040	896.910	189.778	2272.358
Total	***46373.740***	***2484.450***	***989.230***	***588.314***	***50435.734***

Legal Status of Forest in Baripada Forest Division

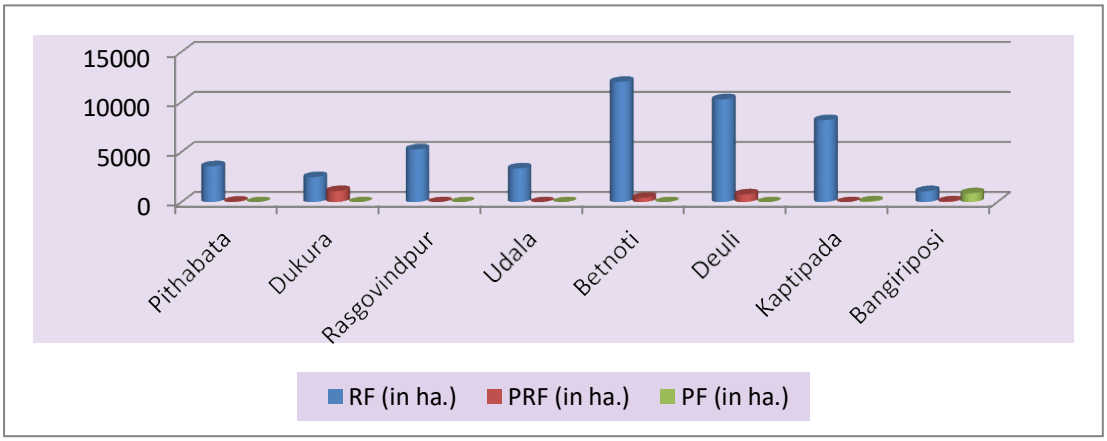


Table 28: Forest Area Abstract with Un-classed Forest

Name of the Division	Reserve Forest (in ha.)	P.R.F. (in ha.)	P.F. (in ha.)	Village Forest (in ha.)	Un-classed Forest (in ha.)	Total (in ha.)
Baripada Forest Division	46373.740	2484.450	989.230	588.314	53.000	**50488.734**

* Reserve Forest area diverted under Forest (Conservation) Act, 1980 is 373.478 Ha.
* PRF area diverted under Forest (Conservation) Act, 1980 is 15.12 Ha
* PF area diverted under Forest (Conservation) Act, 1980 is 0.33 Ha
* Reserve Forest area diverted under section 3(2) of Forest Rights Act, 2006 is 8.086 Ha.
* Unclassed Forests kept out of working plan area is 53 ha.
* Net area for prescription of working plan is **50038.72** Ha.

Forest Area Abstract with Un-classed Forest

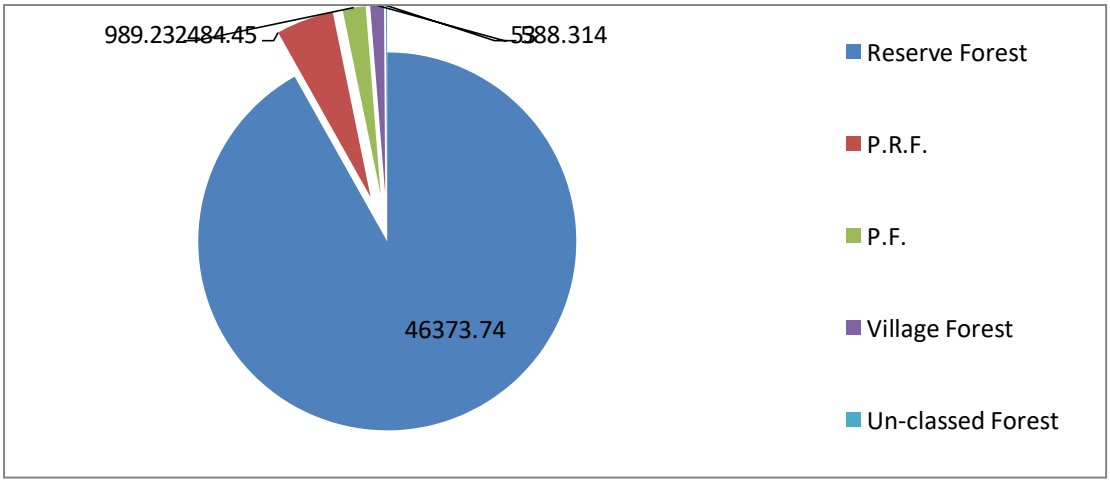
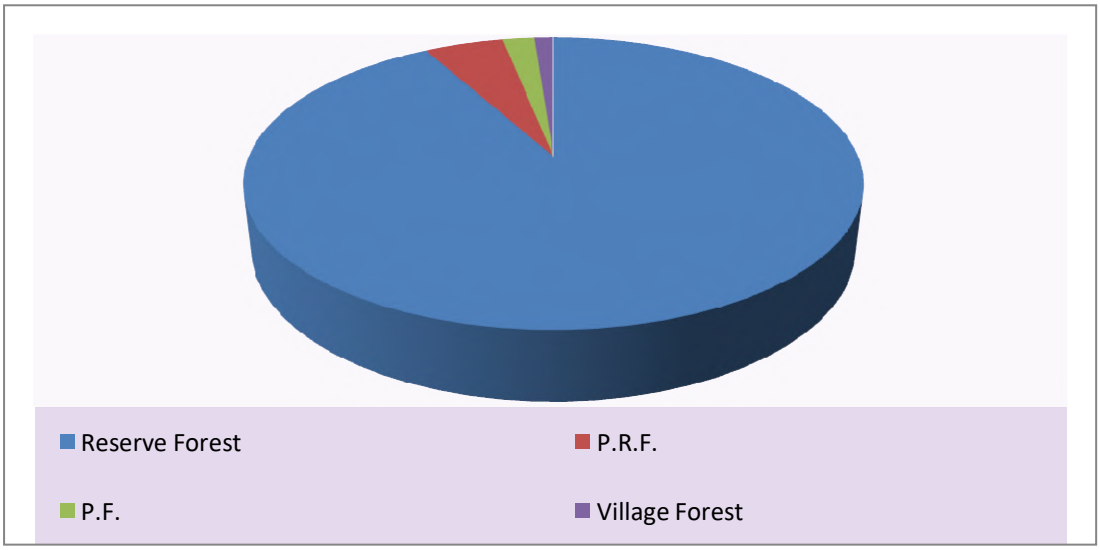


Table 29: Forest Area available for Working Plan

Name of the Division	Reserve Forest (in ha.)	P.R.F. (in ha.)	P.F. (in ha.)	Village Forest (in ha.)	Total (in ha.)
Baripada Forest Division	45992.176	2469.330	988.900	588.314	**50038.720**

Forest Area available for Working Plan



The Range wise Forest Blocks with diverted Forest land in Baripada Forest Division included in the revision have been furnished in the **Appendix – I**.

The Range wise distribution of notified forest area and forest area available for working plan after diversion of forest land in Baripada Forest Division have been furnished in **Appendix – VII.**

Figure 1: Range wise notified areas in Hectares

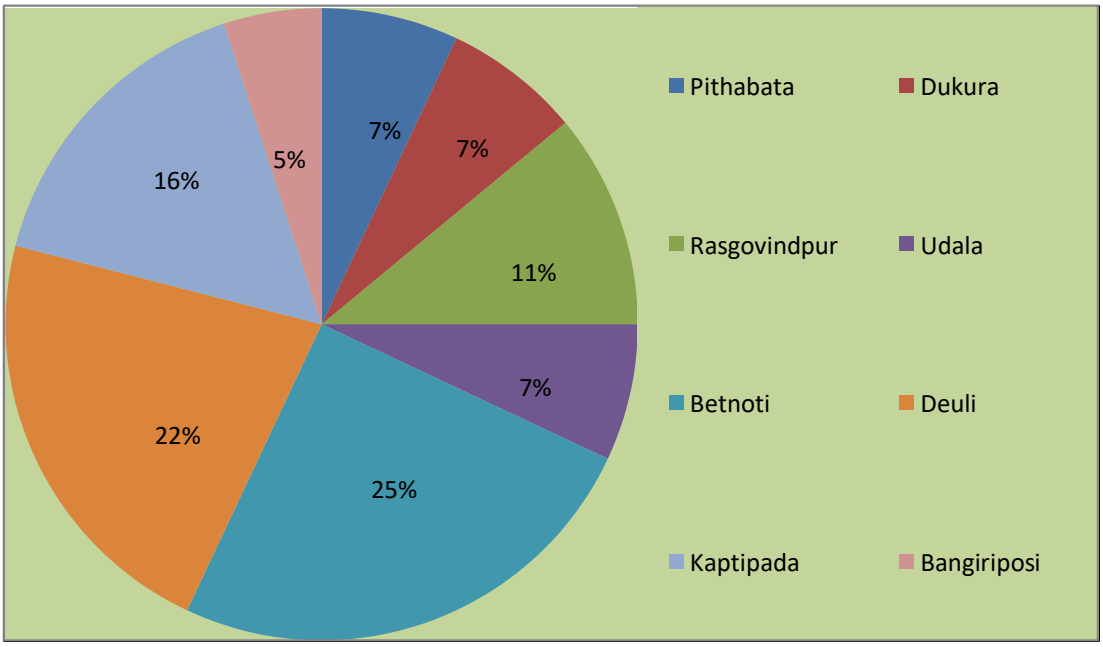
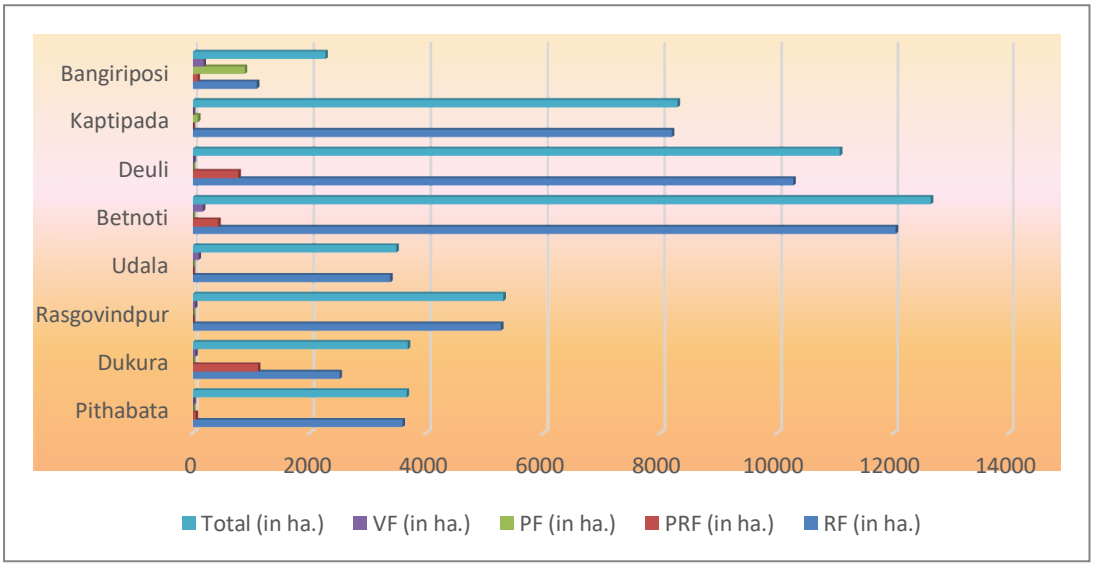


Table 30: Abstract of Range wise Forest Area (excluding U.F.)

Name of Range	RF (in ha.)	PRF (in ha.)	PF (in ha.)	VF (in ha.)	Total (in ha.)
Pithabata	3591.530	57.030	--	13.920	3662.480
Dukura	2514.890	1118.230	--	47.028	3680.148
Rasgovindpur	5275.160	--	--	40.784	5315.944
Udala	3381.270	--	--	105.368	3486.638
Betnoti	12035.370	439.160	--	174.060	12648.590
Deuli	10277.250	783.990	--	13.544	11074.784
Kaptipada	8198.640	--	92.320	3.832	8294.792
Bangiriposi	1099.630	86.040	896.910	189.778	2272.358
Total	**46373.740**	**2484.450**	**989.230**	**588.314**	**50435.734**

Figure 2: Abstract of Range wise Forest Area



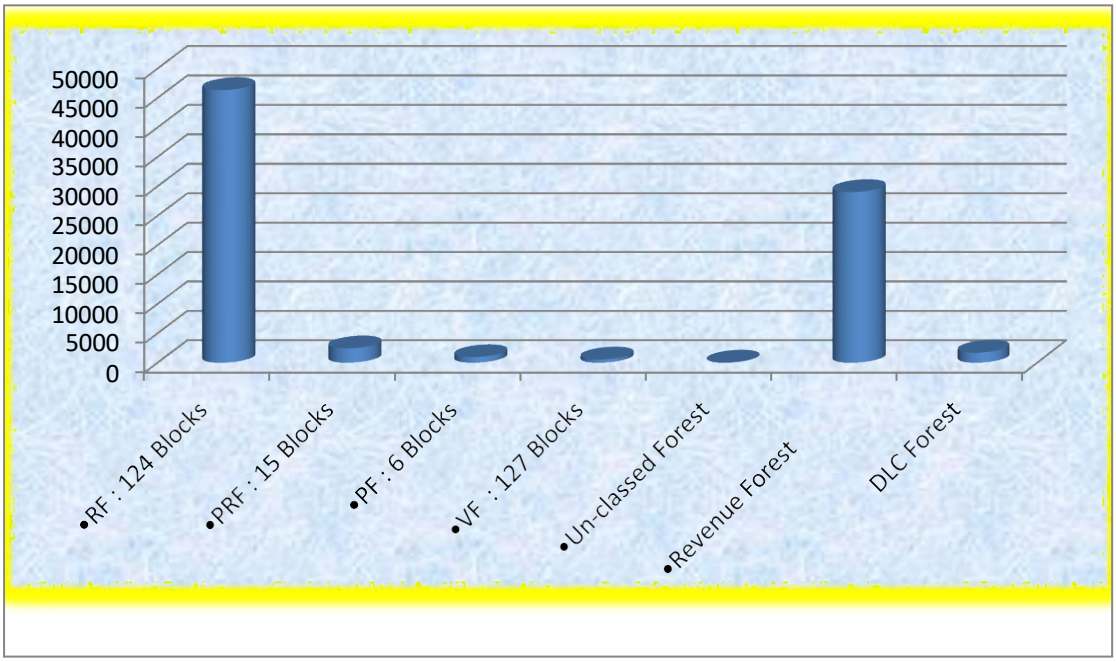
Therefore the abstract of forest area distributed in Baripada Forest Division, which is included in the Plan, has been furnished in the table below.

Table 31: Abstract of Forest Blocks in Baripada Forest Division

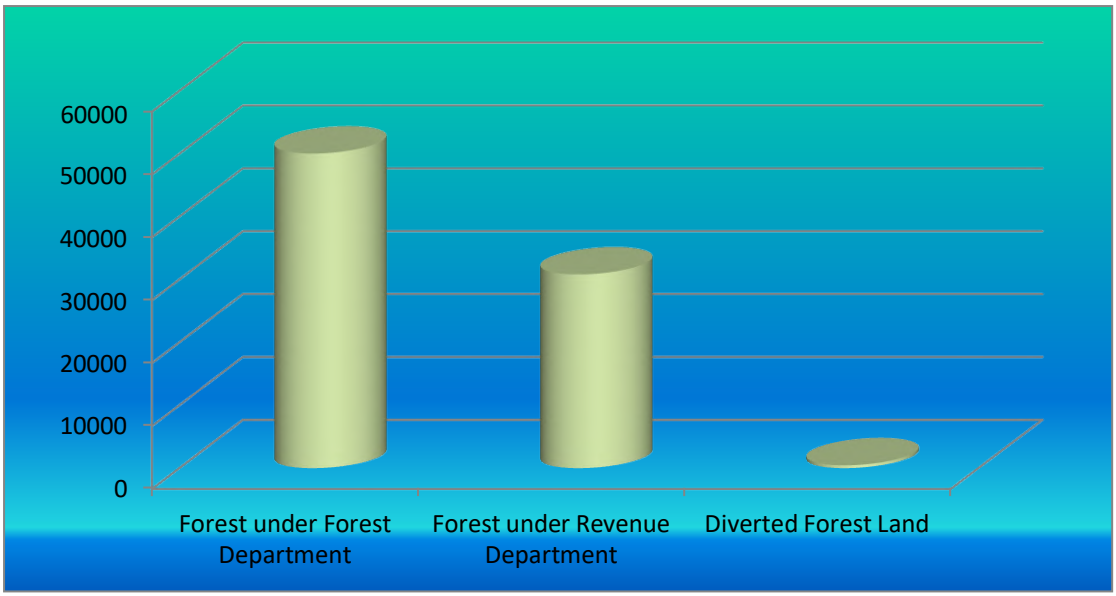
Status	Number of Forest block	Notified area in ha.	Area diverted in ha	Balance area in ha (available for WP)	% of forest area under revision of the plan in this Division
RF	124	46373.740	381.564	45992.176	91.91
PRF	15	2484.450	15.120	2469.330	4.93
PF	6	989.230	0.330	988.900	1.98
VF	127	588.314	-	588.314	1.18
Total	**272**	**50435.734**	**397.014**	**50038.720**	**100**

Table 32 – Total Forest Areas of Baripada Forest Division

Status	Forest area in ha.	% of Forest land
RF	46373.740	57.044
PRF	2484.450	3.056
PF	989.230	1.217
VF	588.314	0.724
UF	53.000	0.065
Revenue Forest	29064.487	35.752
DLC Forest	1741.010	2.142
Total Forest Area	81294.231	100.000
Tree Outside Forest	5805.769	--
Total Vegetation	87100*	--
* As per Govt. of Odisha (F&E) notification no 3913 dt: 21.02.2019, total forest area of Baripada Forest Division is 871 km^2.		

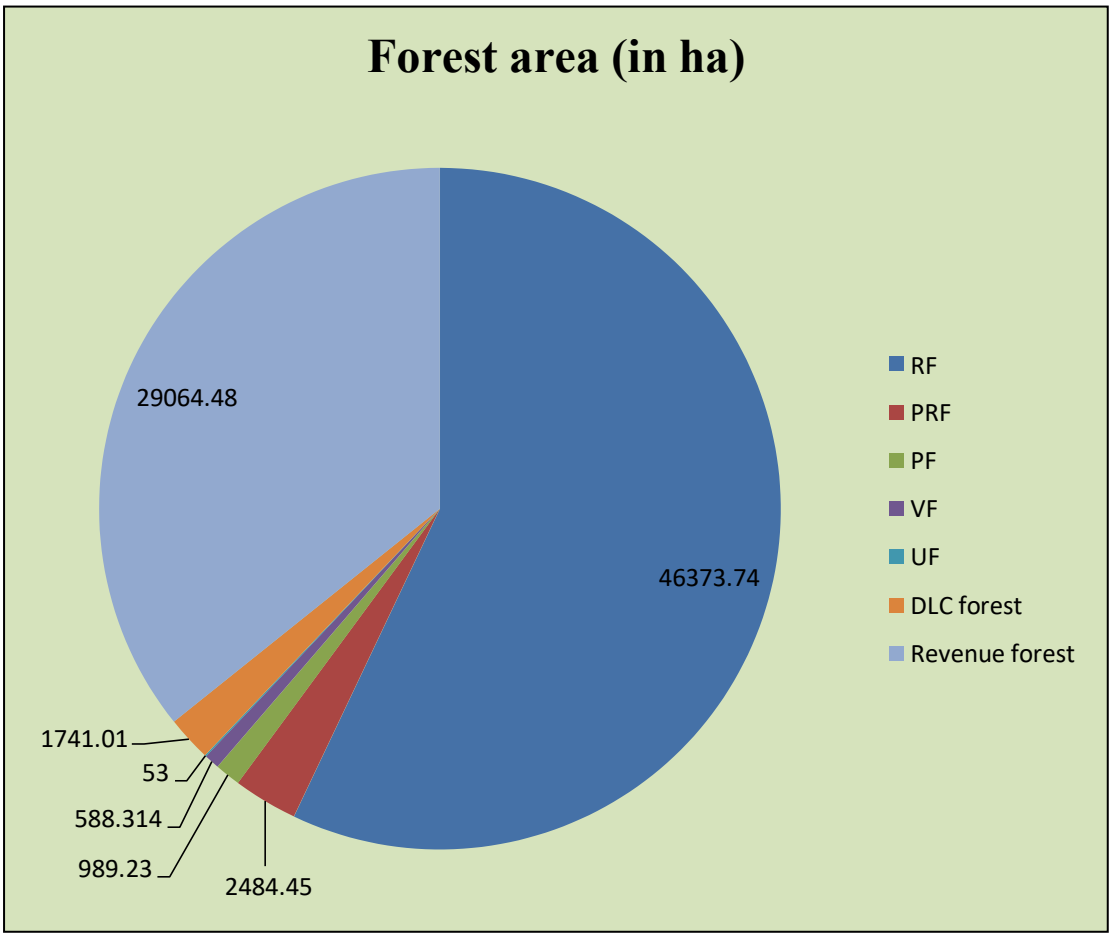


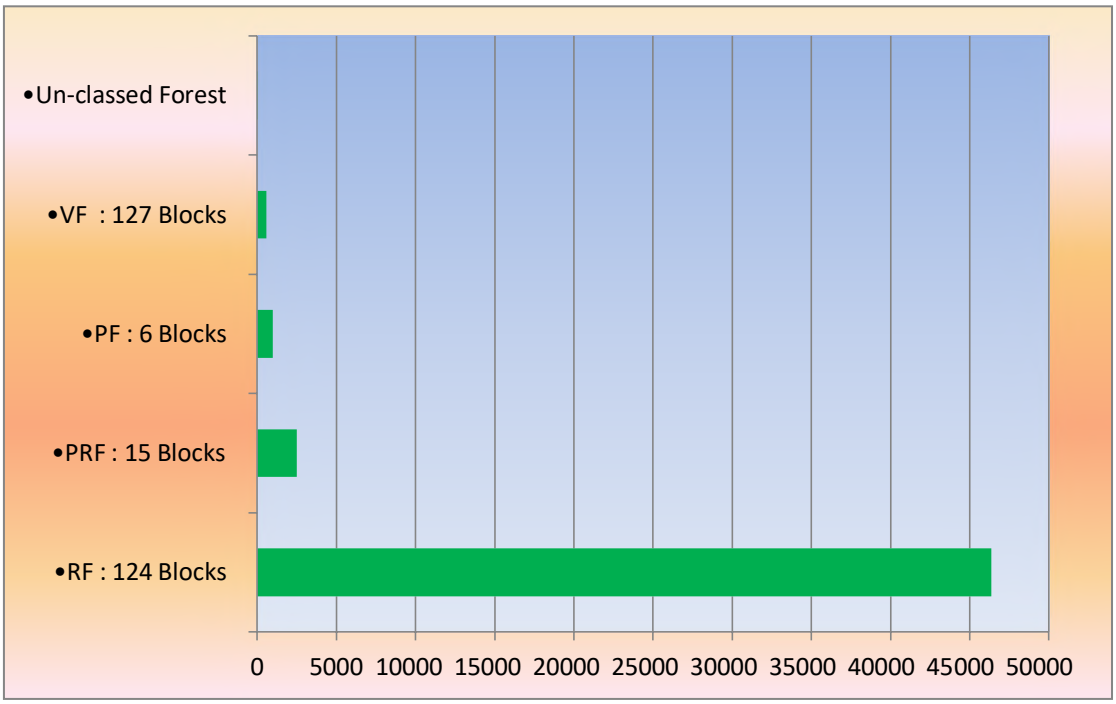
Total Forest Areas of Baripada Forest Division



Administrative Jurisdiction & Management of Forests.

Figure 3: Legal Status of Forest Land in Baripada Forest Division



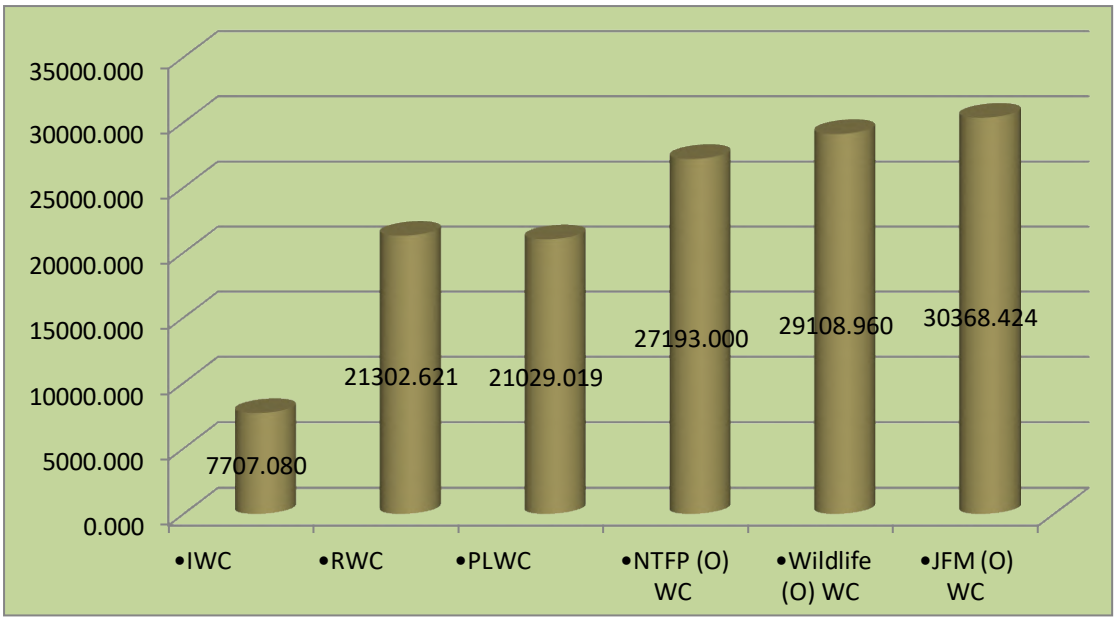


Legal Forests under Management of Baripada Forest Division

2.2 Forest area under different working circle/ management plan

Table 33: Allotment of Area to Different Working Circles and Ranges

Name of the Range	Plan Area	Improvement WC	Rehabilitation WC	Plantation WC	NTFP (O) WC	WL (O) WC	JFM (O) WC
Kaptipada	8294.462	7707.080	134.085	453.297	6558.000	8290.960	1503.832
Pithabata	3634.120	0.000	2227.077	1407.043	1880.000	1911.000	2584.200
Deuli	11036.824	0.000	6518.596	4518.228	5221.000	5882.000	6816.834
Udala	3481.188	0.000	1079.723	2401.465	2705.000	2250.000	2607.488
Dukura	3679.218	0.000	1545.344	2133.874	750.000	1450.000	1185.498
Betnoti	12571.684	0.000	5320.533	7251.151	7000.000	6231.000	9208.040
Bangiriposi	2272.358	0.000	1199.123	1073.235	879.000	969.000	586.448
Rasgovindpur	5068.866	0.000	3278.140	1790.726	2200.000	2125.000	2326.434
TOTAL	**50038.720**	**7707.080**	**21302.621**	**21029.019**	**27193.000**	**29108.960**	**30368.424**



Working Circles in Baripada Forest Division

Figure 4: Distribution of Exclusive Working Circle

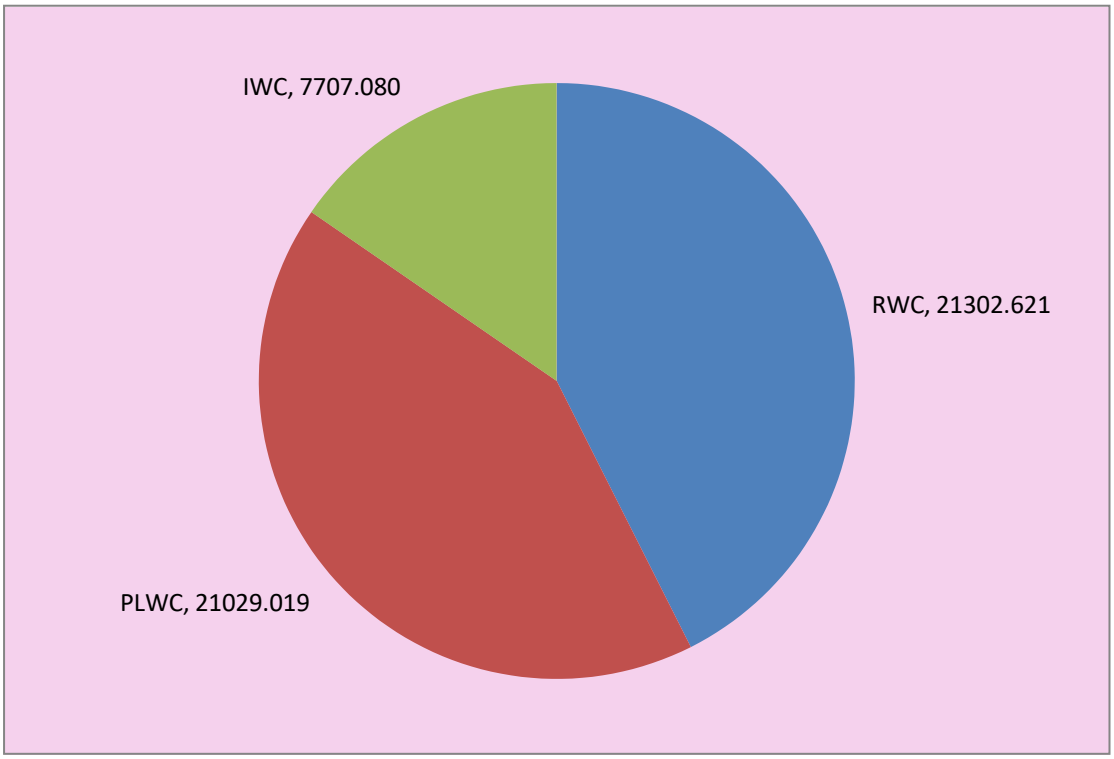
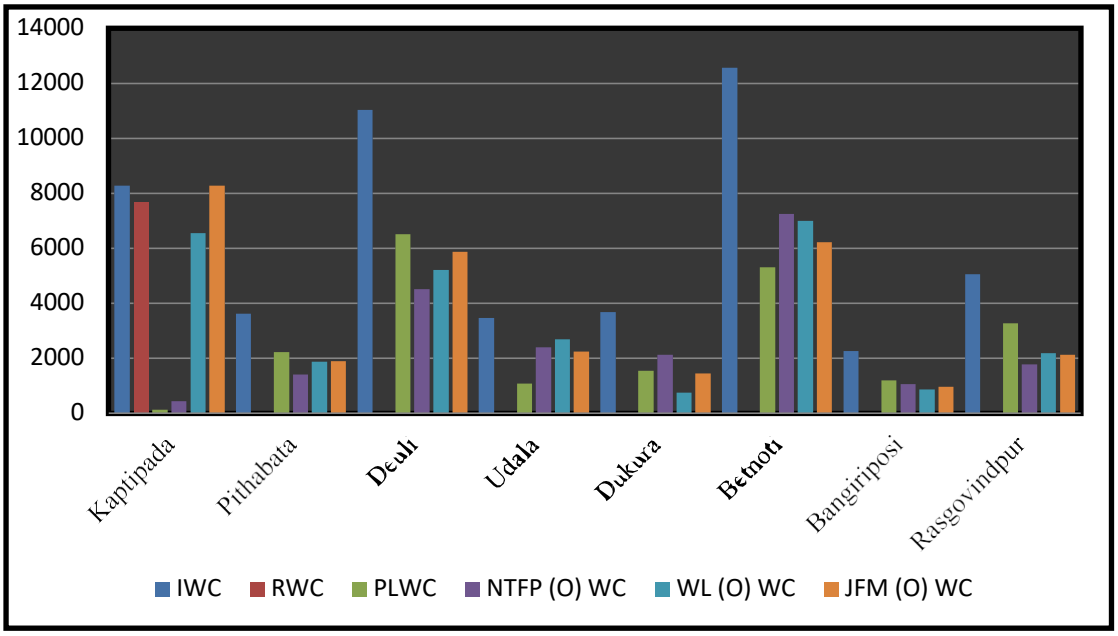


Figure 5: Range wise distribution of working circle



2.2.1 Objectives and Other Essentials of Forest Management Planning

The essence of forest management is aimed at-

* Sustainable management of forest, biodiversity and environment, under the guideline of the National Forest Policy.
* To maintain Forest cover on hill slopes and catchments of rivers and water bodies to check soil erosion.
* To give a check to deforestation and forest fire, which are the most hazardous factors for conservation of forests and its eco-system.
* To protect and manage wildlife resources in their full scope and range with a view to conserve and enrich bio-diversity.
* People‘s involvement to address the above problems by meeting their livelihood needs, through promotion of eco-tourism, creation of opportunities for smooth and sustainable collection of NTFP and provision of marketing facilities resulting in enhancement of forest productivity and improvement of regeneration. These above points are focused on the forest management plan.

2.2.2 General Objective

The principal objectives of forest management plan must be in consonance with National Forest Policy aimed at establishment of a healthy environment and

ecological balance for sustenance of flora and fauna and the availability of benefits on sustained basis. Following aspects is taken into consideration while formulating the general objective of future plan.

a) Increase productivity of forests and continuance of the vitality.
b) Soil and Moisture Conservation.
c) Enrichment of biological diversity.
d) Regulation of climate change and control of environmental pollution.
e) Forest based employment opportunity and livelihood option.
f) Use of modern techniques and tools for effective implementation.

Constitution of Working Circle:

Following working circles are recommended for current plan.

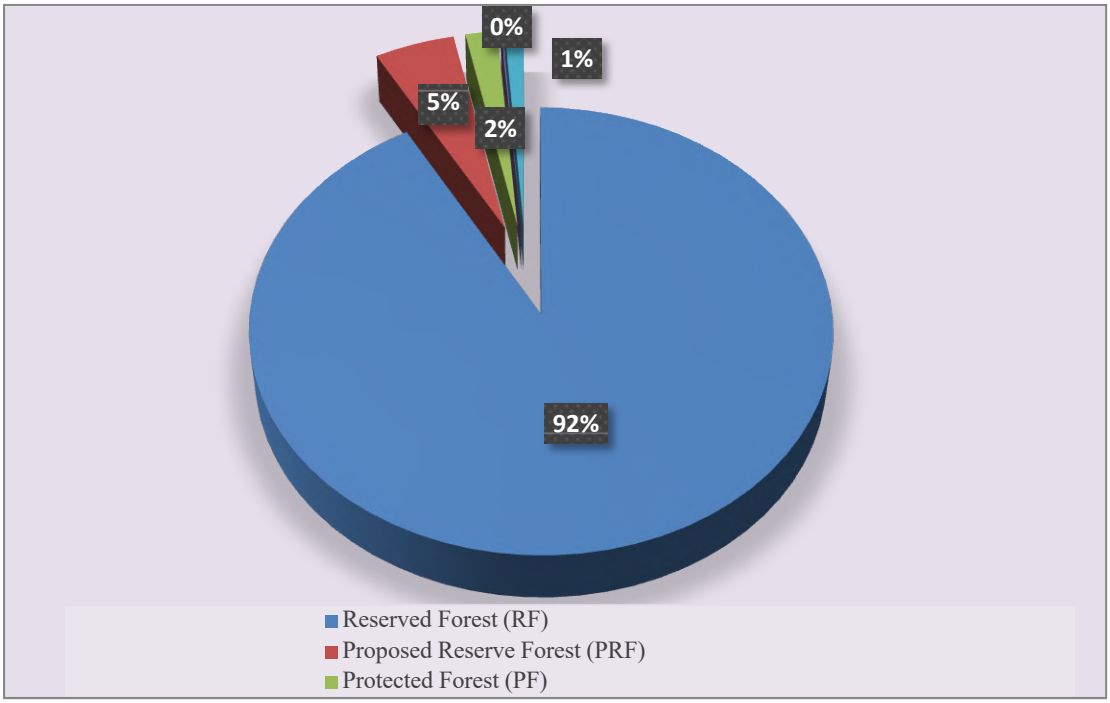
1. Improvement Working Circle
2. Rehabilitation Working Circle
3. Plantation Working Circle
4. Wildlife Management Working Circle (Over-lapping)
5. N.T.F.P Working Circle (Over-lapping)
6. JFM Working Circle (over-lapping)

The forest area of the Division as per the management and control of the Forest Department for the revised working plan is proposed, that follows-

Table 34: Forest Category Included in Working Plan

Status	Number of Forest block	Notified area in ha.	Area diverted in ha	Balance area in ha	% of total forest area under revision of the plan in this Division
RF	124	46373.740	381.564	45992.176	91.91
PRF	15	2484.450	15.120	2469.330	4.93
PF	6	989.230	0.330	988.900	1.98
VF	127	588.314	-	588.314	1.18
Total	**272**	**50435.734**	**397.014**	**50038.720**	**100**

Figure 6: Percentage of Forest Area Out of Total Plan Area



2.2.3 Improvement Working Circle

The proposed constitution for Improvement Working Circle prescribed specific provisions for silvicultural operations. Regeneration cleaning along with climber cutting after completion of annual improvement operation. Apart from the above prescriptions, special attention will be given for Fire control measures and Soil Conservation measures.

2.2.4 Rehabilitation Working Circle

An area of 20829.92 ha was allotted in this working circle in the outgoing plan, out of which 13981.017 ha was treated through ANR with gap planting. In this revised plan, an area of 21302.621 ha is allotted to this working circle. It includes all compartments and blocks of coppice and Rehabilitation Working Circle of last working plan. Forest areas with natural vegetation are included in this working circle. The objective of management is to get maximum protection, carry out water and soil conservation measures, provide natural regeneration of Sal to develop the density of degraded forest and restock of barren and blank patches by planting. The rehabilitation cycle is 10 years. Silvicultural cleaning of irregular crop should be taken up. Soil & moisture conservation, climber cutting, singling of juvenile crop, high stump cutting and fire

control measures will be taken up under subsidiary silvicultural operation. Sowing and planting of 18 months old seedlings of economically important timber, NTFP and fodder species will be taken up as gap planting to make area fully stocked.

2.2.5 Plantation Working Circle

In the outgoing plan an area of 17836.74 ha was allotted in this working circle. In proposed plan, 21029.019 ha are allotted to this working circle distributed among all eight functional Ranges. The old plantations, recent plantations already existing, blank areas practically devoid of substantial tree growth but with some sparse scrubby vegetation, vacant patches, forest areas with less than 10% canopy density and area under encroachment are included in Plantation Working Circle. In this working circle, all new block plantations (to be taken up in coming ten years) will also be included.

2.2.6 Allotment of Area

Proposed allocation of area to different working circles and Ranges.

Table 35: Area allocated in Revised Plan

Name of the Range	Plan Area	Improvement WC	Rehabilitation WC	Plantation WC	NTFP (O) WC	WL (O) WC	JFM (O) WC
Kaptipada	8294.462	7707.080	134.085	453.297	6558.000	8290.960	1503.832
Pithabata	3634.120	0.000	2227.077	1407.043	1880.000	1911.000	2584.200
Deuli	11036.824	0.000	6518.596	4518.228	5221.000	5882.000	6816.834
Udala	3481.188	0.000	1079.723	2401.465	2705.000	2250.000	2607.488
Dukura	3679.218	0.000	1545.344	2133.874	750.000	1450.000	1185.498
Betnoti	12571.684	0.000	5320.533	7251.151	7000.000	6231.000	9208.040
Bangiriposi	2272.358	0.000	1199.123	1073.235	879.000	969.000	586.448
Rasgovindpur	5068.866	0.000	3278.140	1790.726	2200.000	2125.000	2326.434
TOTAL	**50038.720**	**7707.080**	**21302.621**	**21029.019**	**27193.000**	**29108.960**	**30368.424**

Table 36: Area allocated in Out Going Plan as per PWPR (in ha.)

Name of the Range	Plan Area	Selection WC	Rehab. WC	Plant. WC	Misc. regulation for un-classed forest	NTFP (O) WC	WL (O) WC
Kaptipada	8198.640	7707.080	491.560	--	53	46373.740	--
Pithabata	4609.520	--	3168.870	1440.650			
Deuli	10793.190	--	7517.210	3275.980			
Udala	3381.270	--	524.790	2856.480			
Dukura	2514.890	--	818.090	1696.800			
Betnoti	16876.230	--	8309.400	8566.830			
TOTAL	**46373.740**	**7707.080**	**20829.920**	**17836.740**	**53**	**46373.740**	**--**

2.2.7 Comparative Statement of Areas of Different Working Circles in Outgoing and Revised Working Plan

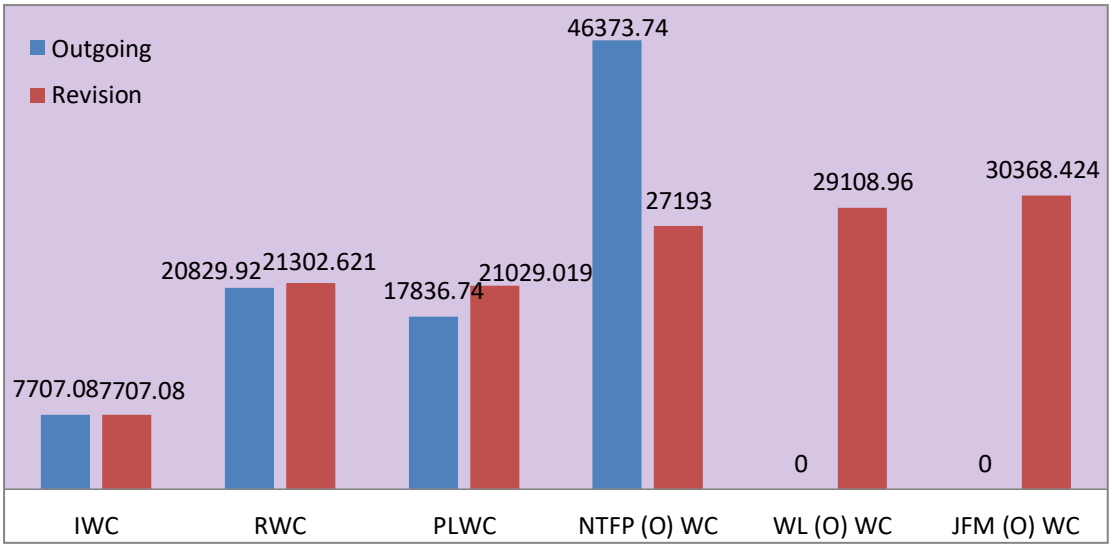


Table 37: Name of the Working Circle and Area in Ha.

The Working Circle wise area (in Ha.) was finalized after completion of biodiversity survey.

Improvement WC	Rehabilitation WC	Plantation WC	JFM (O) WC	NTFP (O) WC	Wildlife (O) WC
1	2	3	4	5	6
7707.080	21302.621	21029.019	30368.424	27193.000	29108.960

2.2.8 JFM Overlapping WC

Total area coming under this WC is calculated to be 30368.424 ha. On introduction of JFM Resolution, the Forest Management has witnessed changes. The latest JFM Resolution No. 9182-F&E dt.01.06.2015 re-introduced local Forest Guard/ local Section Forester as Secretary of Executive Committee of VSS, who will be fully responsible for up-keeping the monthly Account & maintenance of Cash Book of the VSS. Most of the forest areas come under the direct protection of Vana Suraksha Samiti (VSS), the basic unit of JFM management. These changes are now compatible with the prescription of the revised working plan. The JFM resolution, 2011 has further empowered the people/ community by increasing the sharing of usufruct rights. In order to overcome the management problems thereof, a separate working circle is hereby introduced. There are 402 Nos. of VSSs functioning in this Division

looking after 37436.55 ha of forest land. After introduction of the Scheduled Tribe & Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, Community Forest Rights are being recognized and community is protecting nearby forest. These areas are also brought under JFM Working Circle. Considering the management problems, that arises thereof, a separate over-lapping working circle is introduced, as a result of which better cooperation will be maintained with people to protect forest and Wildlife in JFM mode.

At present there are 402 VSS functioning in the Division, covering an area of 37436.55 ha of forests. In addition to this 127 Village Forest Committies constituted under Village Forest Rule, 1985 are also assigned for management of 127 Village Forests over 588.314 ha. Out of 37436.55 ha of forest land protected by 402 VSS, 7656.44 ha of forest are protected by 78 VSS are out side working plan area and 29780.11 ha. of forests is protected by 324 VSS are within working plan area. In total 30368.424 ha of RF/ PRF/ PF/ VF are protected in 219 Forest Blocks of Baripada Forest Division. In JFM (O) Working Circle, 30368.424 ha forest areas are included.

2.2.9 NTFP Overlapping WC

This working circle is aimed at scientific management in collection, drying, storage, processing and marketing of NTFP and designed for improvement of Socio-economic condition of the rural people. The NTFP policy of the state Government has been implemented since 2002, which requires revision for the greater interest of the forest and its dependants. The rural economy of Mayurbhanj mainly depends on Sal leave collection, processing & trading, which is mostly collected from the forest of this Division. Volume of collection is more or less equal among the Ranges like, Betnoti, Rasgovindpur & Deuli. The other important NTFP products are Char seeds, Mahua flower, mahua seed, Sal seed, Kusum seed, Karanj seed and Sabai grass which are widely collected throughout the forest Division area. This working circle spreads over an area of 37101 ha in all the eight Ranges of this Division and will recommend the critical NTFP species Sal leave, Char seed, Sabai Grass and Ropes, Mahua Flower and Seed to be regulated.

2.3 Percentage of Forest with Secured Boundaries

Boundary pillar position has been verified by the working plan Range Officer and staff. The boundaries of different forest blocks of Baripada Forest Division are poorly maintained due to a variety of reasons including paucity of funds and encroachment. One DGPS survey was conducted during 2010-11 to assess the current position of forest after encroachment. The difference in area of working plan forest block map and DGPS map shows the encroachment of forest blocks, continuing since 1980. Boundary lines are required to be cleared and maintained properly. Details of block boundaries, *e.g.*, length of forest boundary, number of pillars, pillar to pillar bearings and distances (along with GPS readings), and a record of maintenance of boundaries need to be maintained in the Divisional Office. Non-maintenance of boundaries in the past has resulted in missing of 60% of boundary pillars. Boundary pillars are constructed in the field as per DGPS survey, which should be stopped. Forest boundary pillars should be constructed along the boundary line of working plan map.

2.3.1 Boundary of Reserve Forests

Boundary lines of all Reserve Forests as per last working plan have been partly surveyed by field staff. There has been degradation of forest vegetation along the boundaries as observed during boundary verification. 60% of the boundary pillars are missing and 10% are damaged, which needs to be reconstructed with concrete boundary pillars as per forest block maps of working plan. Some of the boundary pillars have been constructed away from approved forest boundary which needs to be corrected. The common boundary line with adjoining District has been cleared to a width of 12.00mt.

2.3.2 Boundary of Proposed Reserve Forests and Protected Forests

Boundary lines of Proposed Reserve Forests/ Protected Forests have been surveyed by field staffs. The boundaries should be cleared to a width of 6.00 mt. The boundary of all PRF has been shown in the topo sheets by the field staffs. The details of boundary lengths and total pillar number of individual PRF/ Protected Forest have been given in table below**.** The repair/ re-constuction of RCC RF boundary pillar should be taken up as per following schedule.

Table No.38: Forest Block Boundary Repair Schedule in Baripada Forest Division

Range	Sl. No.	Forest block	No. of Pillars			Year
			Good Condition	Damaged	Missing	
PITHABATA	1	Baldiha R.F.	NA	NA	NA	2021-22
	2	B.C. pur R.F.	24	47	17	2022-23
	3	Budhikhamari R.F.	6	10	152	2023-24
	4	Dungurusahi R.F.	4	7	NA	2024-25
	5	Hatikote R.F.	35	27	NA	2025-26
	6	Lulung-Purunapani R.F.	18	42	NA	2026-27
	7	Manchabandha R.F.	28	15	48	2027-2029
	8	Asanabani PRF	NA	NA	NA	2029-30
	9	Gopalpur VF	NA	NA	NA	
	10	Srirampur VF	NA	NA	NA	
	11	Gadadharpur VF	NA	NA	NA	2030-31
	12	Baunsda VF	NA	NA	NA	
	13	Dumuria VF	NA	NA	NA	
		TOTAL	**115**	**148**	**217**	
DUKURA	14	Aghasole R.F.	5	9	13	2021-22
	15	Badsahi R.F.	NA	NA	NA	
	16	Bidhyadharpur R.F.	NA	NA	NA	2022-23
	17	Chakradharpur R.F.	31	35	14	2023-24
	18	Chengua-Mangalpur R.F.	8	22	8	
	19	Deulia R.F.	30	14	28	2024-25
	20	Gojodi-Damodarpur R.F.	6	2	12	
	21	Haldia R.F.	13	9	14	
	22	Itamundia R.F.	22	6	9	
	23	Jarkani R.F.	5	2	11	
	24	Kanpura R.F.	NA	NA	NA	2025-26
	25	Kuldiha R.F.	11	19	11	2026-27
	26	Pundala R.F.	4	5	2	
	27	Purunapani R.F.	16	8	11	
	28	Belpal R.F.	22	28	16	
	29	Dukura R.F.	25	13	26	
	30	Itamundia-Jamuna R.F.	17	12	24	2027-28
	31	Khanua R.F.	12	24	13	
	32	Kerko R.F.	60	5	7	
	33	Nigirdha-(A) PRF	NA	NA	NA	2028-29
	34	Nigirdha-(B) PRF	NA	NA	NA	
	35	Kukurbhuka-(I) PRF	NA	NA	NA	
	36	Kukurbhuka-(II) PRF	NA	NA	NA	
	37	Sanmokabadi PRF	NA	NA	NA	2029-30
	38	Budhabalanga-(A) PRF	NA	NA	NA	
	39	Budhabalanga-(B) PRF	NA	NA	NA	
	40	Gopinathpur PRF	NA	NA	NA	

Range	Sl. No.	Forest block	No. of Pillars			Year
			Good Condition	Damaged	Missing	
DUKURA	41	Manatri VF	NA	NA	NA	2030-31
	42	Bhupad VF	NA	NA	NA	
	43	Manatri VF	NA	NA	NA	
	44	Rangadihi VF	NA	NA	NA	
	45	Ranibandha VF	NA	NA	NA	
	46	Khanua VF	NA	NA	NA	
	47	Basipitha VF	NA	NA	NA	
	48	Basipitha VF	NA	NA	NA	
	TOTAL		**287**	**213**	**219**	
R.G.PUR	49	Amarda R.F.	NA	NA	365	2021-22
	50	Betnasia R.F.	NA	NA	46	
	51	Baghajharan R.F.	NA	NA	NA	2022-23
	52	Baldiha R.F.	NA	NA	NA	
	53	Chitrada R.F.	40	NA	128	2023-24
	54	Jamsole R.F.	NA	NA	56	2024-25
	55	Moroda R.F.	55	NA	249	2025-26
	56	Nalagaja R.F.	NA	NA	NA	2026-27
	57	Nichuapada R.F.	16	NA	20	2027-28
	58	Nuajhalia R.F.	10	NA	20	
	59	Nunchatia R.F.	NA	NA	NA	
	60	Sarumula R.F.	35	45	14	2028-29
	61	Sukhilakhali R.F.	NA	NA	55	2029-30
	62	Chikitamatia VF	NA	NA	NA	2030-31
	63	Sarajharan VF	NA	NA	NA	
	64	Praharajpur VF	NA	NA	NA	
	65	Duarsuni VF	NA	NA	NA	
	66	Nahiasoli VF	NA	NA	NA	
	67	Jhatiada VF	NA	NA	NA	
	68	Nalagaja VF	NA	NA	NA	
	69	Chandanpur VF	NA	NA	NA	
	TOTAL		**156**	**45**	**953**	
UDALA	70	Anantasahi R.F.	NA	NA	NA	2021-22
	71	Belakuti R.F.	22	14	50	
	72	Bhandagaon R.F.	NA	NA	50	
	73	Charada R.F.	NA	NA	NA	
	74	Dhaundia R.F.	30	15	84	2022-23
	75	Dimgadia R.F.	NA	NA	NA	2023-24
	76	Dugdha R.F.	NA	NA	26	
	77	Ghantasila R.F.	NA	NA	NA	
	78	Jaypur R.F.	NA	NA	18	
	79	Khunta R.F.	40	25	30	
	80	Kuamara R.F.	10	10	18	2024-25
	81	Kuriakhunta R.F.	NA	NA	NA	

Range	Sl. No.	Forest block	No. of Pillars			Year
			Good Condition	Damaged	Missing	
UDALA	82	Marsigaon R.F.	25	16	40	2025-26
	83	Nahara R.F.	NA	NA	67	
	84	Naupada R.F.	30	30	102	2026-27
	85	Mundhakata R.F.	NA	NA	NA	
	86	Phuljhari – (A) R.F.	27	10	40	2027-28
	87	Purunabaripada R.F.	3	NA	10	
	88	Sialia R.F.	NA	NA	17	
	89	Sunduria R.F.	NA	NA	NA	
	90	Sirathali R.F.	10	5	19	
	91	Udala R.F.	20	27	85	2028-29
	92	Purna Baripada (Mankad Kenda) VF	NA	NA	NA	2029-30
	93	Kusunia Patpur VF	NA	NA	NA	
	94	Bhalimunduli VF	NA	NA	NA	
	95	Salabani VF	NA	NA	NA	
	96	Sialia VF	NA	NA	NA	
	97	Raghunathpur VF	NA	NA	NA	
	98	Jamudiha VF	NA	NA	NA	
	99	Nuagaon VF	NA	NA	NA	
	100	Bahanada VF	NA	NA	NA	
	101	Jalda VF	NA	NA	NA	
	102	Murari VF	NA	NA	NA	
	103	Gohira VF	NA	NA	NA	
	104	Jogibandha VF	NA	NA	NA	
	105	Jajpur VF	NA	NA	NA	2030-31
	106	Kuchiladiha VF	NA	NA	NA	
	107	Khunta VF	NA	NA	NA	
	108	Khunta VF	NA	NA	NA	
	109	Khunta VF	NA	NA	NA	
	110	Khunta VF	NA	NA	NA	
	111	Khunta VF	NA	NA	NA	
	112	Khunta VF	NA	NA	NA	
	113	Sridamchandrapur VF	NA	NA	NA	
	TOTAL		**217**	**152**	**656**	
BETNOTI	114	Asanabani R.F.	NA	79	110	2021-22
	115	Asankhali R.F.	2	3	3	
	116	Badampur R.F.	NA	312	91	
	117	Badguma R.F.	1	NA	33	
	118	Baisinga R.F.	45	10	22	
	119	Balka R.F.	NA	5	6	
	120	Bartana R.F.	31	3	NA	
	121	Basantapur R.F.	NA	NA	27	
	122	Beldiha R.F.	NA	NA	NA	
	123	Bhimpur R.F.	12	3	NA	

Range	Sl. No.	Forest block	No. of Pillars			Year
			Good Condition	Damaged	Missing	
BETNOTI	124	Bishrampur R.F.	NA	16	9	
	125	Chhatnna R.F.	30	12	75	2022-23
	126	Daldali R.F.	5	11	12	
	127	Dalki R.F.	143	NA	NA	
	128	Dumapada R.F.	18	30	6	
	129	Durgapur R.F.	129	NA	NA	
	130	Gad-deulia R.F.	NA	15	20	
	131	Gandigadha R.F.	74	20	5	
	132	Garudabasa R.F.	5	4	2	
	133	Gopalpur R.F.	13	NA	NA	
	134	Gobindapur R.F.	NA	NA	6	
	135	Haripur R.F.	NA	NA	44	2023-24
	136	Hatijhuri R.F.	32	NA	NA	
	137	Hempur R.F.	NA	40	121	
	138	Ajadiha R.F.	NA	NA	NA	
	139	Jagannathpur R.F.	32	53	71	
	140	Jarka R.F.	NA	NA	NA	
	141	Jugal R.F.	7	16	11	
	142	Kalma R.F.	NA	6	5	2024-25
	143	Kapoi R.F.	NA	NA	40	
	144	Ketakisole R.F.	NA	NA	16	
	145	Khadikapada R.F.	3	12	21	
	146	Khetrapatana R.F.	NA	NA	NA	
	147	Khiripada R.F.	27	12	19	2025-26
	148	Krushnachandrapur R.F.	48	105	116	
	149	Kochilakhunta R.F.	22	54	26	
	150	Machhapada R.F.	2	13	10	
	151	Mantapal R.F.	NA	7	17	
	152	Merda R.F.	23	57	56	
	153	Mohanpur R.F.	2	5	3	2026-27
	154	Nuagaon R.F.`	NA	2	5	
	155	Phuljhari R.F.	5	23	20	
	156	Purunia R.F.	45	42	70	
	157	Raikama R.F.	20	8	14	
	158	Rautra R.F.	NA	27	28	
	159	Sarbana R.F.	11	NA	NA	
	160	Thakurtota R.F.	NA	NA	13	
	161	Bhalukchua R.F.	24	NA	NA	
	162	Bharadasole R.F.	NA	NA	21	
	163	Totapada R.F.	2	8	19	2027-28
	164	Tikayatpur R.F.	5	43	41	
	165	Patpur RF	NA	21	13	
	166	Kochilakhunta PRF	5	13	5	

Range	Sl. No.	Forest block	No. of Pillars			Year
			Good Condition	Damaged	Missing	
BETNOTI	167	Bhalia PRF	20	5	22	
	168	Kathapal VF	NA	NA	NA	
	169	Chakulia VF	NA	NA	NA	
	170	Karatpata VF	NA	NA	NA	
	171	Chakulia VF	NA	NA	NA	
	172	Anlagadia (Mantidahi) VF	NA	NA	NA	
	173	Jhinkuria VF	NA	NA	NA	2028-29
	174	Singada Munduli VF	NA	NA	NA	
	175	Athabahia VF	NA	NA	NA	
	176	Mendha mundia VF	NA	NA	NA	
	177	Anbagadia VF	NA	NA	NA	
	178	Kalana VF	NA	NA	NA	
	179	Routrapur VF	NA	NA	NA	
	180	Kalana VF	NA	NA	NA	
	181	Tulajhuri VF	NA	NA	NA	
	182	Asukanda VF	NA	NA	NA	
	183	Angaria VF	NA	NA	NA	
	184	Tikayetpur VF	NA	NA	NA	
	185	Purunia VF	NA	NA	NA	2029-30
	186	Purunia VF	NA	NA	NA	
	187	Purunia VF	NA	NA	NA	
	188	Purunia VF	NA	NA	NA	
	189	Balaka VF	NA	NA	NA	
	190	Raghupur VF	NA	NA	NA	
	191	Raghupur VF	NA	NA	NA	
	192	Raghupur VF	NA	NA	NA	
	193	Raghupur VF	NA	NA	NA	2030-31
	194	Raghupur VF	NA	NA	NA	
	195	Raghupur VF	NA	NA	NA	
	196	Raghupur VF	NA	NA	NA	
	197	Gadigaon VF	NA	NA	NA	
	198	Gadadeuli VF	NA	NA	NA	
	199	Gadadeuli VF	NA	NA	NA	
	200	Nuagaon VF	NA	NA	NA	
	201	Buguhuda VF	NA	NA	NA	
		TOTAL	**843**	**1095**	**1274**	
DEULI	202	Andhari R.F.	36	NA	127	2021-22
	203	Chandua R.F.	82	NA	331	2022-23 & 2023-24
	204	Deuli R.F.	352	NA	89	2024-25
	205	Kuliana R.F.	89	NA	285	2025-26
	206	Suliapada R.F.	341	NA	33	2026-27
	207	Badsole PRF	NA	NA	NA	2027-28

Range	Sl. No.	Forest block	No. of Pillars			Year
			Good Condition	Damaged	Missing	
DEULI	208	Tangasole PRF	NA	NA	NA	2028-29
	209	Kaliasole PRF	NA	NA	NA	2029-30
	210	Dhalu Suliapada VF	NA	NA	NA	2030-31
	211	Kasia VF	NA	NA	NA	
	212	Handibhanga VF	NA	NA	NA	
	213	Anlakuda VF	NA	NA	NA	
	214	Sankhunta VF	NA	NA	NA	
	215	Jalada VF	NA	NA	NA	
	TOTAL		**900**	**0**	**865**	
KAPTIPADA	216	Asanabani (A) R.F.	25	30	9	2021-22
	217	Nachhipur R.F.	67	NA	NA	2022-23
	218	Notto R.F.	NA	NA	NA	2023-24 to 2028-29
	219	Sukhuapata hill PF	NA	NA	NA	2029-30
	220	Kaladahi VF	NA	NA	NA	2030-31
	221	Pedagadia VF	NA	NA	NA	
	222	Khaladi VF	NA	NA	NA	
	TOTAL		**92**	**30**	**9**	
BANGIRIPOSI	223	Dighi R.F.	89	NA	78	2021-22
	224	Rangahudi R.F.	16	NA	11	2022-23
	225	Thakurani R.F.	65	NA	28	
	226	Juha PRF	NA	NA	NA	2023-24
	227	Pimpudijharan PF	NA	NA	NA	
	228	Kopadiha PF	NA	NA	NA	
	229	Ambadiha PF	NA	NA	NA	
	230	Hill Block-I PF	NA	NA	NA	2024-25
	231	Maheshpur PF	NA	NA	NA	2025-26
	232	Manbhanj VF	NA	NA	NA	
	233	Baghajhampa VF	NA	NA	NA	
	234	Jarkani VF	NA	NA	NA	
	235	Nata VF	NA	NA	NA	
	236	Birsingh VF	NA	NA	NA	
	237	Nohanatia VF	NA	NA	NA	
	238	Pahadpur VF	NA	NA	NA	
	239	Heena Chandrapur VF	NA	NA	NA	
	240	Heena Chandrapur VF	NA	NA	NA	
	241	Jaivilla VF	NA	NA	NA	
	242	Sindurgoura VF	NA	NA	NA	
	243	Handivanga VF	NA	NA	NA	2026-27
	244	Bagbuda VF	NA	NA	NA	
	245	Pokhariadiha VF	NA	NA	NA	
	246	Govindpur VF	NA	NA	NA	
	247	Bedhakudar VF	NA	NA	NA	

Range	Sl. No.	Forest block	No. of Pillars			Year
			Good Condition	Damaged	Missing	
BANGIRIPOSI	248	Gopoinathpur VF	NA	NA	NA	
	249	Pahadpur VF	NA	NA	NA	
	250	Brundabanchandrapur VF	NA	NA	NA	
	251	Brundabanchandrapur VF	NA	NA	NA	
	252	Brundabanchandrapur VF	NA	NA	NA	
	253	Kuabuda VF	NA	NA	NA	
	254	Kuabuda VF	NA	NA	NA	
	255	Kuabuda VF	NA	NA	NA	
	256	Kuabuda VF	NA	NA	NA	
	257	Kuabuda VF	NA	NA	NA	
	258	Pokharia VF	NA	NA	NA	
	259	Pokharia VF	NA	NA	NA	
	260	Pokharia VF	NA	NA	NA	
	261	Pokharia VF	NA	NA	NA	2027-28
	262	Pokharia VF	NA	NA	NA	
	263	Pokharia VF	NA	NA	NA	
	264	Pokharia VF	NA	NA	NA	
	265	Pokharia VF	NA	NA	NA	2028-29
	266	Pokharia VF	NA	NA	NA	
	267	Joka VF	NA	NA	NA	
	268	Jharpokharia VF	NA	NA	NA	2029-30
	269	Jharpokharia VF	NA	NA	NA	
	270	Bagbuda VF	NA	NA	NA	
	271	Bagbuda VF	NA	NA	NA	2030-31
	272	Banakati VF	NA	NA	NA	
		TOTAL	**170**	**0**	**117**	
		GRAND TOTAL	**2780**	**1683**	**4310**	

As regard to the Reserve Forests, Protected Forests and Proposed Reserved Forests, encroachment have been noticed. Even habitations and cultivated fields recognized under FRA have not been demarcated either on the Map or in the field. Stones and murom quarries are also seen within and near some of forest blocks. The Divisional Forest Officer will take steps to clearly demarcate the boundary lines of Forest Blocks and submit prosecution against the illegal encroachers as per working plan forest block maps. Forest land recognized under individual forest rights should be demarcated in the field in case of eligible beneficiaries under FRA, 2006. 70% of individual title holders do not know the land on which they received title under FRA, 2006. This may encourage encroachments of new forest land by the individual title

holders for cultivation. So while demarcating the individual title holder‘s land, the title holder may point out the piece of land, which is cultivated by him/ her before 13/12/2006.

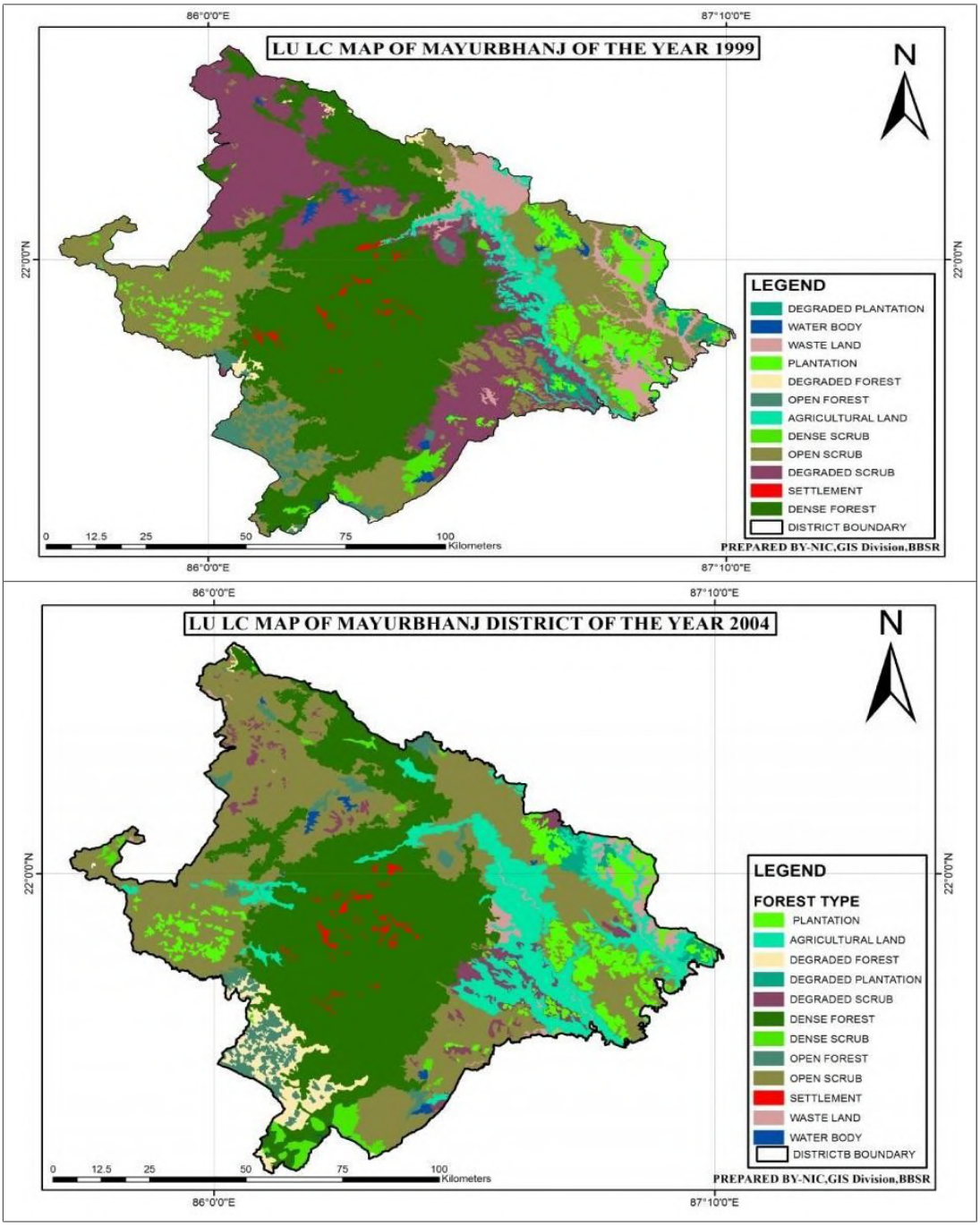
2.4 Land Use, Land Use Change and Forestry (LULUCF):

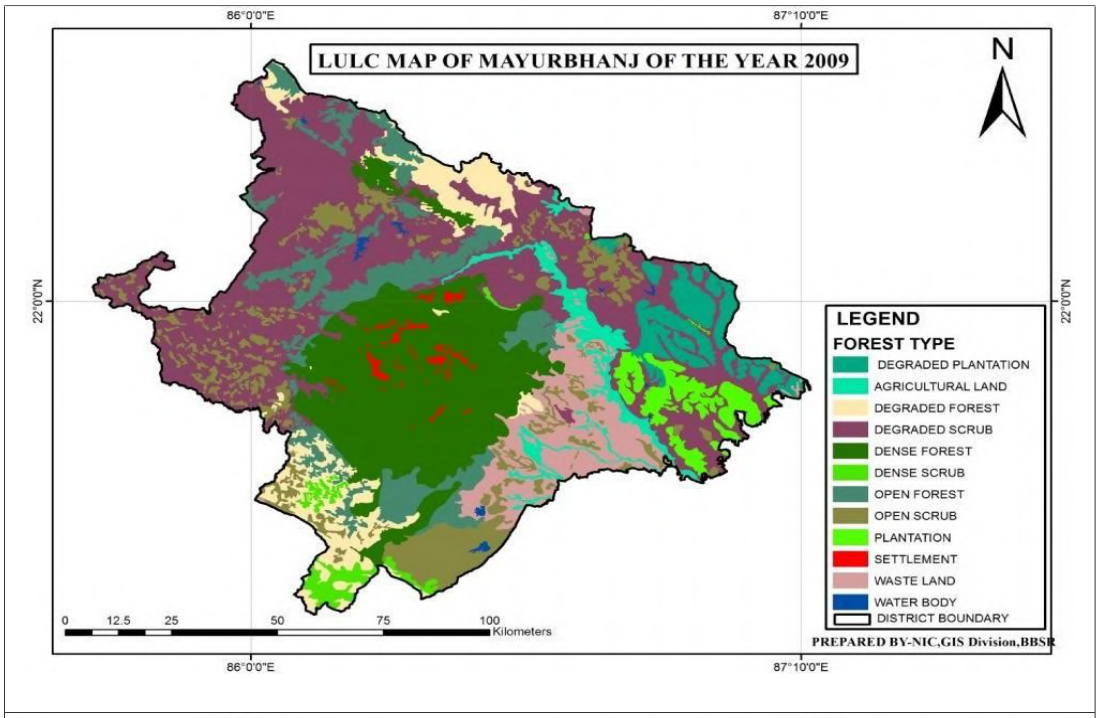
Nature is full of mosaic. Landscape is not exceptional to this order. Different land use pattern have evolved due to variations in anthropogenic activities. This has created environmental complexity. The societal demand in many cases is responsible for change in land use pattern which leads to changes in landscape. Since the change is time dependent mathematical methods are used to predict such changes. The study undertaken in undulating plateau region of Mayurbhanj district, Orissa indicates that settlement area has increased at the cost of farmland. The environmental complexity arises out of this change has brought a negative impact on forested land. More and more lands under vegetation are being converted to agricultural land to meet food need of increasing population. In a study of land use in Mayurbhanj district, platue region, the land used for settlement has increased considerably reducing agriculture land.

LANDUSE IN MAYURBHANJ (AREA IN HECTARE)									
Year	**Total Geographical Area**	**Forest**	**Permanent Pastures & other grazing land**	**Miscellaneous tree crops & groves**	**Culturable Wasteland**	**Fallow Land other than current Fallow**	**Current Fallow Net Area Sown**	**Gross Cropped Area**	**Gross Irrigated Area**
1999	1042000	468000	29000	17000	10000	57000	405000	275000	100810
2000	1042000	468000	29000	17000	10000	56000	406000	479000	109410
2001	1042000	439000	24000	15000	10000	79000	398000	474000	102720
2002	1042000	439000	24000	15000	10000	68000	409000	502000	111610
2003	1042000	439000	24000	15000	10000	101000	376000	440000	30500
Source- SoE									

Land Use Land Cover Maps of Mayurbhanj District

Some LULUCF Maps of Mayurbhanj District is given below.




LULC MAP OF MAYURBHANJ OF THE YEAR 2009
86°0'0"E
87°10'0"E
22°0'0"N
N
LEGEND
FOREST TYPE
DEGRADED PLANTATION
AGRICULTURAL LAND
DEGRADED FOREST
DEGRADED SCRUB
DENSE FOREST
DENSE SCRUB
OPEN FOREST
OPEN SCRUB
PLANTATION
SETTLEMENT
WASTE LAND
WATER BODY
DISTRICT BOUNDARY
0 12.5 25 50 75 100
Kilometers
PREPARED BY-NIC,GIS Division,BBSR

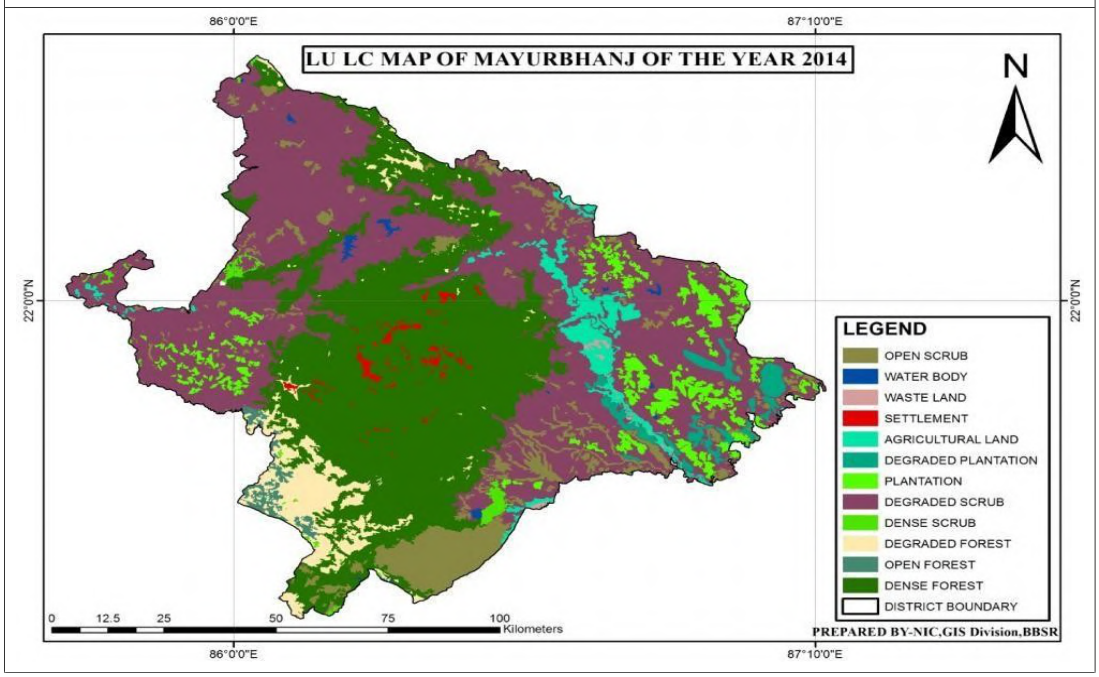
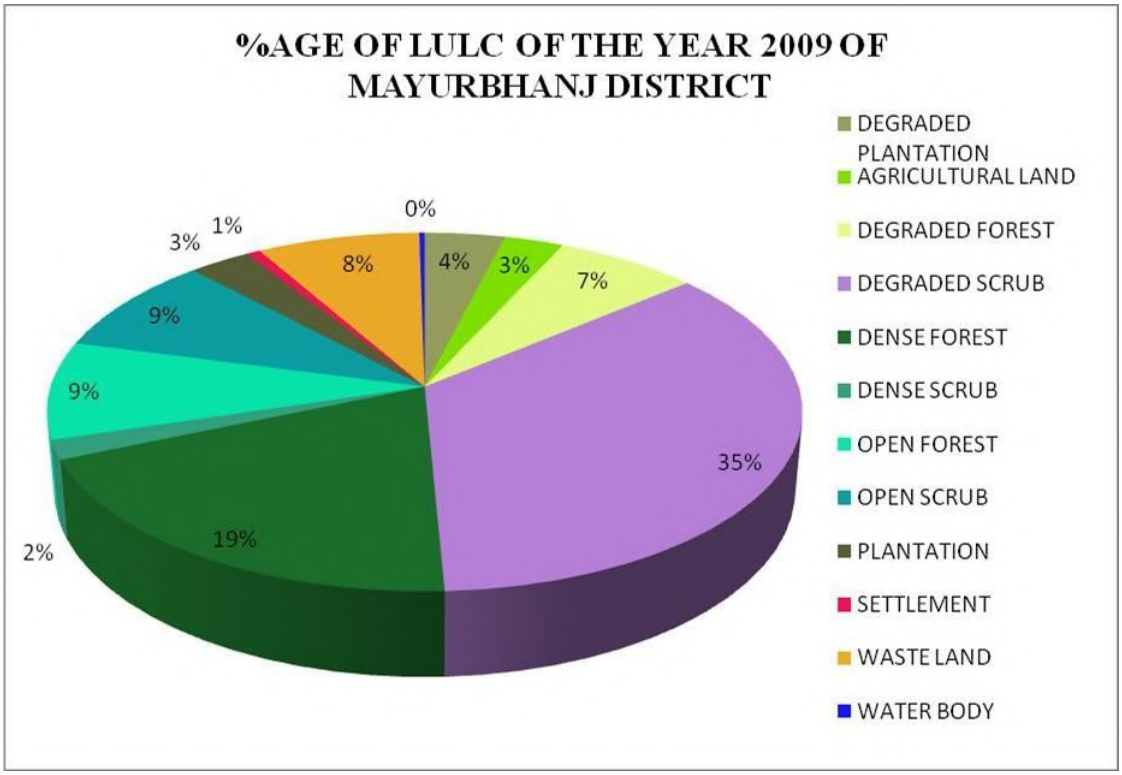

LU LC MAP OF MAYURBHANJ OF THE YEAR 2014
86°0'0"E
87°10'0"E
22°0'0"N
N
LEGEND
OPEN SCRUB
WATER BODY
WASTE LAND
SETTLEMENT
AGRICULTURAL LAND
DEGRADED PLANTATION
PLANTATION
DEGRADED SCRUB
DENSE SCRUB
DEGRADED FOREST
OPEN FOREST
DENSE FOREST
DISTRICT BOUNDARY
0 12.5 25 50 75 100
Kilometers
PREPARED BY-NIC,GIS Division,BBSR

Table 39: % age of area covered by the vegetation types of different years of Mayurbhanj

Vegetation types	1999	2004	2009	2014
Dense forest	35%	32%	19%	32%
Open forest	3%	3%	9%	1%
Degraded forest	1%	3%	7%	4%
Dense scrub	1%	2%	2%	2%
Open scrub	25%	38%	9%	6%
Degraded scrub	21%	3%	35%	46%
Plantation	5%	5%	3%	4%
Degraded plantation	1%	1%	4%	1%
Agricultural land	3%	10%	3%	3%



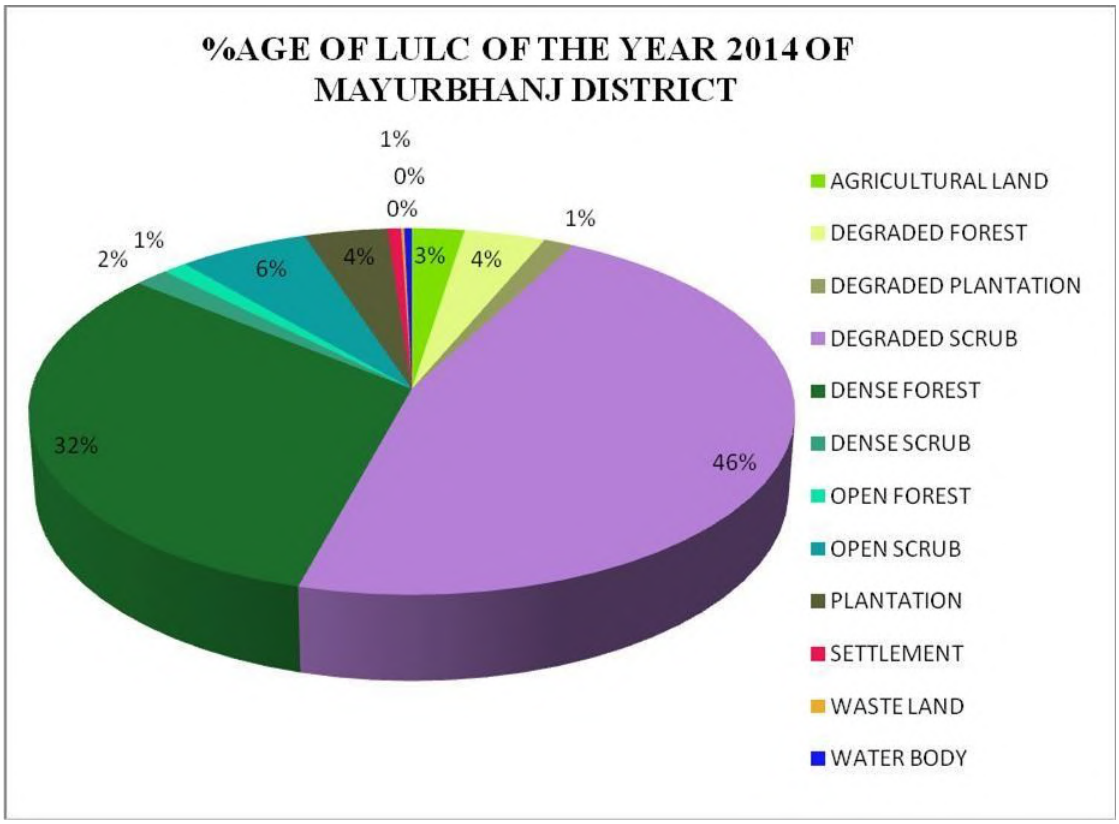


Table 40: Change of area covered by the vegetation types of different years of Mayurbhanj

Vegetation types	1999-2004		2004-2009		2009-2014	
	+ve	-ve	+ve	-ve	+ve	-ve
Dense forest		3%		13%	13%	
Open forest			6%			8%
Degraded forest	2%		4%			3%
Dense scrub	1%					
Open scrub	13%			29%		3%
Degraded scrub		18%	32%		11%	
Plantation				2%	1%	
Degraded plantation			3%			3%
Agricultural land	7%			7%		

The status of forest cover in the forest blocks has improved during the outgoing plan period including the trees outside forest. The change analysis and preparation of change matrix has been shown through compartment maps prepared by NRSC, with assistance of the satellite images. Change matrix for land use, trees outside forest and forest cover for this Division has been accepted as per 2019 re-organization notification. The total forest area diverted for non-forestry activities under Forest (Conservation) Act, 1980 and forest land over which title rights settled under Forest Rights Act, 2006 needs to be shown in the map by the Divisional Forest Officer.

Table 41: Forest cover of Baripada Forest Division - 2015-17.

Year	Division	Very Dense Forest	Moderate Dense Forest	Open Forest	Total Forest	% of Geographical Area	Scrub	Remarks
1	2	3	4	5	6	7	8	9
2015	Baripada	18195.90	53516.61	55703.16	127415.68	27.15	1186.31	Includes Similipal R.F.
2017		18208.69	53612.95	57525.95	129347.59	27.57	1365.01	
Change		12.79	96.34	1822.79	1931.91	0.42	178.70	
Source: Increasing Forest Cover of Odisha, 2015-16								

Table 42: District Forest Cover Change

Year	Name of the District	Geographical Area	Very Dense Forest	Moderate Dense Forest	Open Forest	Total Forest	% of Geographical Area	Change	Scrub
1	2	3	4	5	6	7	8	9	10
2003	Mayurbhanj	10418	99	2910	996	4005	38.44	-127	
2005	Mayurbhanj	10418	319	2690	1010	4019	38.58	0	35
2007	Mayurbhanj	10418	1340	1711	939	3990	38.30	3	34
2011	Mayurbhanj	10418	1340	1711	941	3992	38.32	2	33
2017	Mayurbhanj	10418	1335	1718	1027	4080	39.16	42	34
Source: Indian State of Forest Report, Forest Survey of India									

RECORDED FOREST AREAS OF MAYURBHANJ (in HA.)

Year	Reserved Forest	Protected Forest	Unclassed Forest	Village Forest
1981	339073	127119	245	0
1990	421950	103500	210	210
1991	339453	145211	225	NA
1992	334661	132501	225	225
1993	421953	103499	214	214
1994	335031	132582	198	198
1995	335031	132582	198	198
1996	335031	132582	198	198
1997	333014	24506	220	81473

Year	Reserved Forest	Protected Forest	Unclassed Forest	Village Forest
1998	333014	24506	220	81473
1999	333014	24506	220	81473
2000	333014	24506	220	81473
2001	333014	24506	220	81473
2002	333014	24506	220	81473
2003	333014	24506	220	81473
2004	333014	24506	220	81473
2005	333014	24506	220	81473
2006	333014	24506	220	81473
Source - SoE				

Based on report of Forest survey of India, the PCCF, Odisha published a report on Increasing Forest Cover of Odisha, which indicated change in forest cover between 2015 & 2017 in Baripada Forest Division as given below.

Table 43: Forest Cover Change in Baripada Forest Division

Type of Forest cover	Forest cover in 2015 (in ha)	Forest cover in 2017 (in ha)	Forest cover change between 2015 and 2017
Very dense forest	18195.900	18208.690	12.790
Moderately dense forest	53516.610	53612.950	96.340
Open forest	55703.160	57525.950	1822.790
Scrub forest	1186.310	1365.010	178.700

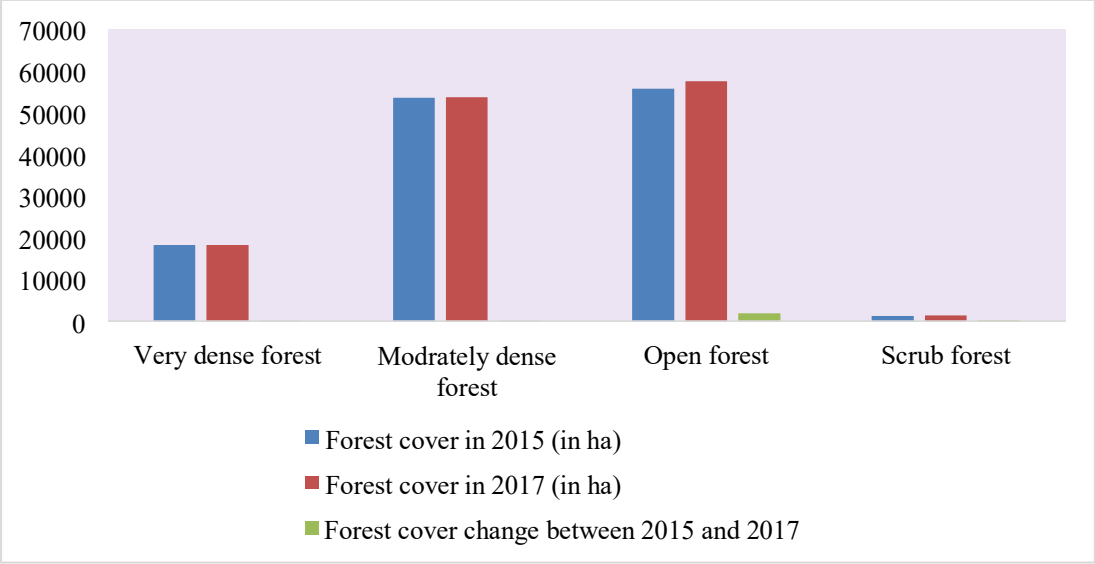


Table 44: Forest Cover Change in Different Ranges of Baripada Forest Division

Forest Range	Type of Forest cover	Forest cover in 2015 (in ha)	Forest cover in 2017 (in ha)	Forest cover change between 2015 and 2017
Bangiriposi	Very dense forest	3331.120	3328.610	-2.510
	Moderately dense forest	7356.230	7350.480	-5.750
	Open forest	7024.690	7037.210	-12.520
	Scrub forest	106.150	106.210	0.060
Betnoti	Very dense forest	0.000	0.000	0.000
	Moderately dense forest	4614.520	4538.870	-75.650
	Open forest	7566.290	8070.600	504.310
	Scrub forest	140.270	186.090	45.820
Deuli	Very dense forest	0.000	0.000	0.000
	Moderately dense forest	5408.290	5377.420	-30.870
	Open forest	9559.940	9531.380	-28.560
	Scrub forest	516.880	535.030	18.150
Dukura	Very dense forest	2593.280	2570.450	-22.830
	Moderately dense forest	3221.080	3199.330	-21.750
	Open forest	4737.870	5117.260	379.390
	Scrub forest	22.190	17.950	-4.240
Kaptipada	Very dense forest	5846.400	5844.370	-2.030
	Moderately dense forest	17370.130	17351.310	-18.820
	Open forest	13866.000	14574.440	708.440
	Scrub forest	186.830	144.830	-42.000
Pithabata	Very dense forest	1180.500	1170.680	-9.820
	Moderately dense forest	6333.600	6319.310	-14.290
	Open forest	3360.240	3455.430	95.190
	Scrub forest	29.510	43.080	13.570
Rasgovindapur	Very dense forest	1475.510	1526.790	51.280
	Moderately dense forest	2318.190	2604.890	286.700
	Open forest	4390.490	4128.900	-261.590
	Scrub forest	94.900	275.670	180.770
Udala	Very dense forest	3769.110	3767.780	-1.330
	Moderately dense forest	6894.570	6871.350	-23.220
	Open forest	5197.650	5610.740	413.090
	Scrub forest	89.580	56.140	-33.440

The range wise Forest Cover change maps (2017 & 2019) is enclosed as **Appendix – XXVI**. Beat wise vegetation change map is enclosed as **Appendix – XXXVIII.**

The forests of Baripada Forest Division comprise of the part of Baripada Civil Sub-Division, Kaptipada Civil Sub-Division of Mayurbhanj District. While analyzing the change in forest cover published in Indian State of Forest Report by Forest Survey of India in case of Mayurbhanj District during 2003 to 2017, there is increase in 1236 Km^2 in forest area in very dense forest category. There is a decrease of 1192 Km^2 area in moderately dense forest category. Further there is increase of 31 Km^2 areas in open forest. There is decrease of 01 Km^2 in area of scrub forest from 2005 report as seen in 2017 report. This indicates that during 2003 – 2017, 1208 Km^2 areas of moderately

dense forests have moved to dense forests and 28 Km^2 areas of moderately dense forests have moved to open forest category. There is overall increase in total forest by 75 Km^2. This increase in forest cover is attributed to forest conservation, joint forest management and plantation. In spite of this there is a net decrease of 01 Km^2 area in scrub forest which indicates gain in forest density.

2.4.1 Area Diverted under Forest (Conservation) Act, 1980

The Forest (Conservation) Act, 1980 envisages regulation/ restriction of use of Forest land for non-forestry purpose to the barest minimum after exhausting all other alternatives. Environmental stability and ecological balance have been given precedence over other matters. However developmental activities are also necessary for the well-being of the common people for which Forest lands are diverted under the Forest (Conservation) Act, 1980, after making proper cost-benefit analysis. Both the conservation and development work should function in an eco-friendly mode. Accordingly, the list of Forest land diverted under FC Act is furnished below.

Forest area diverted for Non-forestry activities under Forest (Conservation) Act, 1980 and Forest Rights Act, 2006 is enclosed as **Appendix – I**. The abstract of Forest diversion in forest blocks coming under revised working plan is given below.

Table No.45: Forest area diverted for Non-forestry activities

Reserve Forest (RF)	381.564 Ha
Protected Forest (PF)	0.330 Ha
Proposed Reserve Forest (PRF)	15.120 Ha
Village Forest (VF)	0.000 Ha
TOTAL	**397.014 Ha**

Forest lands of less than 1 ha are also diverted under sub section-2 of section 3 of S.T And O.T. F.D. (RoFR) Act, 2006. Diversion of forest lands under sub section-2 of section 3 of S.T And O.T. F.D. (RoFR) Act, 2006 in Baripada Forest Division is enclosed as **Appendix – X.**

2.5 Threats to the Forests

The major threats to the forest and wildlife are of following categories.

1. Illegal collection of firewood and fodder
2. Encroachment of forest
3. Grazing of cattle in forest

4. Forest fire
5. Insects and Pests
6. Weeds
7. Drought, flood and cyclone
8. Climbers
9. Poaching

2.5.1 Illegal Collection of Firewood and Fodder

The major threat is caused due to the illegal collection of firewood and fodder by the local people by felling the young regeneration and logging the established plant species. This practice is to be discouraged by making awareness among the villagers and joint forest management.

2.5.2 Encroachment of Forest Blocks

There is Increase in population which demand more land for agriculture and for construction of house. The census figure of district is given below:-

Population in Mayurbhanj as per Census

Year	Males	Females	Density	Area	Dec Var	Females /Thousand	Literacy	Population Attending school	0-15	16-64	65 & above	Crude Birth Rate	Crude Death Rate
1961	534219	534467	115.58	1041700	17.03	999	14.17	3.35	41.73	10.64	0.76	26.68	9.67
1971	721914	712286	137.74	1041200	19.12	1013	18.05	12.54	43.83	53.39	2.77	NA	NA
1981	534219	534467	151.84	1041800	10.3	989	25.71	40.26	38.81	58.21	2.96	NA	NA
1991	952183	932397	181	1042000	19.14	979	37.88	40.16	36.1	56.8	6.5	NA	NA
2001	1123200	1100256	213	1042000	17.89	980	52.43	54.89	36.15	56.54	7.15	NA	NA

Encroachment of forest land is major cause of concern, which has reduced the forest cover causing ecological imbalance. Settlements of encroachment under the ST and OTFD (RoFR) Act, 2006 have made a lot of contributions for shrinkage of forest area. Improper implementation of the above Act has increased tendency among the people for further encroachment of forest land after 13/12/2006 with an intension of legalizing the same in future. The information furnished in quarterly/ yearly report on encroachment is enclosed as **Appendix – XI.** However steps have been taken to foil the fresh attempt made by the miscreants for encroachment after 13/12/2006. Cement concrete pillars constructed to ensure the secure boundary along with digitization of

the map through ORSAC was to stop further encroachment of Forest blocks. Eviction of encroachments prior to enactment of Forest Rights Act, 2006 has become difficult in view of a provision in the said act not to evict till finalization of the claim of the encroacher over the encroached area. Since Grama Sabha is deciding the matter and in most cases Gram Sabha over rides the suggestion of Forest officials, the action on eviction of encroachments is practically nil till date.

Forest Area under Encroachment (in Ha)									
DISTRICT	Year – 1961	Year - 1971	Year - 1981	Year - 1991	Year - 1999	Year - 2000	Year - 2001	Year - 2002	Year- 2003
Mayurbhanj	919.273	679.608	35077.265	3078.757	3078.757	35077.265	3078.757	3078.757	3078.757

At places near the habitation, the forest is encroached for cultivation purpose and even for illegal settlement after 2006. One DGPS survey was conducted during 2010-11 to assess the actual area under Forest cover and the forest area under encroachment. The map of encroachment area can be obtained through analysis of village sheets of Princely State of Mayurbhanj in 1930 settlement. The details of Forest Block wise Encrochment Areas are given below.

Table No.46: Encroachment of Forest Blocks in Baripada Forest Division

Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Encroachment Area (in Ha)
			Under FRA	Under FC Act.		
PITHABATA	Bhagabat Chandrapur R.F.	806.280	10.800	0.000	795.480	299.696
PITHABATA	Budhikhamari R.F.	863.100	6.000	0.480	856.620	94.650
PITHABATA	***Sub-total***	***1669.380***	***16.800***	***0.480***	***1652.100***	***394.346***
DUKURA	Aghasole R.F.	37.550	0.000	0.000	37.550	23.720
DUKURA	Chengua-Mangalpur R.F.	79.640	0.000	0.000	79.640	23.716
DUKURA	Haldia R.F.	52.000	0.000	0.000	52.000	40.357
DUKURA	Jarkani R.F.	10.680	0.000	0.000	10.680	1.564
DUKURA	Kanpura R.F.	533.850	0.000	0.890	532.960	21.606
DUKURA	Pundala R.F.	17.970	0.000	0.000	17.970	0.383
DUKURA	Belpal R.F.	110.600	0.000	0.000	110.600	65.836
DUKURA	Dukura R.F.	162.750	0.000	0.000	162.750	1.731
DUKURA	Itamundia-Jamuna R.F.	111.250	0.000	0.000	111.250	61.269
DUKURA	Khanua R.F.	113.680	0.000	0.000	113.680	22.776
DUKURA	Kerko R.F.	110.070	0.000	0.000	110.070	0.505
DUKURA	Gopinathpur P.R.F.	566.400	0.000	0.000	566.400	196.701
DUKURA	Bhupad V.F.	5.000	0.000	0.000	5.000	0.625
DUKURA	***Sub-total***	***1911.440***	***0.000***	***0.890***	***1910.550***	***460.789***

Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Encroachment Area (in Ha)
			Under FRA	Under FC Act.		
RASGOVINDPUR	**Amarda R.F.**	1512.200	0.648	0.000	1511.552	30.139
RASGOVINDPUR	Chitrada R.F.	422.640	12.800	0.000	409.840	26.600
RASGOVINDPUR	Nalagaja R.F.	260.290	0.000	0.000	260.290	29.192
RASGOVINDPUR	Nuhajhalia R.F.	50.500	0.000	0.000	50.500	2.942
RASGOVINDPUR	Nunchatia R.F.	148.270	0.000	0.000	148.270	19.171
RASGOVINDPUR	Sarumula R.F.	330.220	0.000	0.380	329.840	8.767
RASGOVINDPUR	***Sub-total***	***2724.120***	***13.448***	***0.380***	***2710.292***	***116.811***
UDALA	Anantasahi R.F.	7.120	0.000	0.000	7.120	0.946
UDALA	Belakuti R.F.	223.380	0.000	0.000	223.380	61.166
UDALA	Bhandagaon R.F.	122.210	0.000	0.000	122.210	40.871
UDALA	Charada R.F.	7.120	0.000	0.000	7.120	3.731
UDALA	Dhaundia R.F.	524.790	0.000	0.800	523.990	39.168
UDALA	Dugdha R.F.	35.290	0.000	0.000	35.290	2.494
UDALA	Jaypur R.F.	27.800	0.000	0.000	27.800	7.830
UDALA	Khunta R.F.	427.990	4.590	0.000	423.400	100.106
UDALA	Kuamara R.F.	229.530	0.000	0.000	229.530	79.977
UDALA	Marsigaon R.F.	263.320	0.000	0.000	263.320	169.760
UDALA	Nahara R.F.	161.870	0.000	0.000	161.870	25.712
UDALA	Naupada R.F.	324.380	0.000	0.000	324.380	42.463
UDALA	Purunabaripada R.F.	25.850	0.000	0.000	25.850	11.844
UDALA	Sialia R.F.	34.320	0.000	0.000	34.320	15.344
UDALA	Sirathali R.F.	74.140	0.000	0.000	74.140	27.681
UDALA	Udala R.F.	533.930	0.000	0.000	533.930	17.206
UDALA	***Sub-total***	***3023.040***	***4.590***	***0.800***	***3017.650***	***646.299***
BETNOTI	Asankhali R.F.	12.950	0.000	0.120	12.830	8.923
BETNOTI	Badguma R.F.	28.970	0.000	0.000	28.970	12.159
BETNOTI	Bartana R.F.	194.890	0.000	0.000	194.890	34.529
BETNOTI	Basantapur R.F.	113.800	0.000	0.000	113.800	39.384
BETNOTI	Beldiha R.F.	41.600	0.000	0.000	41.600	12.174
BETNOTI	Bishrampur R.F.	42.250	0.000	0.000	42.250	5.067
BETNOTI	Chhatnna R.F.	393.510	2.050	0.000	391.460	8.220
BETNOTI	Dalki R.F.	827.970	0.000	0.000	827.970	177.033
BETNOTI	Garudabasa R.F.	71.870	0.000	0.000	71.870	10.207
BETNOTI	Haripur R.F.	41.280	0.300	0.040	40.940	14.928
BETNOTI	Hatijhuri R.F.	109.110	0.000	0.000	109.110	28.649
BETNOTI	Hempur R.F.	290.790	0.000	0.000	290.790	59.072
BETNOTI	Jarka R.F.	6.630	0.000	0.000	6.630	4.582
BETNOTI	Jugal R.F.	305.290	0.000	0.500	304.790	47.984
BETNOTI	Kalma R.F.	24.360	0.000	0.120	24.240	5.230
BETNOTI	Kapoi R.F.	109.260	0.000	0.000	109.260	6.115
BETNOTI	Ketakisole R.F.	39.330	0.000	0.000	39.330	8.743
BETNOTI	Khadikapada R.F.	75.110	0.000	0.000	75.110	16.194

Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Encroachment Area (in Ha)
			Under FRA	Under FC Act.		
BETNOTI	Krushnachandrapur R.F.	1272.070	18.000	1.160	1252.910	77.791
BETNOTI	Machhapada R.F.	62.810	0.000	0.000	62.810	18.160
BETNOTI	Mantapal R.F.	222.730	0.000	0.000	222.730	72.098
BETNOTI	Mohanpur R.F.	35.130	0.000	0.000	35.130	12.042
BETNOTI	Purunia R.F.	442.300	0.000	1.350	440.950	69.633
BETNOTI	Rautra R.F.	119.460	0.300	0.000	119.160	7.047
BETNOTI	Sarbana R.F.	41.120	0.000	0.000	41.120	15.348
BETNOTI	Thakurtota R.F.	73.330	0.000	0.000	73.330	1.391
BETNOTI	Bharadasole R.F.	50.670	0.000	0.000	50.670	12.896
BETNOTI	Totapada R.F.	65.070	0.000	0.000	65.070	16.123
BETNOTI	Tikayatpur R.F.	160.960	0.870	0.000	160.090	66.713
BETNOTI	Patpur RF	141.480	0.600	0.000	140.880	19.702
BETNOTI	Kochilakhunta P.R.F.	99.000	0.000	0.000	99.000	0.011
BETNOTI	Bhalia P.R.F.	340.160	0.000	0.000	340.160	81.832
BETNOTI	***Sub-total***	***5855.260***	***22.120***	***3.290***	***5829.850***	***969.981***
DEULI	Andhari R.F.	731.630	0.000	0.000	731.630	330.451
DEULI	Suliapada R.F.	2889.560	8.000	0.000	2881.560	25.919
DEULI	Kaliasole P.R.F.	320.160	0.000	0.000	320.160	43.151
DEULI	***Sub-total***	***3941.350***	***8.000***	***0.000***	***3933.350***	***399.521***
KAPTIPADA	Nachhipur R.F.	229.000	0.000	0.000	229.000	4.900
KAPTIPADA	Notto R.F.	7707.080	0.000	0.000	7707.080	66.841
KAPTIPADA	***Sub-total***	***7936.080***	***0.000***	***0.000***	***7936.080***	***71.741***
BANGIRIPOSI	Dighi R.F.	515.940	0.000	0.000	515.940	166.486
BANGIRIPOSI	***Sub-total***	***515.940***	***0.000***	***0.000***	***515.940***	***166.486***
	DivisionTotal	***27576.610***	***64.958***	***5.840***	***27505.812***	***3225.973***

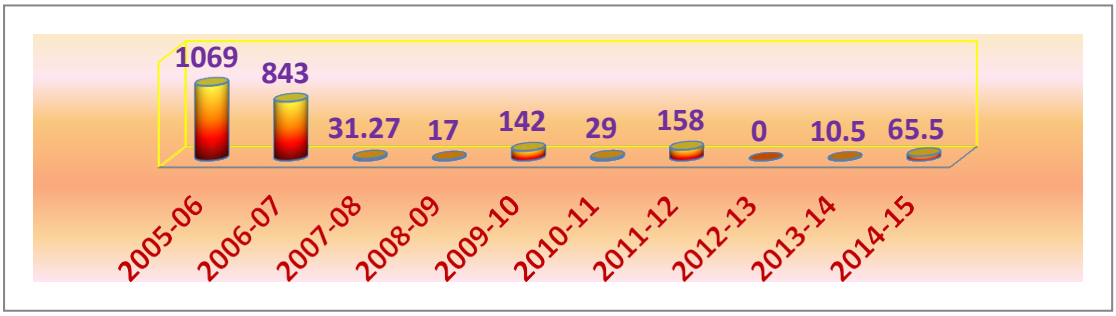
All forest encroachments except Notto R.F. have been included under Plantation Working Circle.

2.5.3 Grazing

Huge numbers of cattle depend on the forest for grazing. There is no rotational grazing in the forest for which growth of forest is affected. There are about 6.18 lakh goats, 1.7 lakh Sheep and 2.0 lakh cattle population in Baripada Forest Division. Hence because of over grazing, forest gets deteriorated.

2.5.4 Forest Fire

Forest fire is as old as human civilization. It poses a great threat to the Forest & wildlife. Only ground fire has been occurring in this Division causing serious damage to the biodiversity as well as eco-system. The natural regeneration in the initial stage at forest floor is the worst sufferer. The causes are many and varied but all owe its origin to human and their activities. Some important causes of Forest fire is furnished below.



2.5.4.1 Causes of Forest Fire:

i. Clearance of forest floor by uncontrolled and irrational fire for collection of NTFP particularly M**a**hua flower during March-May.

ii. Poaching of wild life — poachers put fire in forests for driving the wildlife in particular direction to make it succumb to the attack.

iii. Encroachment – Clearance of forest growth through burning for facilitating the Agriculture, housing and other purposes with less effort.

iv. Ill intension – Throwing inflammable materials like Bidi/ Cigarate carelessly by local inhabitants while passing through forest is the major cause of fire. Sometimes forest offenders with evil desire try to settle scores against forest officials by igniting forest fire. On the whole, majority of forest fires are due to malicious motives/ carelessness/ ignorance.

v. Extreme dry condition and high temperature during the summer are congenial for easy and quick ignition of the inflammable dry leaf and other materials on the forest floor to become forest fire, which spreads rapidly due to high speed wind, prevalent during the said period.

The incidence of fire, location wise, during the current plan period as detected through MODIS aqua and TERA satellite detection is furnished below.

Table 47: Forest Fire

Year	No of Fire incident	Area in ha.
2005-06	29	1069.000
2006-07	28	843.000
2007-08	08	31.270
2008-09	04	17.000
2009-10	09	142.000
2010-11	09	29.000
2011-12	37	158.000
2012-13	-	-
2013-14	02	10.500
2014-15	64	65.500

Figure 7: Number of Fire Incidents

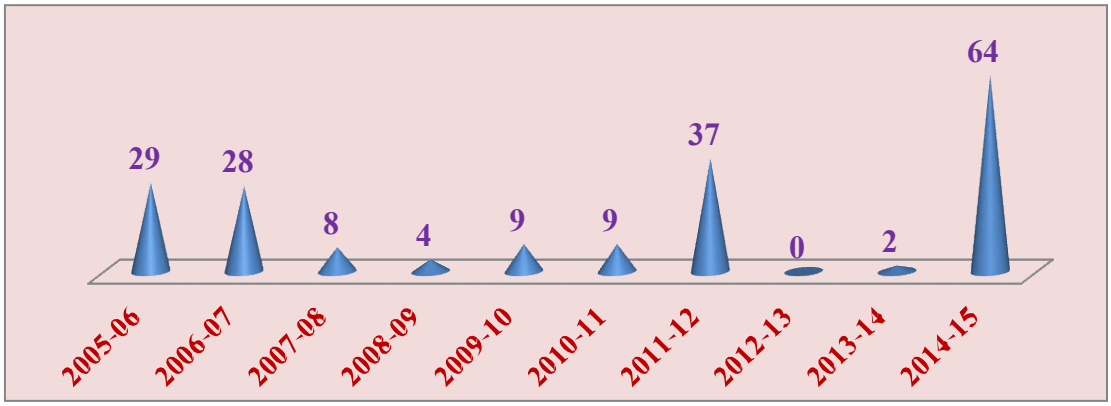
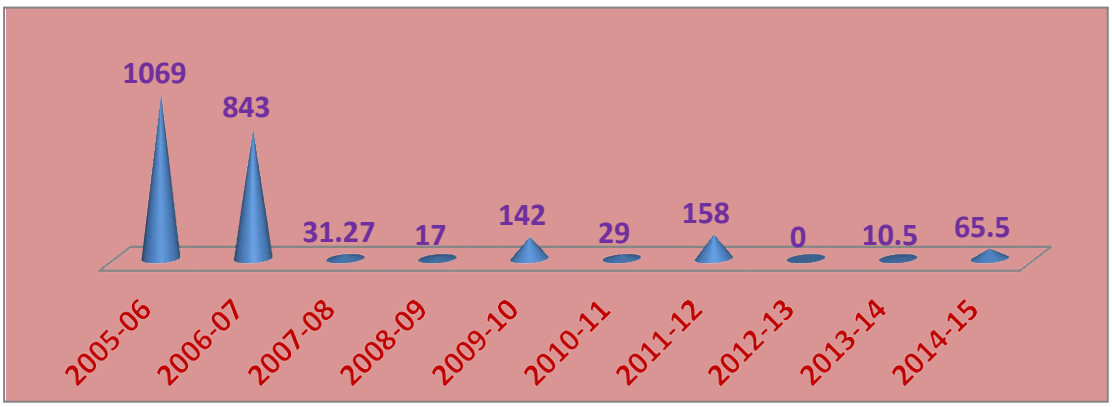


Figure 8: Area in ha. Affected by Forest Fire



This Division has made a number of efforts to tackle this problem by taking different measures as enumerated below.

a) Maintenance of existing fire line: Fire lines are maintained annually prior to the onset of fire season to prevent the spread of fire.

b) Creation of new fire line: New fire lines are created in areas of fire incidences during past year, prior to the onset of fire season to ensure prevention of spreading of forest fire.

c) Alert through SMS: Mobile phones have been registered with FSI to send the message of fire incidence quickly, so that prompt action can be taken to contain the damage.

d) Engagement of fire watchers: Fire watchers are engaged during the fire season to keep a watch on the fire incidents and to control it instantly.

e) Deployment of firefighting squad: Firefighting squads are deployed in vulnerable areas by the Range Officer with vehicle to act instantly for control of fire.

f) Supply of firefighting tools: Fire Proof Jacket, Boot, Helmets etc. are provided to the squad and watchers to discharge their duty efficiently without fear of fire injuries to themselves.

g) Incentive to VSS and villagers: Incentives are provided to the VSS members to inculcate the spirit of preventing fire in the Forest close to their habitation. Financial benefits encouraged local people to prevent forest fire at initial stage.

h) Awareness: Meetings, scrolling message through electronic media, distribution of leaflets about the damage due to forest fire and the benefits of prevention of forest fire are carried out to awaken the public.

i) Extinguishing through Fire brigade: Sometimes the services of fire brigade are also resorted to control the road side forest fire.

j) Functioning of round the clock control room: Control room functions at the Division level round the clock to respond to the problems instantly on receipt of information.

The feedbacks from the field suggest that, all the aforesaid measures should continue and work to control/ prevent the forest fire effectively. Besides that the control of fire

at higher altitude is a difficult task for which use of fire extinguishing gas should be supplied to the staff. Mini fire brigade van should be provided to the vulnerable Ranges.

Fire hazards bring major setback to the growth of forest. The regenerations, herbs, shrubs and even fallen seeds are completely burnt due to forest fire which occurs during the month of March- May. The forest fire is more in years of drought and high atmospheric temperature.

Insects attack by wood borers is common in Sal. The leaf spot disease is manifested in varieties of species. The damaged, deformed, injured, crooked, diseased and dead trees are removed at the time of silvicultural operation.

Weed growth of *Eupatorium spp.* and *Lantana spp.* is heavy in open space, invading the undergrowth. Efforts have been made to remove those by uprooting of weeds during monsoon and post-monsoon before flowering.

Some Forest trees were uprooted by the 1999-Cyclone, 2013-Phailin, 2014-Hudhud etc.. The dead/ uprooted trees in the forest floor need to be removed from forest before fire season.

Climbers such as *Bauhinia vahlii* is a menace to the forest. The dry climbers need to be removed from forest to reduce impact of forest fire.

Legal Provisions to Control Fire:

a) **As per Sec.27 (3) under Orissa Forest Act 1972**

Any person sets fire to a Reserved Forest or who in a Reserved Forest − (a) –kindles, keeps or carries any fire or fells, girdles, lops or burns any tree or paint or strips off the bark or leaves from or otherwise damages the same or causes damages to any forest produce‖ shall be punishable with imprisonment for a term which shall not be less than three years but may extend to seven years and with fine which may extend to ten thousand rupees.

b) The Orissa Forest (Fire Protection) Rules, 1979 envisages under rule 3(1) that

1) No person shall set fire to any part of a reserved forest or a protected forest, and no person shall set fire in the vicinity of a reserved or protected forest so as to cause damage to any forest produce therein.

2) Except as such places, as may be notified locally by the Divisional Forest Officer from time to time, no person shall kindle any fire or leave any fire burning upon any public or private road or path which adjoins or passes through a Reserved or protected forest.

3) No burning wood or fire brands for torches shall be carried within or along the boundaries of any reserved or protected forest between the periods from the 1st November to 30th June of any year. Smoking shall also be prohibited during the aforesaid period within any reserved or protected forests save as authorized camping grounds.

4) No fire shall be lighted within or along the boundary of a reserved forest or a protected forest except in camping grounds notified as such by the Divisional Forest Officer. Persons using such grounds shall light fire in such a way as not to endanger the forest or any burning or shed, and shall extinguish all fire before they leave the place.

2.6 Distribution of Different Forest Types

The forests of Baripada Forest Division mainly comprise of mixed Sal forests. Sal is the dominating species with its associates like Asan, Bija, Champa, Sisoo, Char, Dhaura, Kendu etc. As per the champion and Seth classification, the Forest cover of this Division is classified into two broad types i.e. Tropical moist deciduous Sal forests mainly found in forest blocks of Betnoti, Deuli, Dukura, Kaptipada, Udala, Bangiriposi & Pithabata Ranges and Tropical dry deciduous sal forests in Notto RF of Kaptipada Range. These two types are intermingled with each other. Due to heavy biotic pressure, changes in the forest type are conspicuously noticed. Influence of edaphic factors makes lots of openings, which succeeded with Phoenix and other thorny bushes. Intensive Forest fires have affected both the floral and faunal composition of the forests.

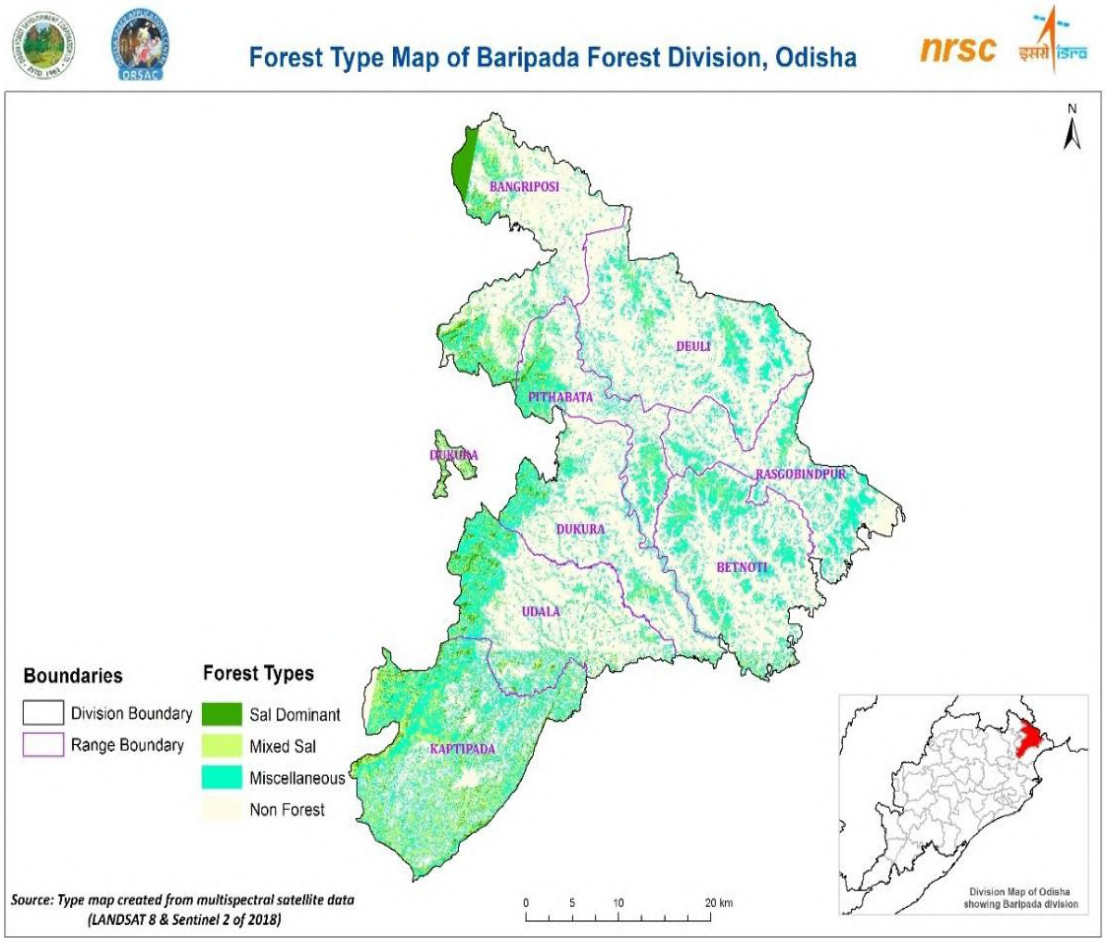
The following types of forests are found in Baripada Forest Division:

1. Tropical moist deciduous Sal forests, 3C/C_2e (ii)

   - Noticed in major portions of Bangiriposi, Dukura, Betnoti, Rasgovindpur, Deuli, Pithabata, Udala Range and part of Kaptipada Range.

2. Tropical dry deciduous sal forests, 5B/1C Northern tropical dry deciduous forest.

   -Noticed in Notto RF of Kaptipada Range, rich in floral & faunal bio-diversity.



For Official Use

There are 124 nos. of Reserve Forests in Baripada Forest Division which (except Notto RF) are mainly plain forests. Reserve Forests is about 57% of the total forest area (including Revenue Forest & DLC Forest area). Sal is the dominating species among others. The Forest type varies from Tropical moist deciduous to tropical dry deciduous forest, with few patches of moist Sal savanna as per the champion and Seth classification. Apart from this, there are good patches of old plantations which are over matured and have exceeded the harvesting period. Some of them are affected by severe cyclones like Phailin & Hudhud. The remaining plantations are included in the

Plantation Working Circle for their special management. This Division contains 15Nos. of PRF, 06 No. PF and Un-classed forests. For management of Forest blocks after expiry of approved Working Plan, working schemes have been prepared and implemented during 2016-17, 2017-18, 2018-19, 2019-20 and 2020-21.

2.7 Tree Cover Outside Forest Area

Trees located on the lands other than the forests (RF/ PRF/ PF/ VF/ Revenue Forest/ DLC Forest), including agricultural lands (e.g. agro-forestry systems, farm forestry, industrial plantations, hedgerows, woodlots, Cashew Plantations), Govt. Plantations on Non-Forest areas (FDA Plantations, CAMPA Plantations, Avenue Plantations, Parks, Urban Plantations), Jahiras and trees on private land, built-up areas such as settlements, Private Bamboo Plantations, private Acacia/ Eucalyptus/ Teak Plantations and bare lands available for tree plantations. It provides a good source of economic production for community as well as individuals who have raised cashew in their own land. So there is a need to describe and comprehend the dynamics of trees and shrubs on rural and urban land, and their interaction with forest ecosystem. This will lead to a better understanding of off-forest tree management of forests as natural resources. ToF contribute nearly 6.7% of the total growing stock in Baripada Forest Division.Block wise land use map is furnished as **Appendix – XXXVII**.

It is prescribed to restock the barren non-forest areas by artificial regeneration wherever possible through commercial forestry scheme, where Govt. will raise the plantations in farmer‘s field & farmer will maintain the planatation out of his own fund.

2.8 Shifting Cultivation (Jhumming)

There is no incidence of shifting cultivation in Baripada Forest Division.

3. CHAPTER – III

MAINTENANCE, CONSERVATION AND ENHANCEMENT OF BIODIVERSITY

3.1 Forest Composition and Distribution

The forests of Baripada Forest Division can be classified into following groups & sub-groups according to standard classification based on ―Revised Survey of Forest types of India‖ by H.G. Champion and S.K. Seth.

Table 48: Distribution of Different Forest Types in Baripada Forest Division

Sl. No.	Type of forest as per Champion and Seth classification	Name of the forest blocks where existing	Plan Area (in ha)
1	Tropical moist deciduous forests, $3C/C_2e_{(ii)}$ Moist peninsular low level sal	Forest Blocks of Betnoti, Deuli, Dukura, Kaptipada, Udala, Pithabata, Rasgovindpur and Bangiriposi Ranges	42331.640
2	Tropical dry deciduous forests, 5B/1C Northern tropical dry deciduous forest - Dry peninsular sal forests	Notto RF of Kaptipada Range	7707.080

GROUP – 3, TROPICAL MOIST DECIDUOUS FORESTS

SUB-GROUP 3C – NORTH INDIAN MOIST DECIDUOUS FORESTS

Tropical moist deciduous forest type is found in the moderately heavy to very heavy rainfall areas of the Division. The top of the storey in this type consists of predominantly deciduous species but the second storey has some evergreens. These forests are most extensive and occur all over Baripada Forest Division (except Notto RF). By far the predominant species of this type is sal which forms 50-80 percent of the crop. The height of sal depends on the site characteristics, like gradient, soil depth, temperature aspect and soil mixture. Common associates of sal in this type are *Pterocarpus marsupium, Xylia xylocarpa, Haldina cordifolia, Emblica officinalis, Lagerstroemia parviflora, Bombax ceiba, Grewia spp, Syzygium cumini, Dillenia pentagyna, Careya arborea, Kydia calycina, Bridelia retusa, Buchannia lanzan*, *Lannea coromandelica, Terminalia tomentosa, Madhuca Longifolia, Diospyros*

melanoxyion, Semecarpus anacardium, Gardenia florida, Terminalia bellirica etc. Climbers are consisting of *Bauhinia vahlli, Dioscorea spp., Smilax spp., Cissus spp., Ampelocissus spp.* etc. Herbaceous flora consists of *Curcuma spp., Zingiber spp.,* species of *Rubiaceae, Asteraceae and Acanthaceae, Ferns and Orchids*. Natural regeneration of sal is generally adequate.

Bamboo is absent. Excessive biotic interference has resulted in degradation of the vegetation.

C. GROUP – 5: TROPICAL DRY DECIDUOUS FORESTS

SUB-GROUP – 5B NORTHERN TROPICAL DRY DECIDUOUS FORESTS.

1C DRY PENINSULAR SAL FORESTS.

This sub-type occurs on shallow soils derived from crystalline and metamorphic rocks wherever the soil mixture conditions are unfavourable for development of moist sal even in areas with a much higher rainfall. The soil often rests on hard impervious laterite and is sometimes calcareous. Typical site quality is III / IV. Sal regeneration is fair but slow.

Whenever conditions are hot and dry, sal is poorer quality giving rise to this type of forests. Both upper and lower canopies in these forests are composed of deciduous species. This type occurs on steep exposed slopes of mainly outside the Similipal reserves such as Notto. Sal forms about 25 percent of the crop or sometimes more up to 40 to 60 percent in favourable conditions. The areas lack in perennial streams. Associated with sal are *Anogeissus latifolia, Terminalia alata, T.chebula, Diospyros melanoxylon, Haldina cordifolia, Cassia fistula, Semecarpus anacardium, Buchanania lanzan, Lannea coromandelica, Sterculia urens, S.Villosa, Cochlospermum religiosum*, etc. The shrubs include *Cleistanthus collinus, Nyctanthes arbortristis, Gardenia latifolia, Randia species, Ziziphus spp, Helicteres isora, Flacourtia ramontchi* etc. The climbers are not many and consist of *Acacia spp., Bauhinia vahlli, Combretum spp.,* etc. Epiphytes and ferns are not conspicuous.

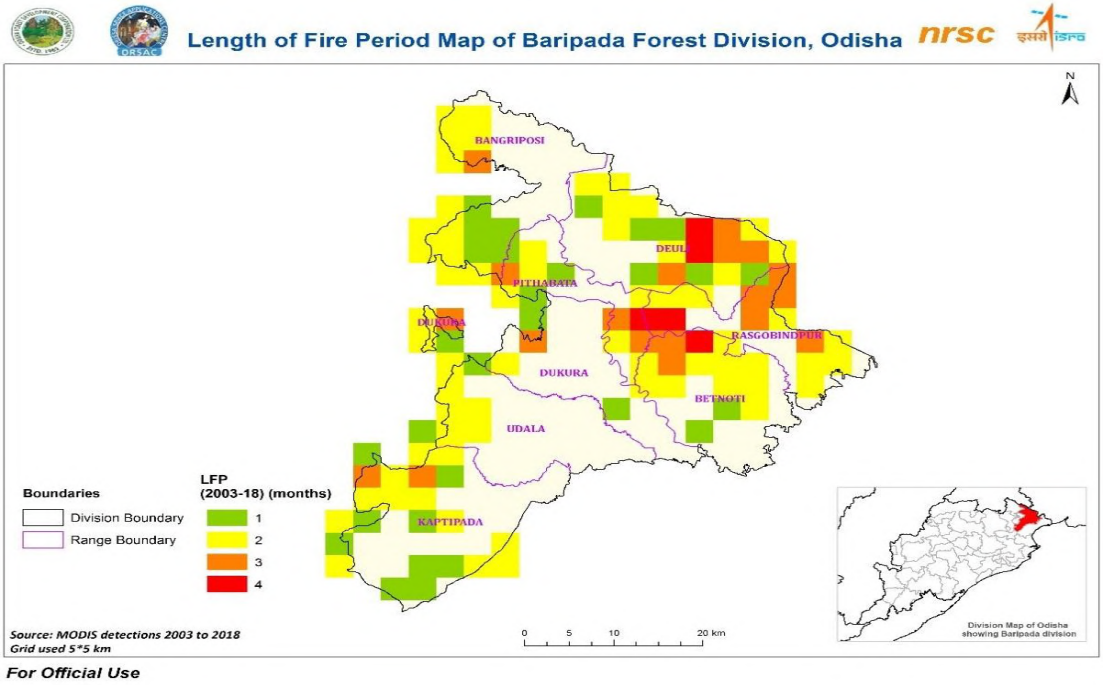
E.3C/C2e (ii) MOIST PENINSULAR LOW LEVEL SAL

The plain forest outside Similipal hills can be classified under this sub-type. Sal occurs on crystalline rocks with yellow loam, soil or red soil devoid of clay. The

elevation of the area is 400m.above M.S.L. There is a light shrub growth under the sal and a moderately dense cover of grass. Sal is Q.III. Regeneration is satisfactory.

Typical associate in top canopy trees are *Pterocarpus marsupium*, *Terminalia tomentosa, Gmelina arborea, Madhuca indica, Anogeissus latifolia*, etc. Second story trees consist of *Emblica officinalis, Cassia fistula, Buchanania lanzan, Ougeinia oojeinensis.* Shrubs consist of *Holarrhena antidysenterica* etc. Bamboo is absent. Common climbers are *Bauhinia vahlii, Butea superba, Similax zylanica* and *Combreturn decandrum*. Grasses are *Themeda quadrivalvis* (No large saccharum) and *Imperata cylindrica*.

This sub-type of forest is distributed in Pithabata Range, Udala Range, Dukura Range, Betnoti Range, Bangiriposi Range, Rasgovindpur Range and Deuli Range. Unfortunately the sal forest is successively degraded and depleted by human activity like indiscriminate fellings high incidents of grazing and daily green leaves collection for local usage and sale.



Map 12: Length of Fire Period in Baripada Forest Division

3.2 Plant Species Diversity

Plant Species diversity is variety in number and richness of the species of a region. Species richness is the number of species per unit area and species evenness is the number of individual of the different species. It is the product of both species richness and evenness.

One of the most used of all sampling methods is the area sample. This is ordinarily a square area of known size called a quadrant. The quadrates were selected at random. Quadrat size is generally determined on the basis of the size and density of the plant being sampled. Quadrat shape is important in relation to the ease of lying out it and to the efficiency of sampling. In each quadrat, all types of plants to be examined are recorded on a previously prepared data sheet. Within each quadrant the number of individuals, presence/ absence of the species in each can determine the species composition. The plant species diversity is assessed based on data collected from Grid sample plot for trees, shrubs herbs. The data should be analyzed as per the National Working Plan Code- 2014 guidelines for Density, Frequency and Total Basal area. Only density and frequency are considered for calculation of IVI for herbs and shrubs.

The Importance Value Index (IVI) is calculated by adding up relative dominance, relative density and relative frequency. It is assumed that the dominance of a species increases with an increasing importance value and species with lowest importance value is the least dominant. The maximum IVI value is 300 (100 is for relative dominance, relative density and relative frequency). Basal area and density of tree species is converted to hectare basis. The result of IVI value is interpreted in terms of dominance, co-dominance and least dominance for tree species only. The plant data must be collected by sampling using quadrats of 10×10 m^2 or 20×20 m^2 size. Quadrats need to be randomly placed at study area. The size and number of the quadrats were determined by the species area curve method. The data were quantitatively analyzed for frequency, density and dominance as per (Mishr, 1968). Their relative values were calculated and summed to get Important Value Index (IVI) of individual species.

The vegetation data were quantitatively analyzed for relative density, relative frequency andrelative dominance in order to calculate the Important Value Index (IVI).

$$Density = \frac{\text{Total number of individuals in all quadrats}}{\text{Total quadrats laid}}$$

$$Frequency = \frac{\text{Number of species in which species occur}}{\text{Total quadrats laid}} \times 100$$

$$Abundance = \frac{\text{Total number of individuals in all quadrats}}{\text{Number of quadrats in which species occur}}$$

$$\text{Mean basal area} = \frac{(\text{Circumference})^2}{4\pi}$$

$$\text{Total basal area} = \text{Mean basal area} * 100$$

$$RelativeDensity = \frac{\text{Density of the species}}{\text{Totaldensity of all species}} \times 100$$

$$\text{Relative Frequency} = \frac{\text{Frequency of the species}}{\text{Total frequency of all species}} \times 100$$

$$RelativeDominance = \frac{\text{Dominance of the species}}{\text{Total dominance of all the species}} \times 100$$

$$Or = \frac{\text{Total basal area of a species}}{\text{Total basal area of all species}} \times 100$$

The vegetation data were analyzed for % frequency (F), density (D) and abundance (A). The Importance Value Index (IVI) need to be computed for all the tree species by adding the relative values of frequency, density and dominance (basal area) following Curtis and McIntosh (1951), Curtis and Cottam (1956), and Brown and Curtis (1952). The relative value of frequency, density and dominance were determined as suggested by Phillips (1959). Phyto-sociological attributes (density, frequency and basal area); aspects and elevation of each stand has to be recorded. Importance value mostly used to rank each species and the plant species with the highest importance value in the stand is considered the dominant species. The plant community needs to be named on the basis of dominant species.

Frequency

Frequency is the important parameter of vegetation analysis, which reflects the spread, distribution or dispersion of a species in a given area, and given in percent. For example, if a species is distributed uniformly in an area, there is greater probability of its occurrence in all quadrants and it would have maximum frequency.

In another case, a species may be clustered or present only in a part of the area. In this case, it will occur only in few quadrants and hence it would have lesser frequency. The % frequency of a species in a given area is studied by either quadrant method or transects and is calculated by the following formula-

$$\% \text{ Frequency} = \frac{\text{Number of quadrats in which species occurred}}{\text{Total number of quadrats studied}} \times 100$$

Relative frequency can be calculated by the formula,

$$\text{Relative frequency} = \frac{\text{Number of quadrats in which species occurred}}{\text{Total Number of quadrats in which species occurred}} \times 100$$

Thus, if a species occurs in 5 out of total 10 quadrants studied, its frequency would be 50%. If a species occurs in all the quadrants studied, its frequency would be 100%. Frequency is a very important quantitative parameter. Raunkiaer (1934) made an elaborative study on the frequency of species in about 8000 quadrants and based on his data, he divided species into 5 classes viz. A, B, C, D, E. The distribution of frequency in 5 classes is given here under in as,

Table 49: Raunkiaer's Frequency class distribution

Raunkiaer's Frequency class	Frequency Range
A	1-20%
B	21-40%
C	41-60%
D	61-80%
E	81-100%

Density

It is defined as the number of individuals of a particular species per unit area. Tree density gives an idea of how closely trees are growing in a given area. This value is always expressed as trees per hectare. The tree density is not an exact number of all of the trees in the region.

$$\text{Density} = \frac{\text{Total number of individual s of the species}}{\text{Total number of quadrats used in sampling}}$$

The density value, thus obtained for each species was expressed as individuals per unit area. Density may be defined as the number of species per specified collection area. The relative density is the study of numerical strength of a species in relation to total number of individuals of all species and calculated as:

$$\text{Relative density} = \frac{\text{Total number of individual s of the species}}{\text{Sum of all individuals of all species}} X100$$

Dominance

Dominance is measure of the size, bulk, or weight of the vegetation. Three characteristics of the vegetation are commonly evaluated as a measure of dominance: weight, basal cover, or canopy (crown) cover or area. Weight measurements are often difficult and time consuming to obtain and the latter two measures are more often evaluated. Dominant species are those which are highly successful ecologically and determine (to a considerable extent) the condition under which the associated species must grow. It can be calculated as follow-

$$\text{Dominance} = \frac{\text{Total basal area or crown}}{\text{Total area sampled}}$$

Relative dominance is the relative proportion of different species in the community.

$$\text{Relative Dominance} = \frac{\text{Dominance of given species}}{\text{Total dominance of all species}} \times 100$$

Importance Value Index

The importance value index is statistical measure, which gives an overall picture of the importance of the species in the vegetation community. It considers the relative values of density, frequency and basal area of every species in a given area. It thus incorporates three important parameters, which are measures of diversity and productivity of every species. Thus, IVI = Relative density + Relative frequency + Relative dominance. The detailed IVI value of the Baripada Division for individual species is enclosed as **Appendix – XXIX.**

Biodiversity is one of the primary interests of ecologists, but quantifying the species diversity of ecological communities is complicated. In addition to issues of statistical sampling, the rather arbitrary nature of delineating an ecological community, and the

difficulty of positively identifying all of the species present, species diversity itself has two separate components:

1. The number of species present (*species richness*)

2. Their relative abundances (termed *dominance* or *evenness*).

As a result, many different measures (or *indices*) of biodiversity have been developed. Here, we will explore two measures of biodiversity: The Shannon index (*H*, also termed the Shannon-Wiener index) and the Simpson index (*D*).

Shannon index

The idea behind this index is that the diversity of a community is similar to the amount of information in a code or message. It is calculated in the following way:

$$H' = -\sum_{i=1}^{S} p_i \ln p_i$$

Where, p_i is the proportion of individuals found in species i. for a well-sampled community, we can estimate this proportion as $p_i = n_i/N$, where n_i is the number of individuals in species i and N is the total number of individuals in the community.

Interpretation: Typical values are generally between 1.5 and 3.5 in most ecological studies, and the index is rarely greater than 4. The Shannon index increases as both the richness and the evenness of the community increase. The fact that the index incorporates both components of biodiversity can be seen as both strength and a weakness. It is strength because it provides a simple, synthetic summary, but it is a weakness because it makes it difficult to compare communities that differ greatly in richness. Shannon Index Value and Simpson Index Value for the Herbs of Baripada Division is enclosed as **Appendix – XXVII**.

Simpson's index

Since evenness and dominance are simply two sides of the same coin, their measures are complimentary. Simpson's index D is based on the probability of any two individuals drawn at random from an infinitely large community belonging to the same species:

$$D = \sum p_2$$

Where again p_i is the proportion of individuals found in species i. For a finite community, this is

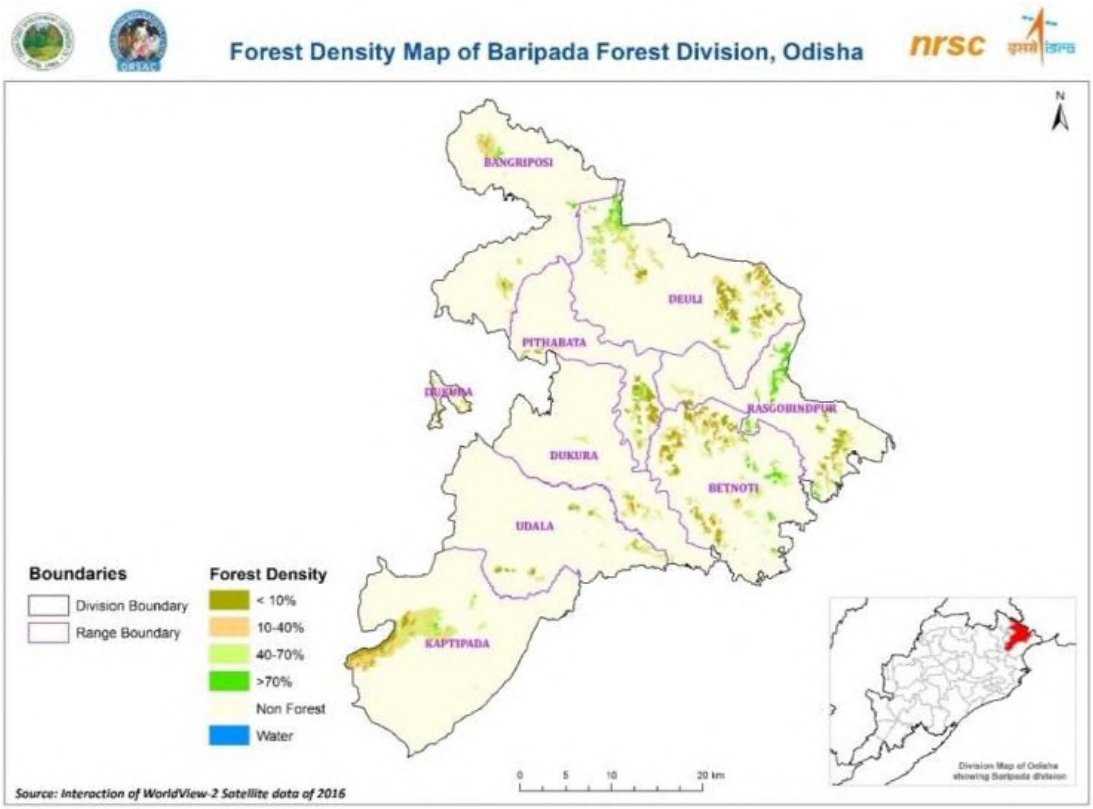
$$D = \sum_{k=0}^{n} \frac{n_i\,(n_i-1)}{N\,(N-1)}$$

Interpretation: Now D is a measure of dominance, so as D increases, diversity (in the sense of evenness) decreases. Thus, Simpson's index is usually reported as its complement 1-D (or sometimes 1/D or –lnD). Since D takes on values between zero and one and approaches one in the limit of a monoculture, (1-D) provides an intuitive proportional measure of diversity that is much less sensitive to species richness. The Shannon Index Value as well as Simpson Index Value for Herbs and Shrubs is calculated for the entire Baripada Division, which is given as **Appendix – XXVII & XXVIII**.

As a whole the **Shannon Index Value** and **Simpson Index Value** for the entire Division is calculated and found to be **3.045 and 0.898** respectively for the Shrubs and similarly **3.47** and **0.94 respectively** for the herbs. Shannon Index Value and Simpson Index Value for the Shrubs of Baripada Division is enclosed as **Appendix – XXVIII.**

State Biodiversity Board

The assessment of some important wild animals are also been made through periodic census. Similarly maintenance of People's Biodiversity Register needs to be encouraged. Hence it is suggested for survey of biodiversity, complete in all respect for few representative area/ block/ forest block/ sample plot of this Division by the DFO with technical support of State Biodiversity Board following the provisions of Biodiversity Act. 2002.



Map 13: Forest Density in Baripada Forest Division

3.3 Status of Biodiversity Conservation in Forests

Forests provide habitat for many plant and faunal species. The contribution of individual species to the overall diversity within a community or ecosystem varies to a great extent. The coexistence of organisms that differ widely from each other contributes more to overall diversity than the co-existence of very similar species. Functional diversity is considered to be one of the main factors determining the long term stability of an ecosystem and its ability to recover from major disturbances. Assessment of status of plant and faunal species and their periodic monitoring can be helpful in formulating strategies for conservation, maintenance and enhancement of overall biodiversity through sustainable management and use practices. Assessment of biodiversity especially the lower forms of life (algae, fungi, lichens, epiphytes, parasites, etc.) of the forest Division must be made an on-going programme with the support from state Biodiversity Board. The biodiversity speaks the number of species in particular area and number of individual species on that area. The more the diversity, the forest is more stable. Hence, survey of biodiversity is required to study the character of the forest.

People's Biodiversity Register

The Biodiversity Management Committees (BMCs) is to be created at Gram Panchayat level and Muncipal level organization through a resoluation as per the Biological Diversity Rules 2004. BMC will prepare People's Biodiversity Register **(PBR)** in consultation with local people. The Register shall contain comprehensive information on the local biological resources, their medicinal or any other use or any other traditional knowledge associated with them.

Aims & Objectives of BMC:-

. To regulate access to biological resources of the country with the purpose of securing equitable share in benefits arising out of the use of biological resources; and associated knowledge relating to biological resources;

. To conserve and sustainably use biological diversity;

. To respect and protect knowledge of local communities related to biodiversity;

. To secure sharing of benefits with local people as conservers of biological resources and holders of knowledge and information relating to the use of biological resources;

. Conservation and development of areas of importance from the standpoint of biological diversity by declaring them as biological diversity heritage sites;

. Protection and rehabilitation of threatened species;

. Involvement of institutions of state governments in the broad scheme of the implementation of the Biological Diversity Act through constitution of committee

. To identify the unique biodiversity of the area like sacred groves, Rare, Endangered and threatened species, biodiversity which are commercial use for Access and benefit sharing.

Role of BMCs:-

- The key mandate of the BMC will be to ensure conservation, sustainable utilization and equitable sharing of benefits from the biodiversity

- The BMC shall facilitate preparation of PBRs.

- The PBRs shall contain comprehensive information of availability and knowledge of local biological resources, their medical or any other use or any other traditional knowledge associated with them.

- The BMC will be responsible for ensuring the protection of the knowledge recorded in the PBR, especially to regulate its access to outside agencies and individuals.

Points to be recorded in the PBR:-

- The list of Flora and Fauna which is available in the territorial (relating to the ownership of an area of land or sea) jurisdiction of the BMC.
- Including the birds, butterflies, snakes, etc which are movable
- Traditional knowledge associated with biological resources
- Record the data from the traditional healers who are using the biological resources for curing the diseases.
- Community protocols for conservation
- Sacred groves of the area
- Rare, endemic, threatened species of the area
- Potential biological resources, commercial biodiversity
- Items to be recorded in PBR are Crop Plants, Fruit Plants, Fodder Crop, Weeds, Pests of Crops, Domestic Animals, Soil types, Medicinal Plants, Ornamental Plants, Timber Plants, Fisheries, Wild Biodiversity (Trees, Shrubs, herbs, Tubers, Grasses, Climbers), Aquatic Biodiversity, Wild Animals (Mammals, Birds, Reptiles, Amphibia, Insects etc.) and Others.

Legal Protection and Importance of PBR:-

- PBR register receives legal protection against misuse of and appropriation by outside agencies and individuals.
- The PBRs helps in preparing the Biodiversity Management plants for the conservation of biodiversity.
- It helps in conservation of threatened flora, fauna and endemic species of the area falling within its territorial jurisdiction and preparing the community & Indigenous protocols for biodiversity conservation.
- It increases the livelihoods of the local community who are depending on the biodiversity
- Documentation of potential biodiversity becomes easier.

- ❖ Effective management, promotion and sustainable uses and Protection of rights including IPR over Biological resources and associated knowledge and systems become easier.
- ❖ It is possible to restrict the flora and fauna which are threatened, endemic, rare, etc and restrict the activities which cause genetic erosion affecting the ecosystem.

This is a small step to study the biodiversity of this Division. The National Working Plan Code - 2014 has given more emphasis on the survey of biodiversity. As per the new code, detail enumeration is carried out on the sample plots selected on systematic sampling basis on the selected sample points with specific Latitude and Longitude. The data collected during the enumeration of growing stock such as the number of individual of each species and the DBH of each tree is utilized to derive secondary attributes like basal area (BA, m2/ha), density (D, trees per ha) and frequency (F, number of quadrates where present in relation to total plots observed). Relative value of BA, D & F is calculated. The Importance Value Index (IVI) is calculated by adding up Relative Dominance (RBAF), Relative Density (RD) and Relative Frequency (RF). However, in case of shrubs, herbs, saplings and for regeneration, the IVI is calculated on the basis of relative values, i.e. relative frequency and relative density. It is assumed that the dominance of the species increases with an increasing important value and that the species with lowest importance value is the least important one. The maximum IVI value is 300 (100 each for RBA, RD and RF). Basal area and density of the tree species is converted to ha basis. To estimate the stand structure, all tree species are grouped under different DBH classes. The total number of individuals belonging to each DBH class is calculated for each species for each site.

D_s = Total number of individuals of a species / Total area of quadrates studied

F_s (%) = Number of quadrants in which a species occurs x 100 / Total area of quadrates studied

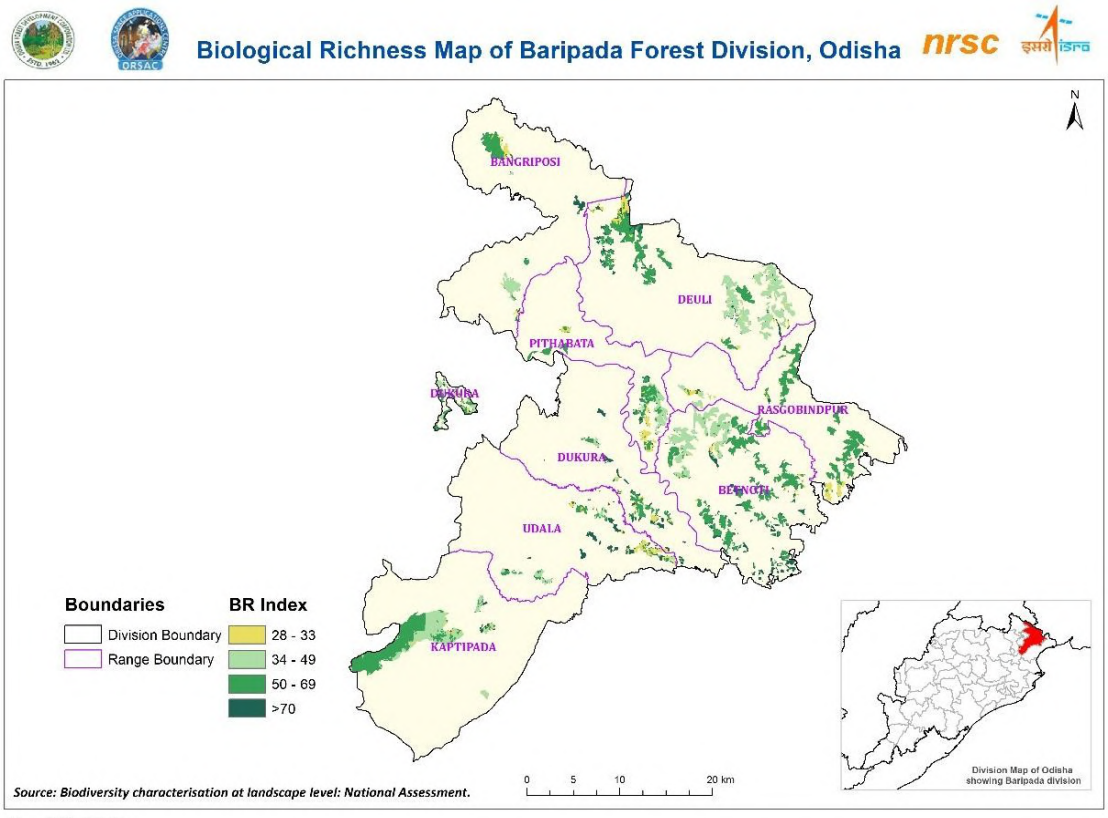
RF_s (%) = Density (D_s) of a species x 100 / Total density of all species

$RBAF_s$ (%) = Total basal area of a species x 100 / Total basal area of all species

$IVI_s = RD_s + RF_s + RBAF_s$

(where_s‘ denotes a particular species for which these variables are calculated)

Species diversity is an expression of community structure and is unique to the community. The number of species in a community is referred to as species richness when topography of the compartment is homogeneous. The relative abundance of all species is called evenness. Species diversity includes both species richness and evenness. A community demonstrates a high species diversity if equally or nearly equally abundant species are present. Communities with a large number of species that are evenly distributed/populated are the most diverse and communities with few species, or if only a few species are abundant, then the species diversity is low). Species diversity indices like Shannon-Wiener Index (H‘) and Simpson‘s Index (λ) are calculated separately for trees, shrubs and herbs as the individuals differ in size and are sampled differently. Similarly index (community co-efficient) is calculated for determining the number of species which are shared among the sites to assess the extent of variation in the species composition.



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Map 14: Biological Richness in Baripada Forest Division

3.4 Status of Species Prone to Over Exploitation

There is no IUCN red data book species to be protected in Baripada Forest Division. However following endemic species needs to be protected:-

Species	Local Name	Reason for endemic nature
Anogeissaus acuminata	Phasi	Over-exploitation
Dillenia pentagyna	Rai	-
Terminalia chebula	Harida	Over-exploitation for medicinal use
Terminalia belerica	Bahada	Over-exploitation for medicinal use
Dalbergia latifolia	Pahadi Sissoo	Over-exploitation
Mesua ferea	Nageswar	Over-exploitation
Symplocos racemosa	Lodha	Over-exploitation for medicinal use
Litsea glutinosa	Medha	Over-exploitation for medicinal use
Oroxylon indicum	Phana Phana	Over-exploitation for medicinal use
Rouwolfia serpentina	Patala garuda	Over-exploitation for medicinal use

The status of species prone to over exploitation has not been assessed in the outgoing Working Plan but has been assessed by the Division during NTFP assessment survey. The Piasal and Sissoo trees above 2.5ft GBH and good Sal and Bandhan trees above 4ft GBH are prone to illicit felling. The extraction of timber is being carried out by the Odisha Forest Development Corporation Ltd, as per prescription of the Working Plan. No over exploitation is found in the forests protected by communities. However, due to illicit removal of trees for firewood / poles from the forest, over exploitation is observed nearby human settlements.

Table 50: Timber Species prone to exploitation

Species	Local Name	Reason for exploitation	Status
Pterocarpus marsupium	Bija	Timber	Present in Forest land
Tectona grandis	Teak	Furniture	Forest and Non Forest lands
Shorea robusta	Sal	Timber	In Forest land

3.5 Conservation of Genetic Resources

Variation in the genes of a species increase with size and environmental parameters of the habitat, Ecological balance depends upon genetic diversity which is useful in adaptation to changes in environmental conditions. Lower genetic diversity within a species may be useful for uniformity in the yield as well as higher yield. However, it

is liable to undergo degradation and prone to mass scale destruction. Hence, conservation of genetic resources is most vital.

Out of 484 random sample points selected 19 points were devoid of tree growth. In Notto RF, the species diversity is high and in the rest of the forest blocks there is predominance of Sal trees and so there is low species diversity. 48 permanent sample plots have been prepared by posting of pillars in sample plot boundaries for annual observation of growth and change of species diversity. 1 preservation plot of 20 ha was created in Notto RF for preservation of 10 rare forest tree species. During silvicultural cleaning it is recommended to preserve medicinal plants (Tree, Shrub, Herb and Climbers) for future use.

3.5.1 Flora

The diversified topography of the hills spreads out a wide range of diverse habitats. The unique geological formation of the hill makes it land of perennial water. All these conditions have favoured in the development of a rich and varied flora. Because of its unique ecosystem, it has housed large varieties of plants and animals. As a matter of which Similipal Biosphere Reserves **has been declared as World Heritage Site by UNESCO during 2012. The unique feature** of the floral diversity of this Division is having a number of orchids and ferns, both Epiphytic (tree growing) and Terrestrial (Earth growing) orchids. There are rare and endangered orchids in Baripada Forest Division some of which are epiphytic and others are terrestrial.

Vulnerable Plant Species of Baripada Forest Division		
Species Category	**Species Name**	**Species Type**
Vulnerable	Cycas circinalis	Angiosperm
Vulnerable	Gloriosa superba	Angiosperm
Vulnerable	Phoenix paludosa	Angiosperm
Vulnerable	Rauvolfia serpentina	Angiosperm

3.6 Fauna and their habitats

3.6.1 Fauna

During ancient period, when the human population was much less and most of the area was full of forest cover, forest was housing a good number of wild animals. With the increase in human population, rapid urbanization and industrial growth,

tremendous pressure on forest and its wildlife has been created. Once upon a time, this Division was famous for variety of wildlife species starting from small mammals to pachyderms, with good number of small cats and big cats like leopards and tigers etc. Varieties of birds and reptiles also enriched the biodiversity composition of forests. At this changing scenario, lots of changes have occurred in both floral and faunal composition of forest. Many wild life species like Chausinga, Wild Dog, and Black Panther are now extinct from forest and some other are on the verge of extinction. To meet the challenges many wildlife conservation projects like project tiger and project Elephant have come into Force. Notto RF, a part of Buffer Area of Similipal Tiger Reserve under Baripada Forest Division. Similipal sanctuary areas in five Ranges of Baripada Forest Division like, Kaptipada, Udala, Dukura, Pithabata and Bangiriposi have been transferred to STR Divisions, for effective protection and management of wildlife. Elephant trackers are engaged for regular monitoring of Elephants in the area as there is threat to the life of Elephant and other Wild animals and to maintain the stable male-female ratio for successful breeding. Elephant protection squads are deployed in different vulnerable places to avoid poaching of this big mammal.

Emphasis has been given for conservation and protection of wildlife like Tiger, Elephant, Mouse deer, Hornbill and the other flagship species. Apart from this the herbivore populations of Sambar, Chital, Barking deer, Boar are also equally important for conservation point of view. They constitute the prey base of forest eco-system.

Vulnerable & Endangered Animal Species if Baripada Forest Division		
Species Category	**Species Name**	**Species Type**
Vulnerable	Tiger (Panthera tigris)	Mammalia
Vulnerable	Indian Pangolin (Manis crassicaudata)	Mammalia
Vulnerable	Fishing cat (Felis viverrina)	Mammalia
Endangered	Python (Genus python)	Reptilia
Vulnerable	Elephas maximus Linnaeus	Mammalia
Endangered	Leopard (panthera pardus)	Mammalia
Vulnerable	Leopard cat	Mammalia
Endangered	Marbled cat	Mammalia
Vulnerable	Fishing cat	Mammalia
Vulnerable	Gangetic Dolphin	Mammalia
Vulnerable	Mouse Deer	Mammalia

Species Category	Species Name	Species Type
Endangered	Common Indian monitor	Reptilia
Vulnerable	Indian Peafowl	Aves
Vulnerable	Malbar Pied Hornbill	Aves

3.6.2 Threats to Flora and Fauna

The natural biodiversity should be maintained and developed through sustainable management practices. Increasing human population and change in land management practices have attributed a number of threats to the flora and fauna compositions of the Division. Few important threats to flora are Fire, Frost, Insects, and Fungi etc. The growing population and traditional hunting habits of the tribal people are the major factors in dwindling of animal population. Many ground insets and reptiles are the most sufferer of the forest fire which is rarely accidental but almost manual. A typical threat to the fauna of this Division is Akhanda Shikar (Mass poaching). During the month of January (Makar Shankranti period) and April (Maha Vishuba Shakranti), the male tribal people go for annual hunting as a part of their rituals and tradition.

This Division is a part of Mayurbhanj Elephant Reserve with Notification No. 8F (W) 42/2001/ 15806 dt.29/09/2001. Further, there are two approved Elephant corridors in this Division, namely West Bengal-Deuli-Suliapada (Length 72 KM, Width 0.1 – 0.7 KM & Area 39.5 KM^2) and a part of Similipal-Hadgarh-Kuldiha (Length 41.7 KM, Width 0.7 – 3.5 KM & Area 91.39 KM^2).

Eco tourism Complex- Manchabandha:

As far as Eco-tourism is concerned, many tourists visit Manchabandha Eco-tourism complex. Efforts are being made for development of this Eco-tourism site with provision for better facilities for tourists, utilizing the Govt. funds from time to time. Many visitors from Baripada used to visit this complex for merry making/ picnic.

3.6.3 Increasing Trend of Migratory Elephant to this Division

Increasing trend of migratory Elephant to this Division is given in the tables below.

Table 51: Increasing Trend of Migratory Elephant

Sl. No.	Year of migration	Period of stay (in days)	No of migratory Elephants
1	2000	11	102
2	2001	1	1
3	2002	2	24
4	2003	9	8
5	2004	7	4
6	2005	7	21
7	2006	6	4
8	2007	22	77
9	2008	44	46
10	2009	9	1
11	2010	26	70
12	2011	26	68
13	2012	25	150
14	2013	23	120
15	2014	46	116
16	2015	38	54

3.6.4 Year Wise Statistics of Human-Elephant Conflict

The year wise statistics of human-Elephant conflict is given in the table below.

Table 52: Year Wise Statistics of Human-Elephant Conflict

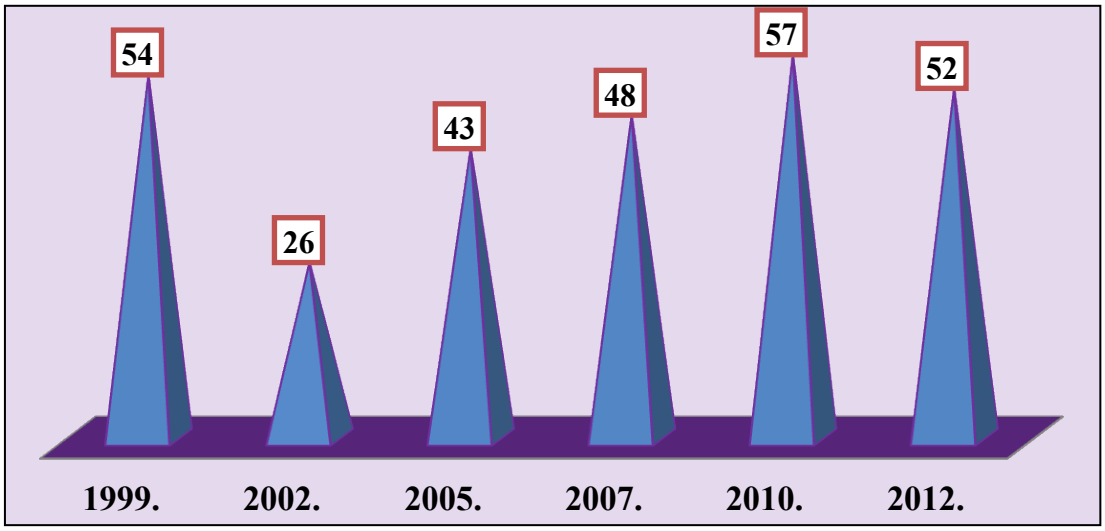
Sl. No.	Year	Extent of crop damaged (in Ac.)	House damaged (in nos.)	Human injury	Human death
1	2008-09	457.56	191	-	1
2	2009-10	184.90	76	1	-
3	2010-11	712.12	52	-	3
4	2011-12	553.89	28	-	1
5	2012-13	304.88	25	-	2
6	2013-14	283.53	20	1	1
7	2014-15	542.25	99	16	11
8	2015-16	459.82	13	3	1

Table 53: Elephant Census Data (Baripada Forest Division)

Year	Male	Female	Sub-adult	Calf	Total
1999	12	39	-	3	54
2002	-	-	-	-	26
2005	-	-	-	-	43
2007	8	25	6	9	48
2010	5	22	18	12	57
2012	5	26	4	17	52
2015	-	-	-	-	68
2017	17	34	19	-	70

This shows the number of male elephant is reducing in Baripada Forest Division. A healthy population contains more number of male Elephant. So step should be taken to protect the male elephants from poachers.

Elephant Census Data (Baripada Forest Division)



Year wise and month wise number of Elephants that entered Odisha (Mayurbhanj, Keunjhar, Sundargarh) from Jharkhand during 2000-2014

Table No.54: Year wise and month wise number of Elephants that entered Odisha

Year	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
2000	52	8										42	102
2001	4					1							5
2002	2			1							2	23	28
2003				6			18	2	9		17	1	53
2004	2		1		1				10	17			31
2005							8	7	6				21
2006							14		9	3			26
2007	1		7			6	14		12		37		77
2008		4					8			34			46
2009	14						17			3	26		60
2010	14									19	53	11	97
2011	30							14	6	59			109
2012			5				12	28	28	24	62	5	164
2013	43	5					37		9	67	26	16	203
2014	20	4				17	8	18		35			102
Total	**182**	**21**	**13**	**7**	**1**	**24**	**136**	**69**	**89**	**261**	**223**	**98**	**1124**
% Total	**16**	**1.86**	**1.15**	**0.62**	**0.08**	**2.13**	**12.09**	**6.13**	**7.91**	**23.22**	**19.83**	**8.71**	**100**

The rich and varied Fauna of this Division are due to existence of large stretch of forests in different density available in forest areas with different type of natural habitat in plain and hilly regions. The climatic condition, compactness of area and

composition of forests are extremely favourable for their growth and multiplication of variety of wild animals of mammalian species, Birds, Reptiles, Fishes and other insects, arthropods and micro-organisms as well. Major fauna of this Division are broadly classified into following categories found in varied profiles. They are (a) Mammals, (b) Birds, (c) Reptiles, (d) Fishes.

A NOTE ON MIGRATION OF ELEPHANT FROM JHARKHAND AND WEST BENGAL STATES TO ODISHA (BARIPADA FOREST DIVISION) AND DETAILS OF CROP RAIDING AND DEPREDATION CAUSED BY THEM

Inter-state migration of wild Elephants is a great problem in Baripada Forest Division. Since 1999, wild Elephants from Dalma sanctuary of Jharkhand entered into Baripada Forest Division through Deuli and Rasgovindpur Range via West Bengal. The herd enters Odisha in small herds, sometimes totaling upto 100 – 150 Elephants of all age classes per year. Every year, they cause lots of damages to the houses and crops along the area of movement. Besides this, there are instances of human death and human injury in the locality. The sagging electric transmission lines pose danger to life of elephants moving within the Division. In order to address the Human-Elephant conflict a long term action plan should be made by the Divisional Forest Officer. The Elephants pass through Deuli, Rasgobindpur and Betnoti Ranges of this Division causing panic among the people before entering Nilgiri and Raibania areas of Balasore Wildlife Division before going back through the same route. The Elephants migrate either in a group of 40 to 50 members or even in single. In the past they even went inside Similipal but remained separate from the resident herds and after sometime returned back in their path through West Bengal to Jharkhand. They create panic among the people due to enormous damage caused to the crop, property and human lives. The damage increases when they are pursued relentlessly by the people. Because of the damages caused to the property and human lives by the migrating Elephants in and around the cultivated areas of Baripada Forest Division, Forest staffs have to face the anger of the people which at times takes the shape of public agitation and gherao of the Forest Officers on duty causing law and order situation.

Therefore, it is the high time to make arrangements either to contain the Elephants within West Bengal or their movement should be facilitated by creating proper corridor between Jharkhand, West Bengal and Odisha for their smooth forward and backward movements without causing damage to life and property of the villagers.

3.6.5 Migration Route

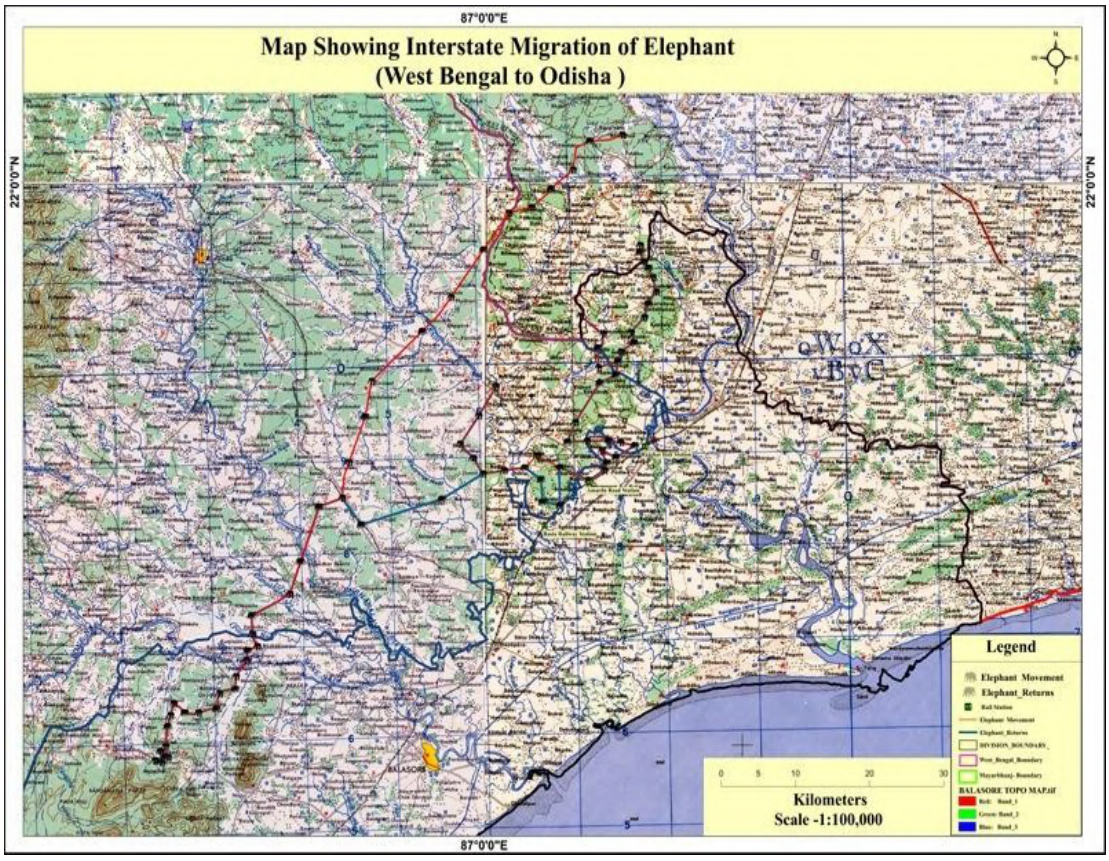
The year wise details of Elephant migration and their route chart is furnished below from 1999-2014.

Table 55: Migration of Elephants from Jharkhand to Baripada Forest Division

Year	Date of migration	No. of Elephant				Route followed by Elephants
		Male	Female	Cub	Total	
1999	19.2.99 to 21.2.99	4	35	6	45	West Bengal to Hatimoda, Bhugudakati, Tulasibani, Dhansole, Nafri, Similipal and back via Banakati, Rumbha.
2000	24.1.2000 to 29.1.2000	4	35	13	52	West Bengal to Palo, Ghangana, Luhamalia, Badsole, Kundiasole, Surki, Dulka, Damdorpur, Baddeuli, Jhadpokharia, Chandanpur, to Similipal forest.
	9.2.2000 to 12.2.2000	2	4	2	8	West Bengal to Banakati, Khakarusole, Bandap and back to West Bengal.
	13.12.2000	1	26	15	42	West Bengal to Bramhnamara, Morada, Chitrada, K.C.Pur and back.
2001	21.6.2001	1	-	-	1	Jharkhand to Bangiriposi Range via Paktia and back.
2002	25.4.2002	1	-	-	1	Elephant went to West Bengal side via Singitia, Belpal, K.C.Pur, Kohi, Pratappur, Kaliasole, Kosta, Paktia, Bhandarisole and Sansole.
	22.12.2002	1	18	4	23	From West Bengal to Darudihi, Dimia and back on 23.12.2002 via Rakshnisole.
2003	4.7.2003 to 8.7.2003	1	-	-	1	West Bengal to Morada, K.C.Pur, Tangadhua, Biridihi, Basipitha, Titia chhak, Balimunduli, Purunapani, Goyalmara, Dhanapana, Phuljhari, Kutling, Badkhamon, Asanbani.
	16.8.2003 to 19.8.2003	1	1	-	2	From West Bengal to Deuli Range of Phagudihi, Kusumasole, Babhasole, Tongasole, Kuabudha RF, Bankisole via Dhadipoda, Dubulabeda, Bhagabandha, Dhenkilangia, Dhatika,

Year	Date of migration	No. of Elephant				Route followed by Elephants
		Male	Female	Cub	Total	
						Suliapada, Paktia, Murgapahadi, Chandabilla, Gendhasahi, Dumuri, Singda, and Gangasole enter into West Bengal forest near Raibani village.
2003	18.9.2003 to 19.9.2003	1	1	-	2	West Bengal to Betnoti and Deuli Range via Saradiha, Nuapoda, Suliapada RF No-I, Ukasole, Keutunimari, Suliapada RF No-VIII, Ghangana, Bisisole, Bankati, Nodhakundia, Dhansole passed Odisha border into West Bengal Forest of Gapiballavpur Range.
	16.11.2003 to 17.11.2003	1	1	-	2	West Bengal to Deuli Range to Bagada via Jhatiada, Rakhanisole PF, Dima, Daradihi, Singda and crossed Odisha border to West Bengal near Gangasole village.
	27.12.2003 to 29.12.2003	1	-	-	1	West Bengal to Rasgabindapur Range near Ramakrushnapur, preceded to Betnoti Range crossing near Tiansi via Khuntapal, Bhalukchua, Chotraipur, Dhansole, Sanyasi, Morada, Chitrada, Masarda, Nadpur, Khunta, Daria, Kathopal, Thakurani, Uttarpal, Jodida, Dumuria, Dahisahi, then entered into border of Balasore (WL) Division.
2004	2.1.2004 to 4.1.2004	1	1	-	2	West Bengal to Deuli Range via Handibhonga, Bholghati, Dhadangiri, Dhabanisole, Rangamatia, Baghuasole, Sunaposi, Keutunimari, Jarjara, Hatimora, Khirabani, Panijia, Purunapani, Kathosirisi , and proceeded to Bhagabanpur, Khukundia, Gudaruma crossed Budhabalanga river near Sarapakaghat of Haldibani section and proceeded to Similipal RF.
	4.3.2004 to 6.3.2004	1	-	-	1	From Kuldiha to Badasahi, Betnoti Range, Ramnagar, Nichupada via Badpeda, Kankamanal, Chandanpur of Rasogabindapur Range, then entered in to Deuli Range of
	6.5.2004	1	-	-	1	

Year	Date of migration	No. of Elephant				Route followed by Elephants
		Male	Female	Cub	Total	
						Dhenkinajia, Kanjiasole, Chitakhal, Jarka, Bhuskunda, Bilasa, Kathagohala, Chilojodi, Jambadi and Pallo then proceeded to West Bengal.
2005					21	West Bengal to Deoli Range via Badjagibandha, Badsole, Khadiasole, Kuabuda Chhak, Kainphulia, Keutunimari, Chandua, Kakharusole and back to West Bengal.
2006					4	
2007					77	
2008					46	
2009					1	
2010					70	West Bengal to Deoli Range/ Rasgovindpur Range to Betnoti Range to Nilgiri Range of Balasore WL Division, Balasore and back to West Bengal in the same route.
2011					68	
2012					150	
2013					120	
2014					102	
Source – DFO, Baripada Forest Division.						



INTER STATE ELEPHANT MIGRATION ROUTE

3.6.6 Details of Elephant Depredation

Details of damages caused to the house property and standing crops of Baripada Forest Division due to Elephant depredation is given below.

Figure 9: Year-wise Human Death by Wild Elephant

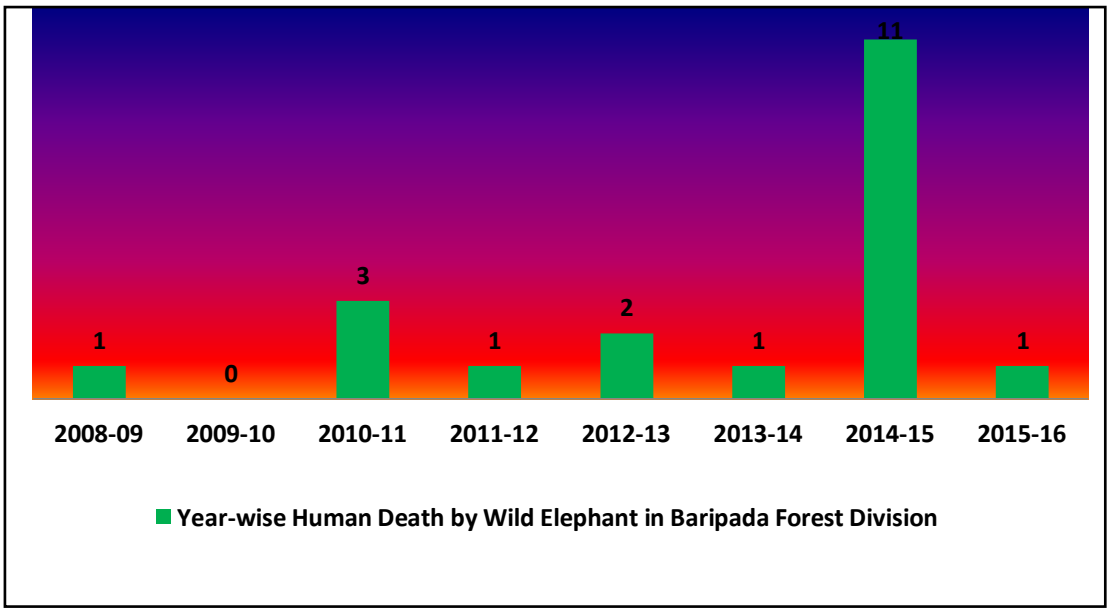


Figure 10: Year-wise Human Injury by Wild Elephant

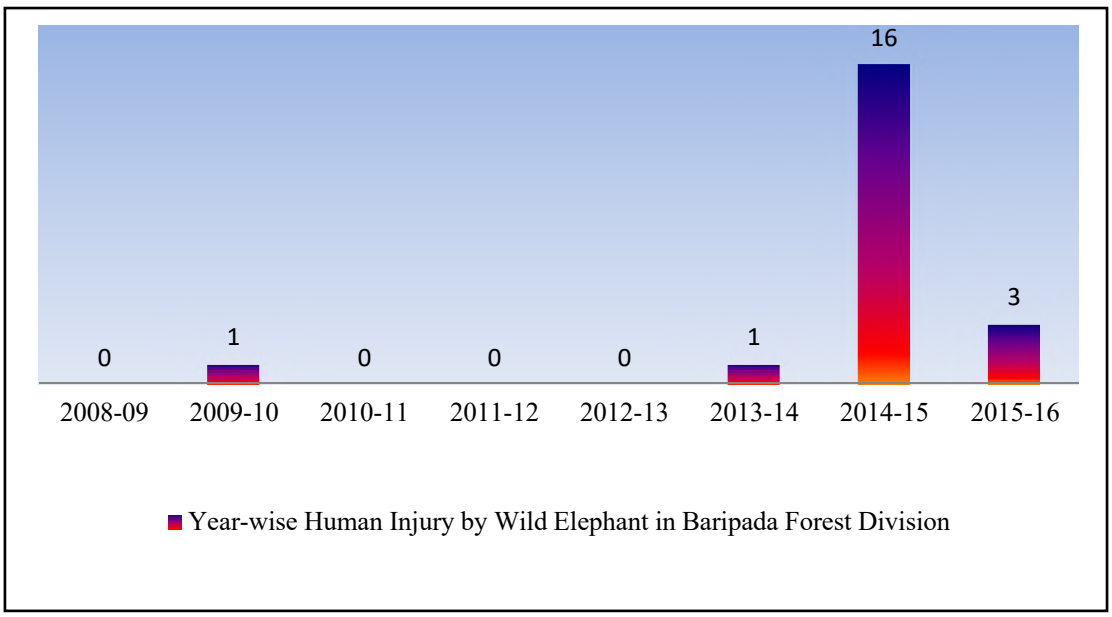


Figure 11: Year-wise Property Damage by Wild Elephant

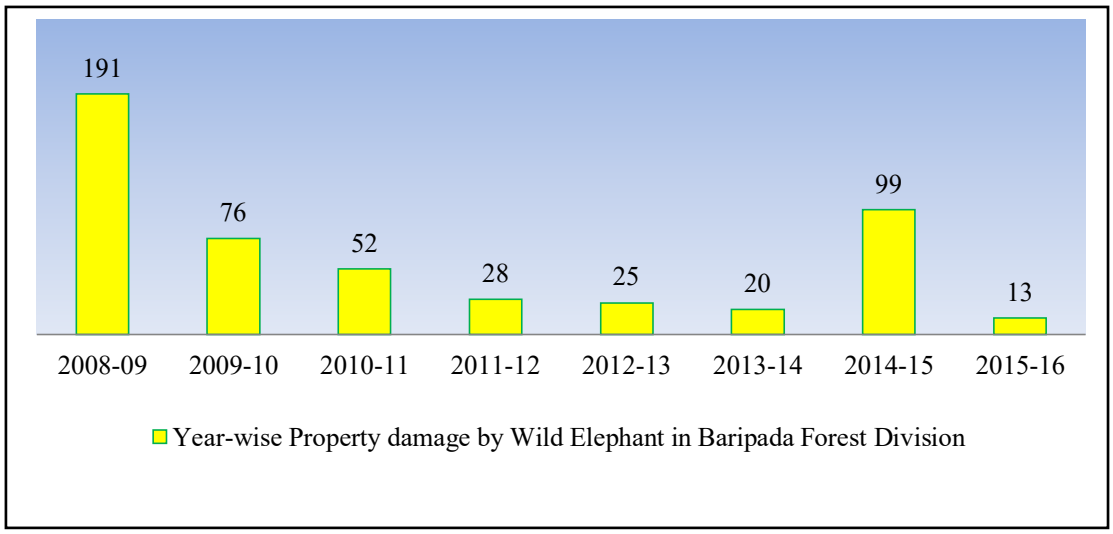
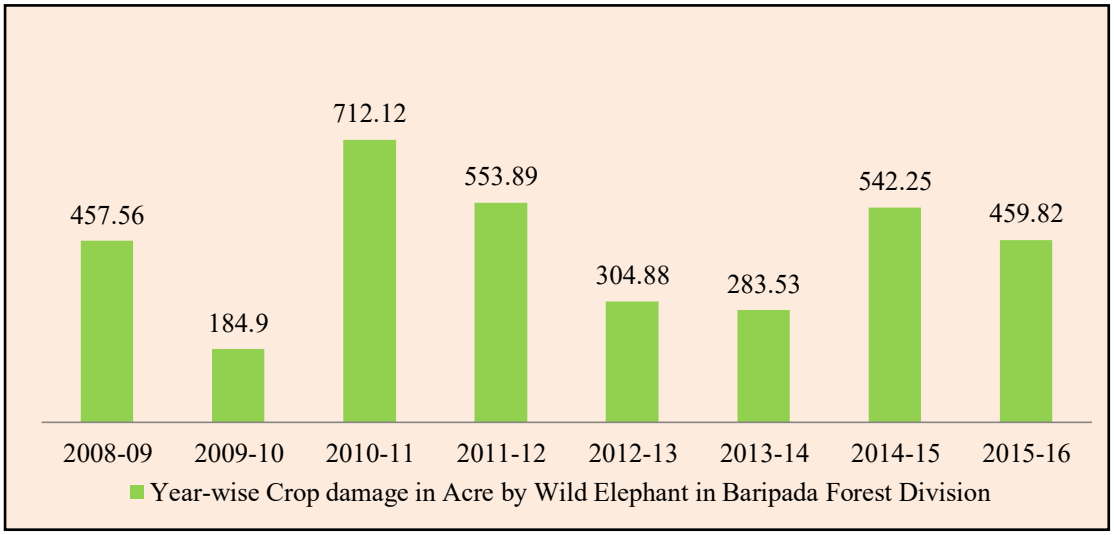


Figure 12: Year-wise Crop Damage in Acre by Wild Elephant



3.6.7 Steps Taken by the Department to Minimize the Loss of Life and Property

3.6.7.1. Steps Taken to Minimize Incidences of Human-Elephant Conflict: Following steps have been taken to minimize the incidences of Human-Elephant conflict which has been in a menacing proportion over the period due to fragmentation and degradation of habitat conditions.

1. Two Elephant driving squads per Range is constituted in Deuli, Rasgabindpur, Betnoti, Pithabata, Dukura, Udala, Bangiriposi and Kaptipada Ranges

equipped with spot lights, fire crackers etc. to guide the movement of Elephant during night.

2. VHF network have been strengthened for immediate communication to the Division office during urgency.
3. The history, the periodicity and the movement route chart have been prepared to plan out the operation of managing the herd.
4. In all vulnerable villages along Odisha and West Bengal border due publicity has been given not to unnecessarily irritate Elephant herds taking refuge in small vegetation close to village and inform nearest staff and patiently wait for the evening for their movement.
5. Elephant watch towers have been constructed in Odisha and West Bengal border and in Elephant movement areas.
6. In case of law and order situation, the help of APR force and Magistrate are taken to diffuse the situation.

These steps should continue with proper planning and co-operation with local people.

3.7 Threats and Challenges to Wildlife

3.7.1 Threat to Fauna

Forest provides habitats to a large no of fauna ranging from small insects to large pachyderm. The biggest faunal biodiversity found in the forest is prone to a number of threats to its existence. The growing population and traditional hunting habits of the tribal people are the major factors in dwindling of animal population. Many ground insects and reptiles are killed due to forest fire which is rarely accidental but almost intentional. A typical threat to the fauna of this Division is Akhanda Shikar. During the month of January (Makar Shankranti period) and April (Bisuba Shakranti), the tribal people go to forest for annual hunting as a part of their rituals. The DFO should analyze this issue critically and prepare routine mobile patrol to contain this menace effectively.

Due to biotic interference the wild animals like Elephant, Wild boar, Wild bison are moving towards the human habitats in search of food and water. Human kills are reported by Wild Elephant and Wild bear. A detail status on the human death, injury

and crop damage as well as the death of wild animals during the outgoing plan period is furnished above.

3.7.2 Man-Animal Conflict

In this Division the Human-Wildlife conflict is primarily due to Elephant depredation, the details of which are furnished in **Appendix – XII, XIII (a) and XIII (b)**.

The fauna of this Division resembles to that of Deccan plateau. The habitat in Udala, Kaptipada, Deuli, Bangiriposi and Pithabata Ranges is natural and suitable for the wild life. The fauna of this Division can be classified as follows:-

a) Animals

b) Avifauna (Birds)

c) Reptiles

d) Fishes

Animals: The wild life inhabiting / moving in these forests include the Elephant, Sambar, Barking deer, Cheetal, Mouse deer, Wild boar, Bear, Fruit bats, Rodents like Giant Squirrel and flying squirrels, Porcupines. The presence of ample number of herbivorous animals supports a good variety of carnivorous and predatory animals. The main predatory animals are the tiger, leopard, wolf, jackal and striped hyena, etc.

Birds: The waters and shore birds are seen along the river and dams, paddy fields near nalla are stripes, Pond Herons, Cranes, Duck and Lapwing. The main ground birds include peafowl, red jungle fowl, partridge and quail. Among birds some of them are Babbler, Barbets, Bulbuls, Cuckoos, Mynas, Doves, Parakeets and Pigeons. A variety of owls, eagles, kites and falcons are the main birds of prey, the scavenging contingent comprising of vulture are not observed now excepting crows.

Reptiles: These are represented by the mugger (*Crocodylus palustris*) found in Similipal river system. The lizards include well known Chameleon and the Monitor Lizard. The snakes found in this Division are Chiti (*Echis carinatus* and *Bungarus caeruleus*), Krait (*Bungarus fasciatus*), Dhamana (*Ptyas mucosa*), Domundia (*Eryx stolata*), King cobra (*Ophiophagus hannah*) and Ajagara (*Python molurus*).

Fishes: There are varieties of fish fauna in this Division available in ponds, streams and rivers. The common fishes are Kau, Singhi, Magura, Rohi, Chenga, etc. Fishing is common in Budhabalanga and Subarnarekha and other streams and ponds.

Table 56: Railway Line in Baripada Forest Division

Name of Railway Line	Length in KM in the Division	Problems to Wildlife
Bangiriposi to Rupsa Junction	80 km	Creates barrier to Elephant movement.
Balasore to Kharagpur Junction	5 km	Creates barrier to Elephant movement.

Table 57: Important Roads in Baripada Forest Division

Name of National Highway	Length in KM in the Division	Problems to Wildlife
Bangiriposi to Bombay Chhak	17 km	Creates barrier to Elephant movement.
Balasore to Jamsola Bridge (NH-18)	80.1 km	Creates barrier to Elephant movement.

3.8 Protection and Management of Fauna

Anti-depredation Squads have been formed in this Division to watch the movement of the wild animals particularly Elephant into the human habitats and drive them in side forest. Further, the anti-smuggling squads have been formed to protect other wild animals from poaching and illegal trade.

It is suggested that a new Elephant corridor from Moroda – Suliapada to Phuljhari RF of Betnoti Forest Range along all routes used by Elephant be notified and sufficient number of fodder trees to be planted in this corridor. Furthermore Elephant friendly ponds need to be created for use of Elephants in the corridor. Special Elephant protection units with camp facilities for Elephant squad should be constructed in each section in this corridor. The routine forestry operations like maintenance of block boundaries to prevent encroachment, annual repair of forest roads to ensure un-interrupted patrolling, deployment of anti-smuggling squads to check illegal activities should be given top priority. The areas included in elephant movement areas are in immediate need of complete protection measures coupled with improvement of vegetative cover, the special objectives of management are as follows:

i) To keep the delicate and eco-fragile areas intact by maintaining adequate vegetative cover.

ii) To curb over-degradation and augmentation of natural regeneration by strong protection measures and minimizing biotic interferences like illicit felling, encroachment, shifting cultivation, grazing and other biotic factors.

iii) To protect these forests from fire and provide strict vigil against the same.

iv) To arrest the drivers of degradation of forests.

Anti-smuggling, Anti-poaching and fire protection measures implemented in Baripada Forest Division

In Baripada Forest Division, one section of APR force and 9 nos. of ex-army personnel along with forest staff are deployed for anti-smuggling measures and prevention of Akhand Shikar. These anti-poaching staffs are deployed in various sensitive entry points, detail of which is enclosed as **Appendix – XIV**. Special group patrolling programmes are chalked out by the Field Director, Similipal Tiger Reserve, Baripada for patrolling forest areas to check Akhand Shikar in Similipal Sanctuary through group patrolling.

3.8.1 Forest Fire Management Plan

3.8.1.1 Preparation of fire map

Range wise forest fire maps are prepared at Range level with different color-coding showing High, Medium and Low fire prone zones. After obtaining the range level maps, a consolidated Divisional forest fire map is prepared.

3.8.1.2 Awareness Creation

The awareness programmes are conducted at regular intervals in VSSs adjoining to forests and Similipal Sanctuary. Staffs try to motivate the village people to take active part in prevention and protection of forest fire. From each VSS, one member is engaged to intimate the local Range officer/staff immediately regarding the outbreak of forest fire in the forest areas being taken care by them.

3.8.1.3 Clearance of Fire Line

All the vulnerable roads, footpaths and boundary of the forest area are cleaned properly at regular interval to provide fire line and to avoid accidental forest fire. Besides this, sufficient numbers of artificial fire lines are maintained by cleaning the ground over a width of approximately 3 mtrs. High speed air blower is engaged in every Range for creation of fire line and extinguishing the fire, which has been proved to be a successful over previous years. During fire season, the Division creates fire line by cleaning to extent of 400 km. spreading over all the eight functional Ranges, especially in fire prone areas.

3.8.1.4 Deployment of Fire Protection Squad

Eight numbers of fire protection squad are engaged and each squad consists of 10 persons with a hired vehicle working round the clock under direct supervision of a Forester/ Forest Guard. Squads are engaged for five months period i.e., from 16th February to 15th July, the peak summer season. All the squads work round the clock and their day to day activity is checked by the concerned Range officer through VHF, Mobile network, frequent field visits etc.

Table 58: Deployment of Fire Protection Squad

Sl. No.	Name of Range	Name of site	Detail of force deployed
1	Kaptipada	Podadiha	Fire protection squad and staff.
2	Udala	Balam (Devkund)	Fire protection squad and staff.
3	Bangiriposi	Jaldiha	Fire protection squad and staff.
4	Dukura	Bahlda	Fire protection squad and staff.
5	Pithabata	Baldiha	Fire protection squad and staff.
6	Rasgovindpur	Rasgovindpur	Fire protection squad and staff.
7	Betnoti	Betnoti	Fire protection squad and staff.
8	Deuli	Deuli	Fire protection squad and staff.

3.8.1.5 Fire Fighting

All the fire protection squads are well equipped with firefighting equipment especially with fire extinguishing machine & Blower, which plays vital role in immediate extinguishing fire. As soon as the message regarding forest fire is received at Range level or section level, the fire protection squads immediately rush to the spot as early as possible and extinguish the fire. Baripada Forest Division is having twenty eight nos. of VHF stations through

which staffs are able to get report regarding fire incidents from the field. VHF stations generally works from 7 am to 9 pm. But in case of emergency these stations become functional for 24 hours.

Following measures are taken up to check fire in this Division.

I. One firefighting cell is constituted at the Divisional level where one Dy. Ranger, one Forester and two Forest Guards have been deployed for the purposes.

II. One vehicle of Baripada Forest Division is kept at the Division office to attend the fire protection work.

III. 10 (ten) nos. of fire watchers are engaged in the field.

IV. 400 (four hundred) kms of old fire lines are maintained.

V. Rewards are disbursed to the informers for providing information on forest fire.

4. CHAPTER – IV

MAINTENANCE AND ENHANCEMENT OF FOREST HEALTH AND VITALITY

4.1 Status of Regeneration:

Young plants of tree species up to 10 cm diameter have been taken into consideration for assessment of regeneration status of a particular species as prescribed in National Forest Inventory by FSI. Data collected from the square plot of 3×3 m for saplings and the square plot of 1×1 m for seedlings has been used to assess the regeneration status of species in the management unit (compartment). Based on the data from plot enumeration, the regeneration status of the sampled species has been assessed in the following categories:

Table 59: Regeneration Status

Category	Criteria	Observation
Good regeneration	Seedlings are more in numbers than the saplings and likewise saplings is more than that of adults. Number of Seedlings > Saplings > Adult	60% of IWC & 29% of RWC area.
Fair regeneration	Seedlings are more in numbers than the saplings but the saplings are equal or less than that of adults. Number of Seedlings > Saplings= or < Adults	40% of IWC & 61% of RWC area.
Poor regeneration	Species survives in only sapling stage, but not as seedlings (through sapling may be less, more or equal to adults). Seedlings absent; Saplings < or = or > adults	10% of RWC & 10% of PLWC area.
No regeneration	Species is absent both in sapling and seedling stage, but present as adult.	Old plantations (90%).
New regeneration	Species has no adults but only sapling and/or seedlings.	New plantations.

NB.: - Saplings of 56 species have been recorded from the sample plots. Maximum saplings recorded are of *Shorea robusta*.

The lower categories of regeneration such as established, un-established (whippy and sub-whippy), recruits, etc. have not been calculated separately.

Sl No.	Scientific Name	Local Name	Regeneration status
1	*Acacia auriculiformis*	Acacia	New
2	*Acacia catechu*	Khair	Poor
3	*Acacia leucophloea*	Gohira	Fair
4	*Acacia nilotica*	Babul	Fair
5	*Adina cordifolia*	Haldu (kurum)	Fair
6	*Aegle marmelos*	Bela	Fair
7	*Ailanthus excelsa*	Mahanimba	Good
8	*Alangium lamarckii*	Ankula	Fair
9	*Albizia chinensis*	Ghoralanjia	Fair
10	*Albizia procera*	Dhala Sirisa	Fair
11	*Albizzia lebbeck*	Sirisa	Fair
12	*Albizzia stipulata*	Ghodalanja	Fair
13	*Alstonia scholaris*	Chatian	Fair
14	*Annona reticulata*	Ata/ Ramphal	Fair
15	*Annona squamosa*	Badhial/Sitaphal	Fair
16	*Anogeissus acuminta*	Phasi	Fair
17	*Anogeissus latifolia*	Dhaura	Good
18	*Neolamarckia cadamba*	Kadamba	Fair
19	*Antidesma diandrum*	Murmuri	Fair
20	*Artocarpus integrifolia*	Panasa	Fair
21	*Artocarpus lacucha*	Jeutha	Fair
22	*Azadirachta indica*	Neem/Nimba	Fair
23	*Barringtonia acutangula*	Hinjal	Fair
24	*Bauhinia malabarica*	Ambthi	Fair
25	*Bauhinia purpurea*	Kanchana Barada	Good
26	*Bauhinia retusa*	Choari	Fair
27	*Bauhinia variegata*	Kanchan	Good
28	*Bixa orellana*	Sakta	Fair
29	*Bombax ceiba*	Simuli semal	Fair
30	*Borassus flabellifer*	Tala	Poor
31	*Boswellia serrata*	Salai	Fair
32	*Bridelia retusa*	Kasi	Good
33	*Buchanania lanzan*	Char	Good
34	*Butea monosperma*	Palas	Fair
35	*Butea parviflora*	Handiphuta	Fair
36	*Canthium didymum*	Dalsinga /Kumarchikini	Fair
37	*Careya arborea*	Kumbhi	Good
38	*Caryota urens*	Salapa	Fair
39	*Casearia elliptica*	Khakada	Good
40	*Cassia fistula*	Sunari	Good
41	*Cassia siamea*	Chakundi	Fair
42	*Cassine glauca*	Chauli (Mukha)	Fair
43	*Catunaregam spinosa*	Salara/Mokam/Potua	Fair
44	*Ceiba pentandra*	Sweta simul	Fair
45	*Chloroxylon swietenia*	Bheru	Fair
46	*Cleistanthus collinus*	Karada	Good
47	*Cordia macleodii*	Samarsinga	Good
48	*Crataeva religiosa*	Barun	Fair
49	*Dalbergia latifolia*	Sisoo	Fair
50	*Dalbergia paniculata*	Barabakulia	Fair
51	*Dalbergia sissoo*	Sissoo	Good
52	*Delonix regia*	Krushnachuda	Fair
53	*Dillenia pentagyna*	Rai	Good
54	*Diospyros embryopteris*	Mankada kendu	Good
55	*Diospyros melanoxylon*	kendu	Good
56	*Diospyros montana*	Halda	Fair

Sl No.	Scientific Name	Local Name	Regeneration status
57	*Diospyros sylvatica*	Kalachua	Fair
58	*Elaeodendron glaucum*	Chauli	Fair
59	*Emblica officinalis*	Amla	Fair
60	*Erythrina indica*	Paldhua	Fair
61	*Erythrina suberosa*	Chaladhua	Fair
62	*Eucalyptus species*	Eucalyptus	Fair
63	*Eugenia heyneana*	Kathjamu	Fair
64	*Feronia elephantum*	Kaitha	Fair
65	*Ficus benghalensis*	Bara	Fair
66	*Ficus glomerata*	Dimiri	Fair
67	*Ficus hispida*	Tambal	Fair
68	*Ficus religiosa*	Aswatha	Fair
69	*Ficus retusa*	Jari	Fair
70	*Ficus virens*	Jida	Good
71	*Gardenia latifolia*	Damkuruda	Fair
72	*Garuga pinnata*	Kenkat	Fair
73	*Gmelina arborea*	Gamhari	Fair
74	*Grewia tiliifolia*	Dhaman	Fair
75	*Hymenodictyon excelsum*	Kansa	Fair
76	*Ixora arborea*	Telkuruma/Bhuinkuruma	Fair
77	*Kydia calycina*	Kapasia	Fair
78	*Lagerstroemia parviflora*	Sidha	Fair
79	*Lagerstroemia speciosa*	Patuli	Good
80	*Lannea coromandelica*	Mai	Fair
81	*Limonia acidissima*	Kaitha	Fair
82	*Litsea glutinosa*	Jaisanda	Fair
83	*Macaranga peltata*	Gandha guharia	Fair
84	*Madhuca indica*	Mahula	Good
85	*Mangifera indica*	Amba	Good
86	*Memecylon edule*	Dalsundra/Niras	Fair
87	*Miliusa velutina*	Gandha palas	Fair
88	*Mitragyna parvifolia*	Mundi/Mitkania	Fair
89	*Morinda tinctoria*	Anchhu	Fair
90	*Moringa oleifera*	Sajana	Fair
91	*Murraya paniculata*	Kamini	Fair
92	*Naringi crenulata*	Benta	Fair
93	*Nyctanthes arbortristis*	Ganga siuli	Fair
94	*Ochna obtusata*	Tangarchampa/Patharchampa	Fair
95	*Oroxylum indicum*	Phanphana/Phanpuni	Good
96	*Ougeinia oojeinensis*	Bandhan/Tinsa	Fair
97	*Phoenix sylvestris*	Khajuri	Fair
98	*Polyalthia cerasoides*	Patamasu/Gandhapalas	Fair
99	*Millettia pinnata*	Karanj	Fair
100	*Protium serratum*	Protium	Fair
101	*Pterocarpus marsupium*	Piasal/ Bijasal	Good
102	*Pterospermum acerifolium*	Muchkunda	Fair
103	*Pterospermum canescens*	Giringa	Fair
104	*Pterospermum suaveolens*	Padhel Chuin patuli	Fair
105	*Samanea saman*	Bada chakunda	Fair
106	*Saraca asoca*	Ashok	Fair
107	*Schleichera oleosa*	Kusum	Good
108	*Semecarpus anacardium*	Bhalia	Fair
109	*Sesbania grandiflora*	Agasti	Fair
110	*Shorea robusta*	Sal	Good
111	*Soymida febrifuga*	Rohini	Good
112	*Spathodea campanulata*	Turi Mysore queen	Fair

Sl No.	Scientific Name	Local Name	Regeneration status
113	*Spondias mangifera*	Ambada	Fair
114	*Sterculia urens*	Genduli	Fair
115	*Sterculia villosa*	Kodala	Fair
116	*Stereospermum colais*	Chhuinpatali	Fair
117	*Streblus asper*	Sahada	Fair
118	*Strychnos nuxvomica*	Kochila	Fair
119	*Strychnos potatorum*	Katakala	Fair
120	*Symplocos racemosa*	Lodha	Fair
121	*Syzygium cumini*	Jamu	Good
122	*Syzygium calophyllifolium*	Poijamu/Bhatjamu	Fair
123	*Syzygium operculata*	Pitajamu	Fair
124	*Tamarindus indica*	Tentuli	Fair
125	*Tectona grandis*	Saguan	Good
126	*Terminalia arjuna*	Arjuna	Fair
127	*Terminalia bellirica*	Bahada	Fair
128	*Terminalia catappa*	Badam (Deshi)	Fair
129	*Terminalia chebula*	Harida	Fair
130	*Terminalia tomentosa*	Asan/ Sahaja	Good
131	*Trewia nudiflora*	Panigambhar	Fair
132	*Vitex leucoxylon*	Chadheigudi	Fair
133	*Vitex peduncularis*	Chadeigudi	Fair
134	*Wendlandia tinctoria*	Telei	Fair
135	*Xylia dolabriformis*	Tangini	Fair
136	*Xylia xylocarpa*	Kangada	Fair
137	*Ziziphus mauritiana*	Barkoli	Fair
138	*Ziziphus xylopyrus*	Ghanta	Fair

4.2 Area Affected by Forest Fire

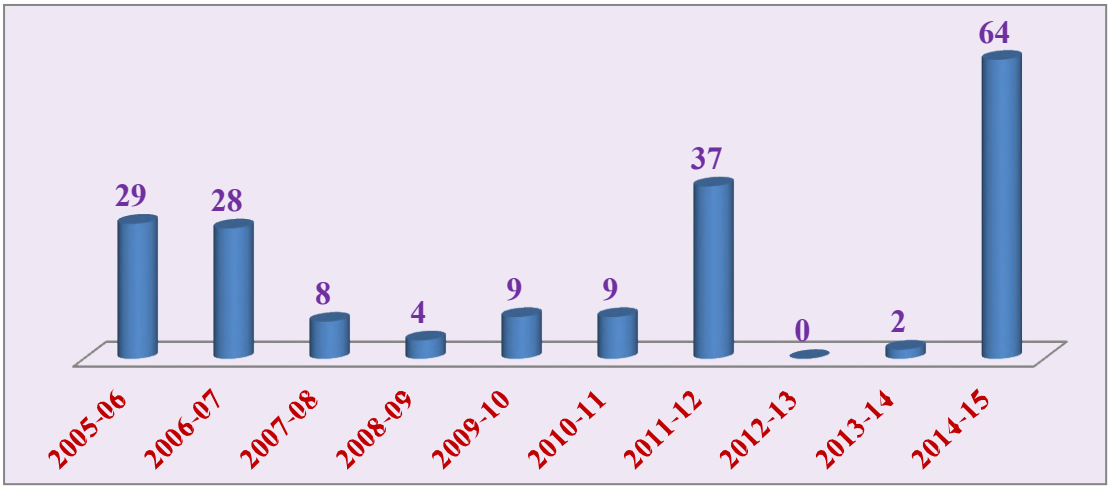
Forest blocks vulnerable to fire, based on satellite imageries, need to be protected from forest fire. Protection against fire requires continuous effort of the field staff and the forest fringe dwellers during the period from February to June.

* Fire continues to be the major threat to forest regeneration and establishment. Fire Watcher system needs to be strengthened in the identified vulnerable areas, depending upon requirement and availability of funds. Fire watchers need to be provided at least from February to June every year. A Standard Operating Procedure (SOP) has been prepared by the department. However, VSS members would be involved in the whole process with provision of incentive to specific incidence of fire control.
* There is a need to adopt modern firefighting methods with maintenance of Fire line in vulnerable areas.

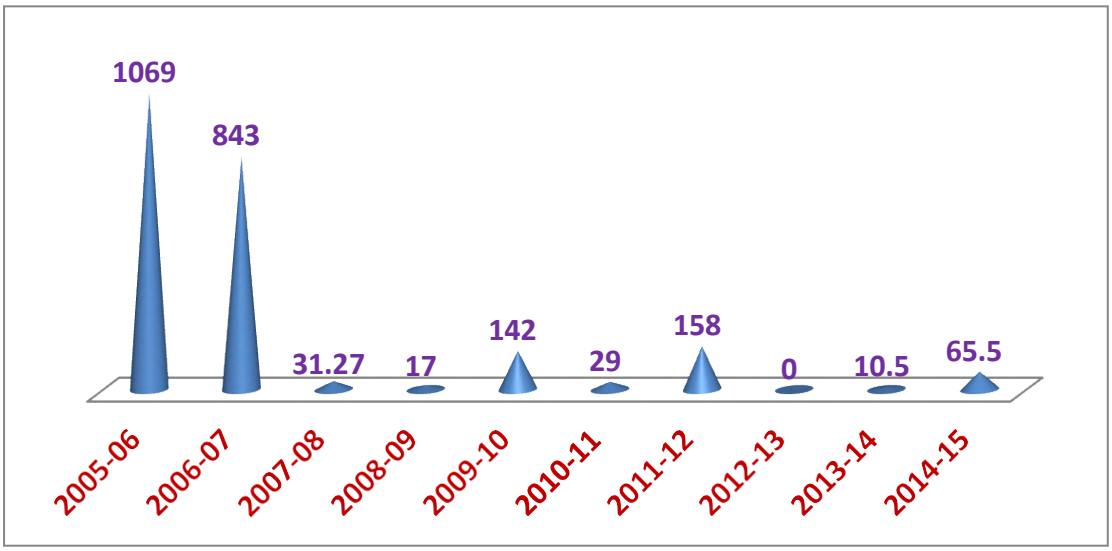
Table 60: Annual Forest Fire Incidents

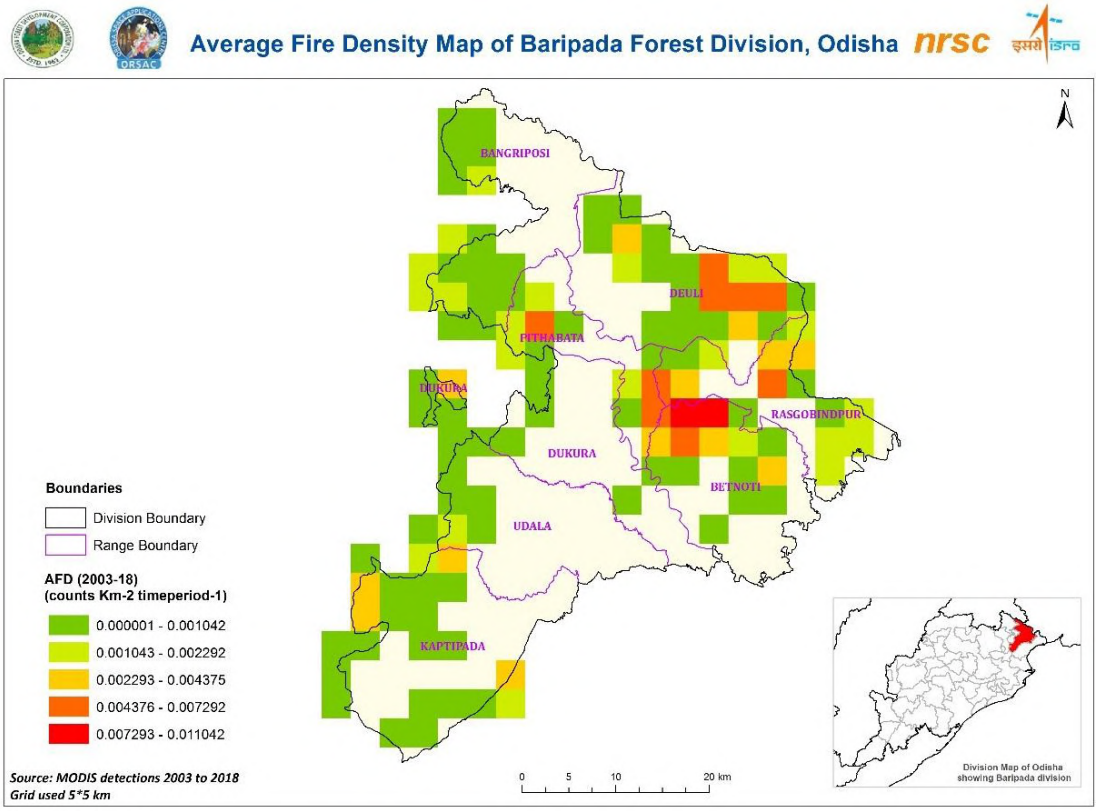
Year	No of Fire incident	Area in ha.
2005-06	29	1069.000
2006-07	28	843.000
2007-08	08	31.270
2008-09	04	17.000
2009-10	09	142.000
2010-11	09	29.000
2011-12	37	158.000
2012-13	-	-
2013-14	02	10.500
2014-15	64	65.500

Number of fire incidents



Area in ha. Affected by Forest Fire





Map 15: Average Fire Density in Baripada Forest Division

4.3 Area Damaged by Natural Calamities

Uprooting of forest trees has been noticed after strong current of wind. 1999 Super Cyclone, 2013 Phailin and 2014 Hudhud created large scale uprooting of trees in forest areas, which were salvaged.

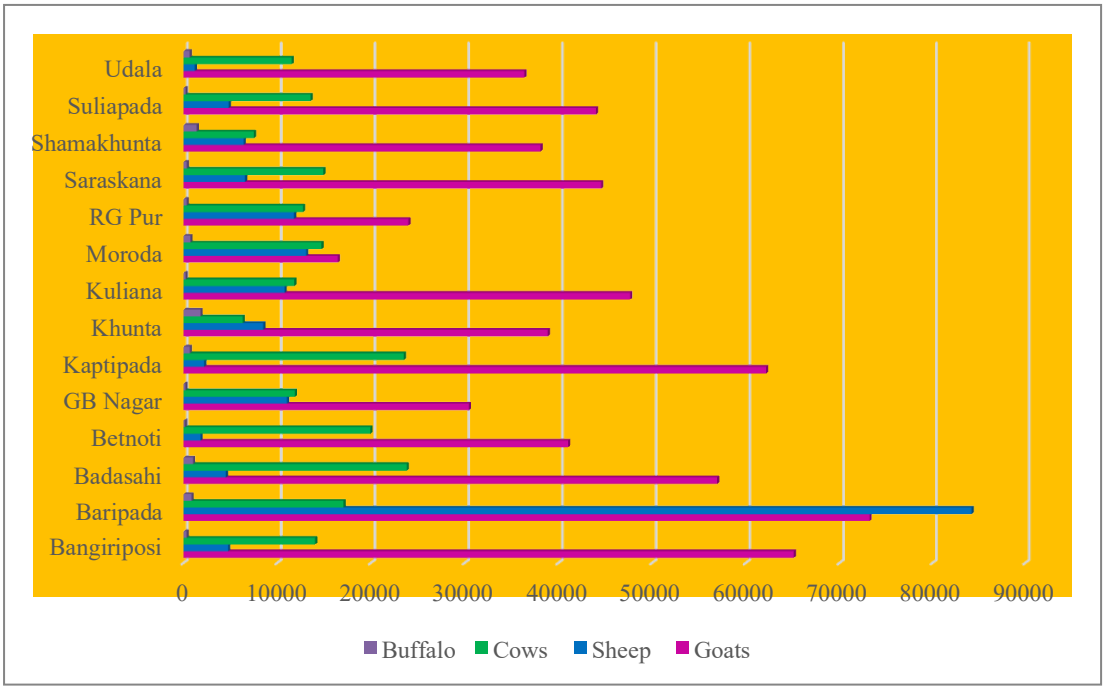
4.4 Area Protected from Grazing

The Forest blocks of Baripada Forest Division are vulnerable and close to human habitations. There is heavy biotic pressure, particularly due to grazing by the domesticated cattle population of the nearby village areas. Effective control measures should be taken to prevent rampant grazing involving VSS in the forest. Prophylactic immunization of cattle should be ensured in coordination with veterinary officials to prevent contamination of disease from the cattle to the wild animals.

TABLE 61: LIVE STOCK POPULATION IN BARIPADA FOREST DIVISION

SL No	Name of the Block	Goats (No.)	Sheep (No.)	Cows (No.)	Buffalo	Draft Animal (Buffalo/ Bulls/ Any Other) (No.)
1	Bangiriposi	65125	4761	14053	339	22503
2	Baripada	73207	84203	17074	865	24793
3	Badasahi	56947	4517	23833	1016	35533
4	Betnoti	41030	1806	19933	160	31795
5	GB Nagar	30448	11052	11889	198	19336
6	Kaptipada	62161	2206	23517	677	39527
7	Khunta	38867	8512	6318	1815	14893
8	Kuliana	47669	10785	11828	223	18869
9	Moroda	16470	13087	14719	735	22896
10	RG Pur	24001	11800	12755	354	20645
11	Saraskana	44573	6560	14921	360	24879
12	Shamakhunta	38102	6425	7516	1408	11785
13	Suliapada	44011	4826	13560	221	22447
14	Udala	36379	1201	11554	676	100696
	Total	**618990**	**171741**	**203470**	**9047**	**410597**

Figure 13: Number of Domestic Animals in Each Block



4.5 Lopping Practices

It is found that, the forest dwellers while collecting NTFP generally lop the trees to get more products. As a result NTFP yield decreases. Due to this practice the NTFP

species are damaged which affect long term production. Further, the people while grazing their animals inside the forest lop the trees to feed cattle, goat and sheep. Such practices are detrimental to the forest growth. Awareness among the NTFP collectors as well as the illegal grazers is necessary to check this practice.

4.6 Area Infested by Invasive Weed Species in Forest

The forests of Baripada Forest Division are mainly dry deciduous forests. Some of the patches of forest areas are infested with invasive weeds like *Lantana camara*, *Eupatorium* spp. Due to this invasion of weeds the regeneration of the area is affected. Regular removal of these weeds at intervals of 3 years in such patches is required for healthy growth of forest. Removal by uprooting whole plant with underground root before flowering stage is recommended. The details of forest areas infested by invasive weeds species is given below**.**

INVASIVE WEEDS IN BARIPADA FOREST DIVISION

Sl. No.	Name of the Range	Name of RF	Area of Invasive Weed (in ha)	Weed Species
1	Bangriposi	Thakurani RF	218	*Eupatorium odoratum*
		Rangahudi RF	35	
		Dighi RF	154	
2	Udala	Khunta RF	50	
		Dugdha RF	5	
		Phuljhari – (A) RF	20	
		Kuamara RF	20	
3	Rasgovindpur	Jamsole RF	200	
		Amarda RF	20	
		Chitrada RF	30	
4	Kaptipada	Noto RF	420	
		Nachhipur RF	50	
5	Baripada	Hatikot RF	150	
		Budhikhamari RF	250	
		Manchabandha RF	350	
		Badsahi RF	100	
		Deulia RF	50	
6	Betnoti	K.C. Pur RF	100	
		Durgapur RF	200	
		Dalki RF	100	
		Garudabasa RF	50	
		Jugal RF	50	
		Asanabani RF	100	

Sl. No.	Name of the Range	Name of RF	Area of Invasive Weed (in ha)	Weed Species
		Badampur RF	100	
		Khirpada RF	100	
		Merda RF	50	
		Mantapal RF	50	
		Phuljhari RF	50	
		Gandigadha RF	100	
7	Deuli	Suliapada RF	100	
		Deuli RF	100	
		Chandua RF	100	
		Kuliana RF	50	
		Total	***3522***	

4.7 Incidences of Pest and Diseases

The disease like dry rot is a fungal disease causing damage to the heart wood of sal and other trees. Leaf spot disease is observed in a wide range of trees. Defoliators damage the leaves of the trees by eating away the chlorophyll pigments. *Loranthus*, parasite, weakens the trees. Many fungi and parasitic mushrooms have been found to affect the forest crop adversely. *Loranthus* attacks Sal, Piasal, Kusum etc. and causes unsoundness of host tree. Different types of fungal attack are seen in forest species. Damages due to borers, defoliators, skeletonizers and termite are quite common occurrence in Teak plantation and inferior Quality Sal Forest.

4.8 Forest Degradation and its Drivers

Some forests are degraded due to illegal removal of Murom and soil from forest areas. Such types of degradation are noticed in foothills of Similipal, Sukhuapata Hills and Kuliana RF of the Division. Besides this, the illegal removal of trees from forest for construction purpose and domestic use has resulted in the degradation of the forest. Girdling of trees for theft or encroachment purpose also causes forest degradation, which should be checked. To check these practices, strict protection in these areas is needed.

4.8.1 Un-regulated Removal of Forest Produces

As early as 1990, the then Principal Chief Conservator of Forests, Odisha had cautioned the Govt. about the unrestricted removal of sal leaves from sal saplings growing in the degraded forests of Mayurbhanj. So Govt. decided not to grant any lease for removal of sal leaves. Over exploitation of sal leaves continued unabated in some patches resulting in arrested growth of sal trees. Management plans should be made for limited removal of sal leaves to stop irreparable damage to sal forest.

Harvesting and exploitation of sal leaves from the forest area will be permissible subject to silvicultural viability. Removal should normally be in conformity with management plan or micro plan; but until the silviculturally permissible limits have been proposed in such management plan/ micro plan a thumb rule will be adopted. The thumb rule will be that not more than 2 (two) quintals of sal leaves will be allowed to be collected during a forest year per ha. of fully stocked forests. In case of forests with a sparse growth, the upper limit of collection of leaves will be one quintal per ha.

Removal or collection of sal leaves shall not be allowed during the spring season (from 1st January to 31st March) and the rainy season (1st of July to 30th September) in order to allow growth of sal trees. Collection will be permissible only during the periods from 1st October to 31st December and again from 1st April to 30th June. Fifty percent of annual limit will be allowed to be removed during the October-December quarter and the remaining fifty percent during the April-June quarter.

For the collection of sal leaves from any forest area, the area should be divided into convenient strips of equal width and leaves should be collected during each quarter from alternate strips leaving the intervening strips untouched.

Plucking should be allowed from the sal saplings of less than three meter height. Plucking of leaf from any tree will be allowed up to 2 meter height only and leaves at the top should be allowed to remain. Leaf shall not be plucked from the leading shoots and may be collected only from the branches and the non-leading shoots. Leading shoots of Sal saplings should be clearly visible from a distance after leaf plucking has taken place in the area.

Cutting of leading shoots hamper the tree growth. This should be stopped. During March-April the local people use to kindle the forests to collect Mahua flowers. During collection of Char seeds, Amla fruit etc. the collectors use to cut the branches to collect forest produces. Such practice should stop.

4.8.2 Encroachment

The local people encroach upon the forests adjacent to boundaries because of poor maintenance of permanent forest boundary pillars. The extent of encroachment is visible through NRSC satellite maps. The RCC forest boundary pillars should be maintained.

4.8.3 Over Grazing

Almost all forests of Baripada Forest Division are prone to over grazing by local livestock, resulting in death of recruits. The regeneration is hampered in some forests.

4.8.4 Mining

Illegal removal of Murom, metal and soil from forest areas are noticed in foothills of Similipal sanctuary in Dukura Range and Bangiriposi Range, Sukhuapata hills in Kaptipada Range and Kuliana RF in Deuli Range of the Division. This should stop.

Table 62: Forest Degradation and Remedies

Forest Degradation	Drivers of Degradation	Remedial Measures
Loss of Tree cover	Collection of Firewood and timber for local consumption	To provide alternate fuel, timber substitute. To have Strict enforcement of protection & legal action.
Loss of Ground Flora	Forest Fire	Maintaining Fire Lines, Strict vigilance on Forest Fire detection & combating. Taking help of nearby Fire stations/ brigades.
	Heavy Grazing	Regulating Grazing, Practicing Rotational grazing. Development of Grass lands.
Reduction in Forest Area	River bank erosion.	Planting of Soil binding species on River banks. Rapid stabilization of unsettled banks with grass planting. Resorting to construction of structures to prevent bank erosion in extreme cases of importance.
	Land grabbers/ Encroachers.	Appropriate legal action, Motivate the encroachers to resort to Agro Forestry.
Bio diversity.	Loss of Bio diversity.	Introduce / Protect less known species outside forest block in ToF. Educate students/ villagers importance of Bio Diversity.

4.9 Pollution Control and Protection of Environment

A number of illegal stone quarry units have been installed by the individuals for commercial supply of chips and boulders for construction of roads and buildings. The municipal wastes of urban areas are released to nearby river. This results in pollution of streams and cause damage to forest floor, forest growth and wildlife.

4.9.1 Ban on Use of Polythene of Specified Thickness.

The government of Odisha, Forest & Environment Department has issued notification banning use of polythene, thermocool etc. within the municipal limits or as the case may be within the Municipal Corporation Limits of Bhubaneswar, Cuttack, Berhampur, Rourkela, Sambalpur and Puri, namely: -

(i) Polythene carry bags of any shape, thickness and size (excluding compostable)

(ii) Bottled drinking water polythene Terephthalate (PET/PETE) bottles of less than 200 ml. capacity

(iii) Single use disposable cutlers made up of thermocol (polystyrene) or plastic such as dish, spoon, cup, plate, glass, fork, bowl, straw, pouch to store liquid and container etc. of any size and shape &

(iv) Thermocool decorative materials (flower and the like)

(Note: Compostable plastic shall conform to the Indian Standard: IS 17088:2008. The manufactures or seller of compostable plastic carry bags shall obtain a certificate from the Central Pollution Control Board before marketing or selling.)

Forest Department should promote use of alternatives to polythene products.

4.9.1.1 Air Quality

In India, The Central Pollution Control Board along with State Pollution Control Boards has been operating National Air Monitoring Program (NAMP) covering 240 cities of the country having more than 342 monitoring stations. There is a pollution testing centre at Malihata, Muruda. They provide information on air quality in public domain in simple linguistic terms that is easily understood by a common person. Air Quality Index (AQI) is one such tool for effective dissemination of air quality information to people.

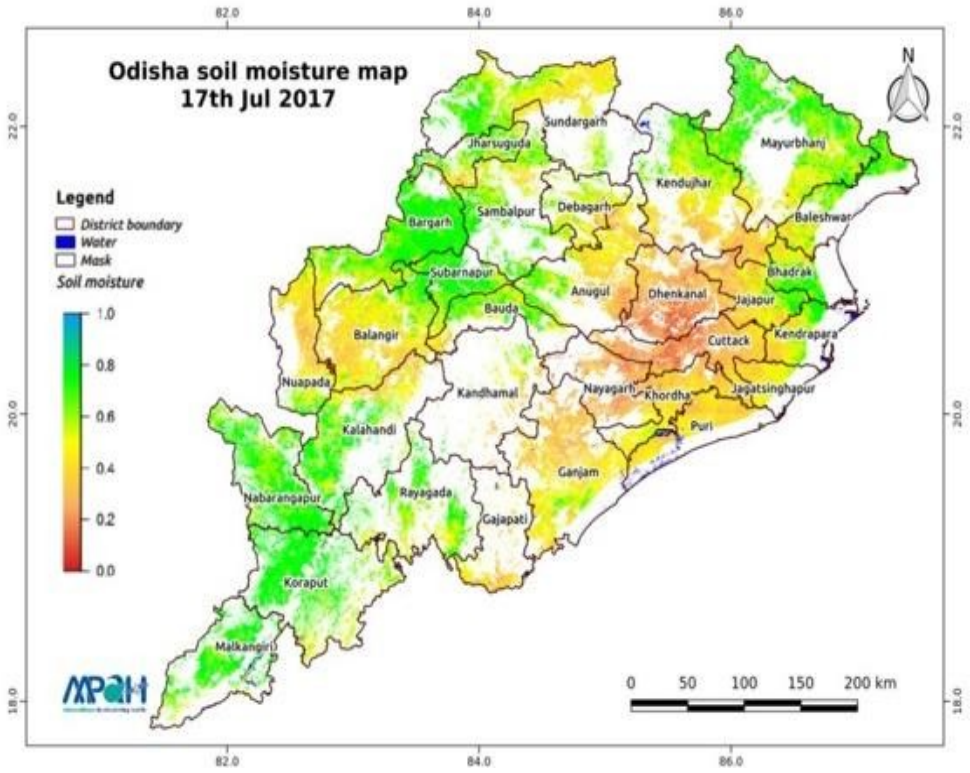
There are six AQI categories, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe. The proposed AQI will consider eight pollutants (PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb) for which short-term (up to 24-hourly averaging period) National Ambient Air Quality Standards are prescribed.

AQI	Associated Health Impacts
Good (0-50)	Minimal impact
Satisfactory (51-100)	May cause minor breathing discomfort to sensitive people.
Moderately polluted (101–200)	May cause breathing discomfort to people with lung disease such as asthma, and discomfort to people with heart disease, children and older adults.
Poor (201-300)	May cause breathing discomfort to people on prolonged exposure, and discomfort to people with heart disease.
Very poor (301-400)	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases.
Severe (401-500)	May cause respiratory impact even on healthy people, and serious health impacts on people with lung/heart disease. The health impacts may be experienced even during light physical activity.

Baripada Forest Division comes under the category of ‑Satisfactory‖ in Air Quality Index. The PM 2.5 air quality for Mayurbhanj is 55µg / m^3. This is considered slightly polluted. The WHO‘s clean air guideline for PM 2.5 is 25µg / m^3.

4.9.1.2 Water Quality

State Pollution Control Board of Odisha monitors water quality of Budhabalanga River. According to report of CPCB, Budhabalanga is one of the 19 most polluted rivers of Odisha. Dumping of un-treated water of factories and municipal waste without purification is the main reason for pollution. It is assessed that harmful chemicals like Arsenic, Lead, Cobalt and Mercury are found in Budhabalang water.


Odisha soil moisture map
17th Jul 2017
Legend
District boundary
Water
Mask
Soil moisture
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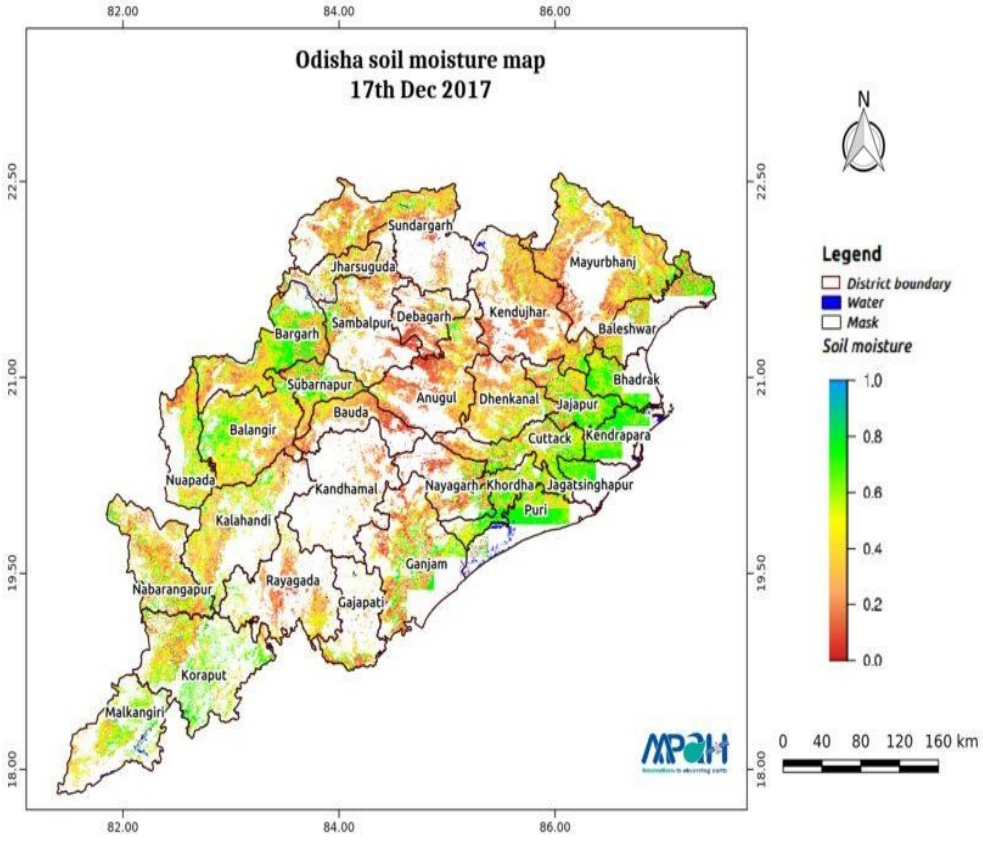
Odisha soil moisture map
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5. CHAPTER – V
CONSERVATION AND MAINTENANCE OF SOIL AND WATER RESOURCE

Forest ecosystem productivity and functioning depend on soil and water resources. But the reverse is also true. Forest and land-use management activities can significantly alter forest soils, water quality and associated aquatic habitats. Soil and water resources are protected through the allocation of land for that purpose or through appropriate management regimes and best management practices. Best practices for forest management usually combine soil and water conservation objectives. In the absence of information on land use; management activity and application of best practices can serve as useful efforts to conserve soil and water resources.

Soil conservation refers to the conservation of top soil and preventing soil loss from forest due to surface run off of rain water to reduce loss of fertility. Techniques for improved soil conservation include gulley plugging, construction of loose boulder check dams and plantations for soil conservation with species like *Agave spp*., *Vetiver spp*. etc. Contour bunding should be adopted to reduce surface run-off.

5.1 Area Treated Under Soil and Water Conservation Measures:

Most of the forest areas in the Division are prone to soil erosion. Soil erosion results in poor water retaining capacity of the forest areas. For conservation of soil and moisture, contour trenches, loose boulder structures, check dams have been constructed during the plan period under the funding by State CAMPA.

Soil moisture conservation is always initiated from top of the hill towards bottom of the hill. It is divided into three portions- Hilly portion, Valley portion and Sloppy land portion. Hilly portion and valley portion need treatment like soil and moisture conservation activities to retain the soil and enhance moisture retaining capacity. For these activities soil and moisture conservation methods such as loose boulder check dam, contour bunding, contour trenches, percolation tanks, water harvesting structures

and plantation of *Agave* and *Vetiver* in contour has been carried out in Baripada Forest Division.

5.2 Duration of Water Flow in the Selected Seasonal Streams:

Baripada Forest Division receives average rainfall of 1400 mm to 1800 mm. Many perennial and seasonal streams are flowing in the forest areas of the Division. Maximum rainfall is received during rainy season from July to October. During this period the rain water flows down from the forest through the seasonal streams. In the outgoing plan period and in the past, no periodical monitoring of river flow pattern with reference to rain fall has been done. Periodical monitoring of river flow will be conducted by the DFO during this plan period.

5.3 Wetlands in Forest Areas:

There is no wetland in forest areas of Baripada Forest Division.Temporary swampy areas are seen in the rainy days near river and barrages.Some of these small swampy areas holds water even in summer days and serves as waterhole for wild animals.Wetlands/water bodies are probably the earth‘s most important freshwater resource and are also the most threatened. They perform manifold functions in the maintenance of the ecological balance of the region. Some of the important functions include water storage, protection from storms and floods, recharge of ground water, water purification, fisheries, agriculture, wildlife resource, transport, recreation, etc. They are fragile ecosystems that are susceptible to damage even with only a little change in the composition of biotic and biotic factors. They are threatened due to inadequate water holding capacity, excessive withdrawal, pollution due to raw sewage and sullage, industrial effluents, eutrophication, leached fertilizers and insecticides. The aforementioned threats cause severe damage to the wetlands/ water bodies. The degradation in the water quality affects the floral and faunal population along with the people dependent on these ecosystems. This necessitates the need for restoration and formulation of conservation strategies for sustainable management of wetlands. Ever flowing nallas in Forest create a series of swampy areas within Forest Blocks. In Kaptipada range, the forest areas located at downstream of Kala Dam and Sunei Dam create swampy areas. The streams flowing in forest areas create swampy areas in rainy season.The water holes used by wild animals should be maintained for their use

as perennial source of drinking water. The map showing water bodies is given in **Appendix – XXXIX & XL.**

5.4 Water Level in the Wells in the Vicinity (up to 5 Km) of Forest area

Due to degradation of forest, the water level in the vicinity of the forest (up to 5 Km) of forest area is going down. The water level can be brought upwards by protecting the forest, controlling the soil erosion and moisture loss and taking up plantation in the barren land. The intervention in the forest management should be approached on Water shed basis. Periodic monitoring of water level in the wells in the vicinity of the forest area is required to assess the availability of ground water. At present depth of water table in summer is 11.4 m in Baripada, 8.07 m in Betnoti, 7.4 m in Kaptipada and 7.3 m in Udala.

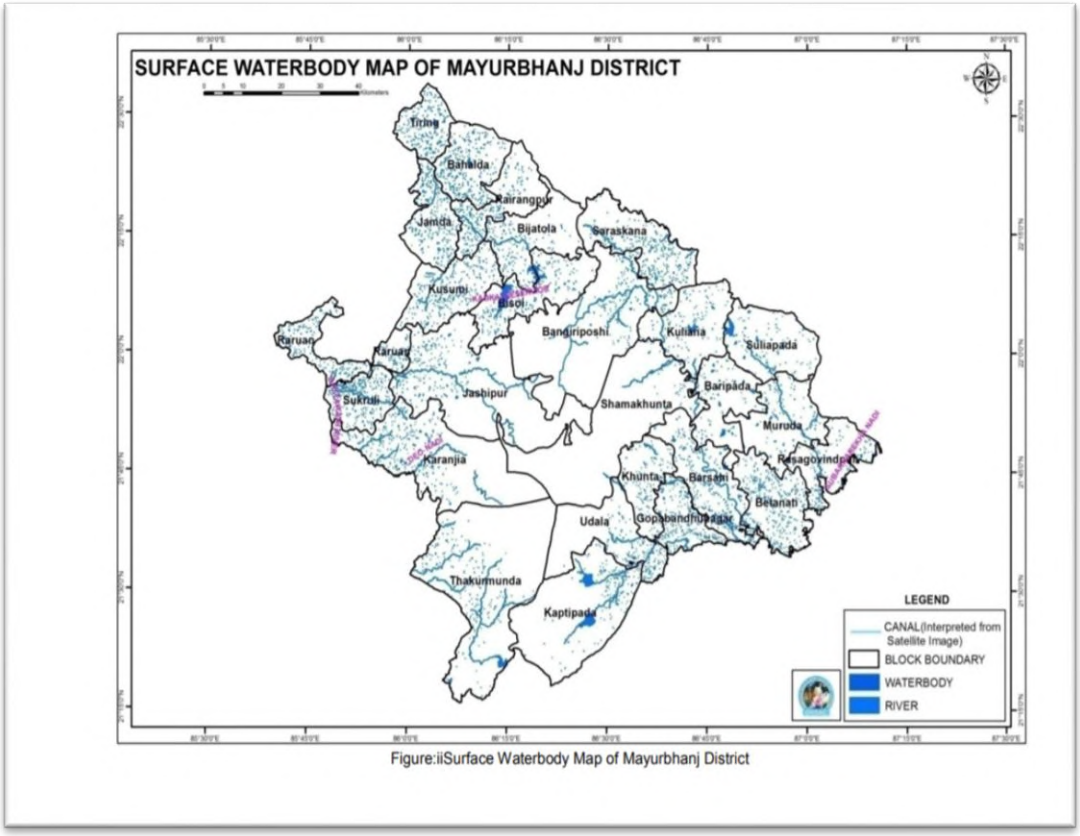


Figure:iiSurface Waterbody Map of Mayurbhanj District

5.5 Status of Aquifers:

There is one aquifer in Baripada Forest Division at Nalakhanja where water flows down froms hill slope in Notto RF, which acts as reliable water source for wild animals.

Wetlands outside forest areas:-

There is no wetland defined under ‒The Wetlands Rule - 2017‖ in Baripada Forest Division. However there are many barrages and dams created by irrigation department which needs to maintain for healthy wetland ecosystems.

With lakhs of people depending on wetlands for water, food and their livelihoods, in Baripada Forest Division, there is urgent need for management of wetlands. India under the UN Sustainable Development Goals for protecting wetlands has committed to protect the wetlands which can make a significant contribution to human well-being.

The wetlands in Baripada Forest Division face a number of threats including pollution, illegal logging and encroachment from construction projects.

Wetlands are the most biologically diverse ecosystems on Earth, and act as giant sponges, soaking up rainfall and slowly releasing it over time. They also serve as natural sewage treatment works, absorbing chemicals, filtering pollutants and sediments, breaking down suspended solids and neutralizing harmful bacteria. Alarmingly, global extent of wetlands is estimated to have declined by 71% since 1900.

The Ramsar Convention‘s mission signed by India in 1971 aims at the conservation and wise use of wetlands, with the goal of achieving sustainable development.

Wetlands in Baripada Forest Division (outside forest area)					
Sl.No.	**Dam Name**	**River**	**Height (m)**	**Length (m)**	**Purpose**
1	Alubani Dam				
2	Arikul Dam	Arikul Nala	16.8	976	Irrigation
3	Badjore Dam	Badjore nalla	26.75	1290	Irrigation
4	Baura Dam		38	995	Irrigation
5	Haladia Dam	Haladia	23.1	4200	Irrigation
6	Jambhira Dam	Jambhira	30.4	7360	Irrigation
7	Kakudajodi Dam	Kukudajodi	15.04	853.44	Irrigation
8	Kalo Dam	Kalo	24.24	2458	Irrigation
9	Paunsia Dam		11.89	960.53	Irrigation
10	Sunei Dam	Sunei River	30	2134	Hydroelectric,Irrigation

6. CHAPTER – VI

MAINTENANCE AND ENHANCEMENT OF FOREST RESOURCE PRODUCTIVITY

6.1 Growing Stock of Wood

In order to manage the forests scientifically, study of resource utilization and resource growth is essential. It is also essential for the society as well as for the environment. In forest inventory, information on forest growth, condition of stock, composition, drain on resources and changes in stock is collected which forms the basis for preparation of management plan for future forest management and managerial decision for planning, development and monitoring of resources on long term basis. The assessment of changes taking place in a forest cover over a period of time requires periodic or repeated inventory for taking appropriate measure for better forest management.

FOREST COVER BY DENSITY CLASS, MAYURBHANJ (in ha.)					
YEAR	Dense Forests (Crown density Cover Area above 40%)	Open Forests (Crown density 10% to 40%)	Per Capita Forest Cover(in Ha)	Scrubs(in Ha)	Non Forest(in Ha)
1991	332500	73700	0.215		
1993	332500	73700			
1995	332500	73300		5500	
1997	323700	61500		1600	
1999	322300	71900	0.209	1600	
2001	288300	124900	0.185	3700	
2003	232503.89	161010.73	0.1995	42883.44	607869.9
2004	288300	124900	0.185	3700	
2005	300900	101000			
Source - SoE					

The statistics of growth & yield are vital information, not only to assess the exploitable quantum vis-à-vis potentity of the forest but such data are otherwise required to evaluate the growing stock as well as the outcome of the prescriptions. Hence, the current plan aims at providing reliable estimates of number of stems and stand volumes, by species and by girth-class, per hectare in sampled forest blocks besides total stems & stand volume in the entire Divisions. It also aims at creating a

benchmark against which the future inventory assessments can be better compared; conditions of future crops can be objectively assessed and reliable estimates of growth potential, MAI and yield can be ascertained.

6.2 Growing Stock of Bamboo

There is no bamboo forest in Baripada Forest Division. However some bamboo clumps are found in Notto RF. Bamboo is cultivated in large scale in private land grown through farm forestry. About 500 truckloads of permit free domestic Bamboo are transported from Baripada Forest Division to Bhubaneswar annually.

FOREST PRODUCE PROFILE OF MAYURBHANJ			
Year	**Timber** (cu.metre)	**Fuel Wood(in Tonnes)**	**Sal Seeds(in Tonnes)**
1999	298.6797	511	NA
2000	1315.1514	279.7	2677.107
2001	330.505	152	13.888

6.3 Increment in Volume of Identified Timber Species

The Mean Annual Increment of Sal species has not been calculated in this Division, neither in the outgoing plan nor in the past. During this plan the grid method of enumeration in 0.1ha was carried out. Sample plots were taken, with geo-coordinates. This data will form the baseline, on the basis of which, Mean Annual Increment will be calculated over different time intervals by the Divisional Forest Officer.

The mean annual increment of Teak as calculated in this Division is given below.

SL.No.	Age	Mean Height (in Metres)	Total Volume (in Cum/ ha)	Current Annual Increment (CAI/10 years) in cum/ha	Mean Annual Increment (MAI) in cum/ha
1	30	31	690	138	23
2	40	45	2070	179	51.75
3	50	56	3730		77.2

6.4 Enhancement of Forest Productivity through Quality Plantation Activities

In the outgoing plan, Plantation Working Circle has been constituted. Plantation activities in the Division have been taken up within and outside the Plantation Working Circle, where ever plantable area is found. At present 1226.88 ha old, over matured Eucalyptus/ Acacia plantations and teak plantations exist at several locations. Besides these, new plantations including mixed plantation have been taken up in the Division.

Production of genitically improved seedlings:-

- In Sankhabhanga Mega Nursery has been updated to produce improved seedlings through clonal propagation/ tissue culture. Annual production of clonal seedlings is proposed below

Year	No. of Clonal seedlings to be produced	Remarks
2021-22	-	-
2022-23	10000	Proven materials collected from establised sources will be used for tissue culture / Clonal propagation
2023-24	10000	
2024-25	50000	
2025-26	100000	
2026-27	200000	
2027-28	200000	
2028-29	200000	
2029-30	200000	
2030-31	200000	
Total	**1170000**	

6.5 Carbon Stock.

The management of terrestrial carbon sinks is of paramount importance to contain and arrest the carbon dioxide from the atmosphere as it is one of the main green house gases contributing to global warming. Thus, forests play a very important role in the dynamics of the global carbon cycle. This issue is dealt with in this working plan is very important for the policy makers for framing of policies to combat climate change.

Classification of carbon stock:

In forests enormous carbon is stored which is classified into 5 types by Good Practice Guide of IPCC (Intergovernmental Panel on Climate Change). Both living and dead organic matter of the biomass is classified into two pools each:-

1. Above Ground Biomass.
2. Below Ground Biomass.
3. Dead wood.
4. Litter.
5. Soil organic matter.

Category	Pools	Description
Living Biomass	Above Ground Biomass	All living biomass above the soil which includes stumps, branches, bark, fruits, flower, seeds and Foliage.
	Below	All living biomass of roots. Fine roots of less.
	Ground Biomass	Than 2mm dia are excluded as they cannot be empirically distinguished from soil organic carbon or litter.
Dead Organic Matter	Deadwood	Includes all non living biomass not include in litter either standing or lying on the ground. Also includes dead wood above 5 cm in diameter.
	Litter	Includes all non living biomass having diameter less than 5cm (FSI), lying dead in various tates of Decomposition on ground.
Soil	Soil Organic Matter	Includes organic carbon in mineral and organic Soils in the plot

Above Ground Biomass

Estimation of above ground biomass (AGB) has traditionally been based on the use of allometric equations developed for forest trees, using the pan-tropical model by Chave et al. (2014). Allometric equations for biomass usually include information or trunk diameter at DBH (in cm), total height H (in cm) and wood density p (in g/cm3). In this plan we have assessed this above ground biomass.

Trees species absorb Carbon dioxide (CO_2) from the atmosphere through chlorophyll of leaves for preparation of food for their growth. The more the growth of tree species, the more is the absorption of Carbon dioxide (CO_2) from the atmosphere and also the more is the storage of Carbon inside the trunks of the trees. The Carbon content of a tree is approximately the half of dry weight of the tree. In the National Working Plan Code-2014, it has been provided to calculate the Carbon stock of forest by laying grid based sample plot of 0.1ha. area where trees species are enumerated above 30cm. girth at breast height (GBH) in the main sample plot and shrubs,

regenerations, herbs, and grasses are enumerated on the square plots of 1m × 1m, 3m × 3m are laid at 30mtr distance from the center of the main plot of 0.1ha. on North-East South-East, South-West and North-West direction at 45 degree, 135 degree, 225 degree and 315 degree respectively. It has been provided to lay square plots of 5m × 5m on North-East and South-West direction over the square plots of 1m×1m and 3m ×3m for estimation of dry wood biomass from dead woods, branches, twigs, humus etc.

From the enumeration data of trees above 30cm GBH, the volume of individual species is calculated from the volume table for the species. The bole mass of the species can be calculated by multiplying the specific gravity of that species with the volume of the species. Similarly the biomass of species below 30cm girth can be calculated from the square plots of 1m × 1m and 3m × 3m in all four directions laid at 30 mtr distance from the center of the main sample plot. The total bole mass of all species above 30 cm GBH are calculated. The Above Ground Biomass (AGB) of the species of 30 cm GBH and above are found out by multiplying the total bole mass of the species with the Bio mass Expansion factor (BEF) of that species. From the data of AGB, the Below Ground Biomass (BGB) i.e. bio mass of roots of the species can be calculated by multiplying a default value with the Above Ground Biomass (AGB). The Dead Wood Biomass can be calculated by weighing the dry fallen wood, branches, twigs and humus. The total Biomass of 0.1ha.area is calculated by summing up the Above Ground Biomass (AGB), Below Ground Biomass (BGB) and Dead Wood Biomass (DWB).

The carbon stock of total Biomass is calculated by multiplying a constant factor with the value of total Biomass. The soil Carbon stock can be calculated by analyzing the Carbon content of 200 gm of soil collected from pits of 30cm × 30cm × 30cm on South-East and North-West corners of main plot. The Soil Carbon stock is added to the Carbon stock derived from the total Bio mass (AGB+BGB+DWB).

In this manner the Carbon stock of 0.1 ha. area is calculated and Carbon stock per ha is estimated. The Carbon stock of a Forest Block can be calculated by taking the average Carbon stock of the sample plots of that Forest Block and then multiplying the average Carbon stock of 1ha.area with the area of that Forest Block.

The Carbon stock of a Forest Range can be estimated by adding the carbon stock of all the forest blocks under the jurisdiction of the Range as because the forest blocks may be coming under different forest types. Similarly the Carbon stock of a Forest Division can be estimated by adding Carbon stocks of all the Forest blocks under the jurisdiction of the Division. The estimation of carbon stock of a Forest Division should be as accurate as possible and it should be transparent. As per guidelines of Inter-governmental Panel on Climate Change (IPCC) there should be mechanism for measurement, reporting and verification of Carbon stock at national and sub-national level. For this purpose more permanent sample plots (PSP) are to be laid in the Division in different strata of forest.

Efforts are to be made to estimate the Carbon stock of Forest Division, Forest Ranges, Forest Sections, and Forest Beats. The in-charge of Division, Range, Section, and Beat are to be well acquainted with the carbon stock under their jurisdictions. Decrease of carbon stock will indicate the degradation of forest and the reasons/ drivers of forest degradations are to be found out.

6.6 Carbon Sequestration and Mitigation.

The IPCC 3rd assessment report (AR-3) issued in the year 2001 noted that emission from deforestation and forest degradation in developing countries has a large impact on global carbon cycle. The IPCC 4th assessment report (AR-4) issued in the year 2007 reported that 80% of carbon dioxide was being emitted by combustion of fossil fuel and 20% of carbon dioxide was being emitted due to deforestation and forest degradation.

Growing trees absorb carbon dioxide (CO_2) from the atmosphere and store the carbon on their trunks and twigs so efficiently that half of the dry weight of a tree is carbon. This carbon remains in the form of wood and wood products. The more the growth of the tree, the more is the store of the carbon in its trunk. This absorption of carbon dioxide from the atmosphere and storage of carbon on the trunk of the tree is carbon sequestration.

At the time of Forest Resource / Carbon Inventory, sample plots of 0.1 ha. have been laid in different strata of forest. During inventory of trees of 30 cm and above in GBH

have been enumerated, shrubs, herbs, climbers, grasses and dead wood mass have been measured. Out of the total 484 nos. of sample plots provided by ORSAC 465 nos. of sample plots of 0.1 ha. have been laid the forests of Baripada Forest Division. From those sample plots laid in the forest 48 nos. of sample plots (PSP) have been identified in the different strata of forest as permanent sample plots. The carbon stock of the permanent sample plots have been estimated by the methods of multiplying the biomass expansion factor (BEF) to the bole mass. The AGB, BGB, and DWB have been estimated and the carbon stock has been assessed by multiplying the constant factor of 0.47 to the total biomass.

The 48 permanent sample plots (PSP) will be visited after 1 year or 2 year and the carbon stock of the permanent sample plots will be estimated as per the methodology described in the previous para. If the carbon stock of the sample plots will increase, then it can be ascertained that carbon have been sequestrated. The amount of carbon sequestration can be found out from the following equation.

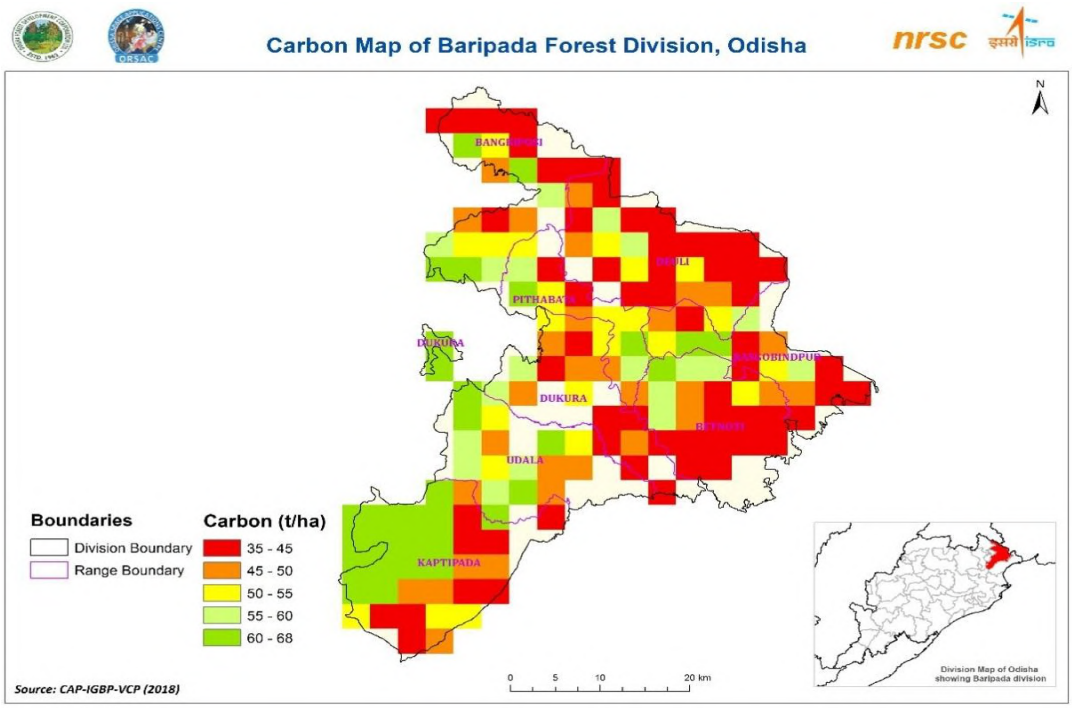
$$\Delta C = \frac{Ct_2 - Ct_1}{t_2 - t_1}$$

Where ΔC = Amount of carbon sequestration, Ct_1 = Carbon stock of the current year, Ct_2 = Carbon stock after the time period_t'.

When the value of Δ C is positive carbon have been sequestrated and forest growths have improved but when Δ **C** is negative the forest growths have degraded.

The sample plot wise floor carbon stock of the 48 nos. of the permanent sample plots in different strata of under different Forest Ranges is shown in the table in the **Appendix – XVII.**

Carbon sequestration can be enhanced in the forest by adopting suitable Silvicultural practices, like regeneration cleaning, climber cutting, eradication of weeds, and by improving the soil health and fertility and by taking up Soil and moisture conservation in the degraded forest. Carbon sequestration can be enhanced by checking the biotic interference on the forest making awareness among the members of the VSS and safeguarding the forest from illicit felling.



Map 16: Carbon Sequestration Map of Baripada Forest Division

Carbon Stock:

For calculation of Carbon Stock of trees/ Herbs/ Leaf litters on forest floor, it is required to enumerate them as per procedures led out in the National Working Plan Code-2014. Permanent sample plot wise study has been taken up. The forest survey of India has been requested to provide available information on Carbon Stock of Baripada Forest Division.

Principle:

The rate of carbon sequestration depends on the growth characteristics of the tree species, the conditions for growth where the tree is planted, and the density of the tree‘s wood. It is greatest in the younger stages of tree growth, between 20 to 50 years. Further complicating the issue is the fact that far less research has been done on tropical tree species as compared to temperate tree species.

1. Determine the total (green) weight of the Growing Stock.
2. Determine the dry weight of the Growing Stock.
3. Determine the weight of carbon in the Growing Stock.
4. Determine the weight of carbon dioxide sequestered in the Growing Stock.

General approach:

As per thump rule & taking Wood Empirical Formula $C_nH_{2n}O_n$, 30 gms of Wood contains 12 gms of Carbon. Considering the Ash content i.e. Metals and its oxides in plants 15% reduction of Carbon may be safely considered.

Hence 30 Tons of Wood may contain (12T-0.3T) 11.70 Ton of Carbon. Hence 1 Ton of Wood (Dry mass) may contain 0.39 Tons of fixed Carbon. For conversion of mass of Wood from cum to Ton, the density factors for various species recorded in Tropical forests are furnished below.

Table 63: Species wise density of wood

Species	Wood Density	Species	Wood Density	Species	Wood Density
Acacia arabica	0.7	*Diospyros spp.*	0.7	*Palaquium spp.*	0.55
Acacia leucophloea	0.88	*Dipterocarpus spp.*	0.61	*Parkia roxburghii*	0.34
Adina cordifolia	0.59	*Eleocarpus serratus*	0.4	*Peltophorum pterocarpum*	0.62
Aegel marmelos	0.75	*Emblica offcinalis*	0.8	*Pinus caribaea*	0.48
Alangium longiflorum	0.65	*Enterolobium cyclocarpum*	0.35	*Pittosporum pentandrum*	0.51
Albizzia lebbek	0.55	*Erythrina suberosa*	0.32	*Polyalthia falva*	0.51
Albizzia odoratissima	0.76	*Eucalyptus citriodora*	0.64	*Premna tomentosa*	0.96
Albizzia procera	0.52	*Eucalyptus deglupta*	0.34	*Pterocarpus marsupium*	0.67
Alstonia scholaris	0.36	*Eugenia spp.*	0.65	*Quercus spp.*	0.7
Anogeissus latifolia	0.78	*Ficus benjamina*	0.65	*Samanea saman*	0.45
Artocarpus heterophylla	0.6	*Ficus botryocarpa*	0.43	*Sapindus saponaris*	0.58
Azadirachta Indica	0.69	*Ficus spp.*	0.39	*Schleichera oleosa*	0.96
Balanocarpus spp.	0.76	*Ficus variegate*	0.28	*Semecarpus anacardium*	0.64
Barringtonia edulis	0.48	*Garcinia spp.*	0.75	*Shorea robusta*	0.72
Barrya cordifolia	0.78	*Gardenia latifolia*	0.64	*Soymida febrifuga*	0.97
Bauhinia spp.	0.67	*Garuga pinnata*	0.51	*Spathodea campanulata*	0.25
Bombax ceiba	0.33	*Gmelina arborea*	0.41	*Stereospermum suaveolens*	0.62
Boswellia serrate	0.5	*Grewia multiflora*	0.46	*Streculia urens*	0.67
Bridellia retusa	0.5	*Hardwickia binate*	0.73	*Strychnos potatorum*	0.88
Buchanania lanzan	0.45	*Heritiera spp.*	0.56	*Swintonia spp.*	0.61
Bursera serrate	0.59	*Heritiera sylvatica*	0.77	*Syzygium cuminii*	0.7
Butea monosperma	0.48	*Hevea brasiliensis*	0.53	*Tamarindus indica*	0.75
Calophyllum inophyllum	0.57	*Hibiscus tiliaceus*	0.57	*Tectona grandis*	0.5
Calycarpa arborea	0.53	*Hopea spp.*	0.64	*Terminalia arjuna*	0.68
Cananga odorata	0.29	*Kydia calycina*	0.72	*Terminalia bellerica*	0.72
Canarium spp.	0.44	*Lagerstroemea parviflora*	0.62	*Terminalia chebula*	0.96
Canthium monstrosum	0.42	*Lannea coromandelica*	0.54	*Terminalia tomentosa*	0.73
Carallia calycina	0.66	*Leucaena leucocephala*	0.64	*Thespesia populnea*	0.52
Cassia fistula	0.71	*Litchi chinensis*	0.88	*Toona calantas*	0.29
Casuarina equisetifolia	0.83	*Litsea spp.*	0.4	*Trema orientalis*	0.31
Cedrela toona	0.43	*Macaranga bicolor*	0.29	*Trichospermum richii*	0.32
Chloroxylon swietenika	0.76	*Madhuca fulva*	0.53	*Vitex spp.*	0.65
Cinnamomum spp.	0.43	*Mallotus philippinensis*	0.64	*Wallaceodendrom celebicum*	0.55
Citrus grandis	0.59	*Mangifera indica*	0.52	*Wrightia tinctorea*	0.75
Cleistanthus collinus	0.88	*Melia dubia*	0.4	*Xanthophyllum excelsum*	0.63
Cochlospermum religiosum	0.27	*Mesua ferrea*	0.83	*Xylia xylocarpa*	0.73
Cocos nucifera	0.5	*Michelia spp.*	0.43	*Zizyphus spp.*	0.76
Cordia spp.	0.53	*Mimusops elengi*	0.72	*Zizyphus talanai*	0.53
Dalbergia latifolia	0.75	*Mitragyna parviflora*	0.56	*Zizyphus xylopyrus*	0.85
Dillenia pentagyna	0.53	*Oroxylum indicum*	0.32		
Diospyros melanoxylon	0.68	*Ougenia dalbergiodes*	0.7		

Carbon Sequestration & Mitigation:

Carbon sequestration:

Carbon sequestration the process involved in carbon capture and the long-term storage of atmospheric carbon dioxide or other forms of carbon to migrate or defer global warming. It has been proposed as a way to slow the atmospheric and marine accumulation of greenhouse gases, which are released by burning fossil fuels.

Carbon dioxide (CO_2) is naturally captured from the atmosphere through biological, chemical and physical process. Carbon dioxide may be captured as a pure by-product in process related to petroleum refining or from power generation. CO_2 sequestration includes the storage part of carbon capture and storage, which refers to large-scale, artificial capture and sequestration of industrially produce CO_2 using subsurface saline aquifers, reservoirs, ocean water, aging oil fields or other carbon sinks.

Increasing yields and efficiency generally reduces emissions, since more food results from the same with less effort. Techniques include more accurate use of fertilizers, less soil disturbance, better irrigation, and crop strains bred for locally beneficial traits and increased yields.

Replacing more energy intensive farming operations can also reduce emissions. Reduced or no-till farming requires less machine use and burns correspondingly less fuel per acre. However, no-till usually increases use of weed-control chemicals and the residue now left on the soil surface is more likely to release its CO_2 to the atmosphere as it decays, reducing the net carbon reduction.

In practice, most farming operations that incorporate post-harvest crop residues, wastes and byproducts back into the soil, provide a carbon storage benefit. This is particularly the case for practices such as field burning of stubble – rather than releasing almost all of the stored CO_2 to the atmosphere; tillage incorporates the biomass back into the soil. The Range wise Carbon Sequestered is given below.

Carbon Sequestration as it relates to Forestry, the following steps are suggested:

- Planting of Species having long Rotation period in order to enhance carbon storage for a longer period.

- The crop should not be harvested when the bio mass growth is faster i.e. fast growing species to be favoured to slow growing species. When growth slows down the species may be harvested.

- The timber should be utilized in structures / house hold articles than use as fuel.

- Leaf litters, Twigs may be allowed to convert to compost and go back to soil than use as fuel which immediately releases CO_2 to atmosphere.

- Steps to be taken to improve soil organic content than losing carbon to atmosphere as CO_2.

Enhancing Carbon Removal

All crops absorb CO_2 during growth and release it after harvest. The goal of agricultural carbon removal is to use the crop and its relation to the carbon cycle to permanently sequester carbon within the soil. This is done by selecting farming methods that return biomass to the soil and enhance the conditions in which the carbon within the plants will be reduced to its elemental nature and stored in a stable state. Methods for accomplishing this include:

- Use cover crops such as grasses and weeds as temporary cover between planting seasons.

- Concentrate livestock in small paddocks for days at a time so they graze lightly but evenly. This encourages roots to grow deeper into the soil. Livestock also till the soil with their hooves, grinding old grass and manures into the soil.

- Cover bare paddocks with hay or dead vegetation. This protects soil from the sun and allows the soil to hold more water and be more attractive to carbon-capturing microbes.

- Restore degraded land, which slows carbon release while returning the land to agriculture or other use.

Agricultural sequestration practices have positive effects on soil, air, and water quality, beneficial to wildlife and expand food production. On degraded croplands, an increase of 1ton of soil carbon pool may increase crop yield by 20 to 40 kilograms per hectare of wheat, 10 to 20 kg/ ha for maize and 0.5 to 1 kg/ ha for cowpeas.

The effects of soil carbon sequestration can be reserved. If the soil is disrupted or tillage practices are abandoned, the soil becomes a net source of greenhouse gases. Typically after 15 to 30 years of sequestration, soil becomes saturated and ceases to absorb carbon. This implies that there is a global limit to the amount of carbon that soil can hold.

Many factors affect the costs of carbon sequestration including soil quality, transaction costs and various externalities such as leakage and unforeseen environmental damage. Because reduction of atmospheric CO_2 is a long-term concern, farmers can be reluctant to adopt more expensive agricultural techniques.

Forest is linked to climate change in three ways:-

(i) They are source of greenhouse gas (GHG) emissions.

(ii) They offer mitigation opportunity to stabilize GHG concentrations.

(iii) They are impacted by climate change.

Impacts of climate change on forest eco system are getting manifested as species range shifts, changing bio diversity, physiological changes in plant life cycles, forest growth pattern of species changing boundaries of eco systems and other biotic and abiotic responses / stresses. There are evidences of increase in frequency and severity of forest fire changing water regimes and expanding forest insect‘s infestation. Long observational studies are necessary to identify the key changes for which grid based sample point enumeration has been designed. The forest block wise carbon stock is enclosed as **Appendix – IV.** Range wise carbon stock of forest area under working plan in Baripada Forest Division is calculated 7805803.923 tonne per ha.

Table 64: RANGE WISE CARBON STOCK OF FORESTS UNDER WORKING PLAN

Name of the Range	Plan Area in Ha.	Blank Area (in Ha.)	Forest Cover in Ha.	Range wise Biomass (t/ha)	Total Range Biomass (t/ha)	Range Carbon stock (t/ha)
Bangiriposi	2272.358	411.852	1860.506	165.12	307206.7507	153603.3754
Betnoti	12571.684	2730.334	9841.350	676.93	6661905.056	3330952.528
Deuli	11036.824	2235.152	8801.672	246.37	2168467.931	1084233.965
Dukura	3679.218	771.686	2907.532	177.44	515912.4781	257956.239
Kaptipada	8294.462	196.115	8098.347	292.09	2365446.175	1182723.088
Pithabata	3634.120	398.574	3235.546	556.46	1800451.927	900225.9636
Rasgobindpur	5068.866	970.465	4098.401	207.02	848450.975	424225.4875
Udala	3481.188	897.296	2583.892	365.25	943766.553	471883.2765
Division Total	***50038.720***	***8611.474***	***41427.246***		***15611607.85***	***7805803.923***

RANGE WISE CARBON STOCK OF FORESTS UNDER WORKING PLAN AREA

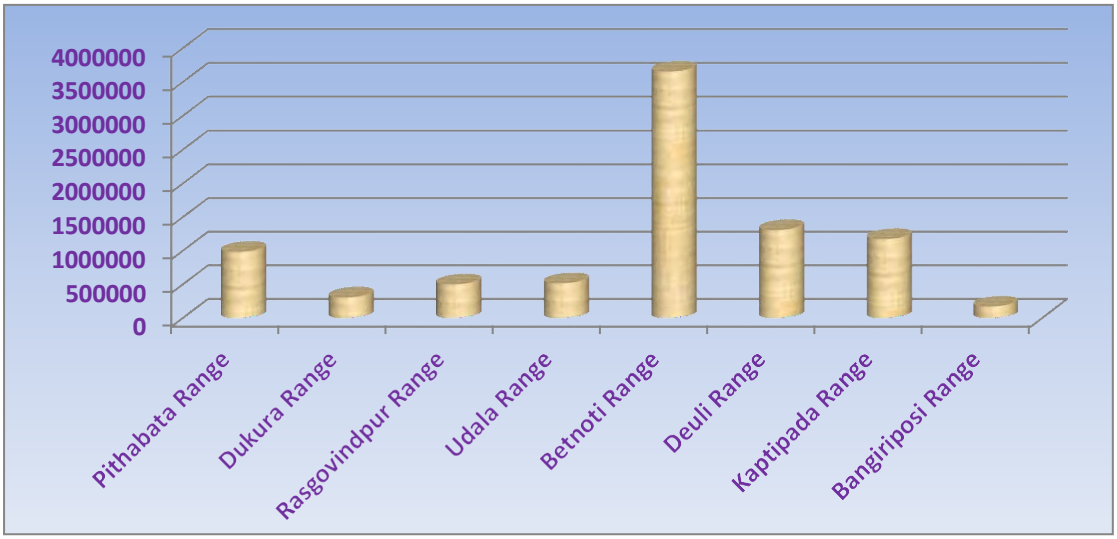


Table 65: RANGE WISE REVENUE FOREST CARBON

Name of the Range	Revenue Forest (ha)	Range Wise Biomass (t/ha)	Total Range Biomass (t/ha)	Range Carbon stock (t/ha)
Bangiriposi	2020.081	165.120	333555.775	166777.887
Betnoti	3295.541	676.930	2230850.569	1115425.285
Deuli	3194.118	246.370	786934.852	393467.426
Dukura	948.846	177.440	168363.234	84181.617
Kaptipada	13872.990	292.090	4052161.649	2026080.825
Pithabata	2206.588	556.460	1227877.958	613938.979
Rasgobindpur	1344.229	207.020	278282.288	139141.144
Udala	2182.094	365.250	797009.834	398504.917
Division Total	***29064.487***		***9875036.158***	***4937518.079***

Enhancement of forest carbon stocks Effective implementation of good management practices ensures the multiple functions of forest and can increase forest carbon stocks. Specific management practices – e.g. silvicultural treatments (tending operations, enrichment of gaps, etc.), species selection, modification of rotation cycles, can be enhance forest carbon stocks.

Deforestation and forest degradation:

Whether due to human activities or natural causes, deforestation and forest degradation result in carbon stock reductions and greenhouse gas emission, as well as loss or impairment of other forest goods and services, threatening livelihoods, environmental functions and other socio-economic values. Forest conservation

endeavors to rectify such deleterious impacts that cause forest degradation, and ultimately deforestation.

Forest threats include fires, pests and diseases, poor management and harvesting, overexploitation, grazing and other disturbances etc. Management measures must be adapted to the specific threats of the site. Forest management activities that conserve carbon stocks in forests includes:

a. Sustainable practices of forest management and use;

b. Integrated fire management.

c. Management of forest health and vitality;

d. Management of forest biodiversity;

7. CHAPTER – VII

OPTIMIZATION OF FOREST RESOURCE UTILIZATION

7.1 Recorded Removal of Timber

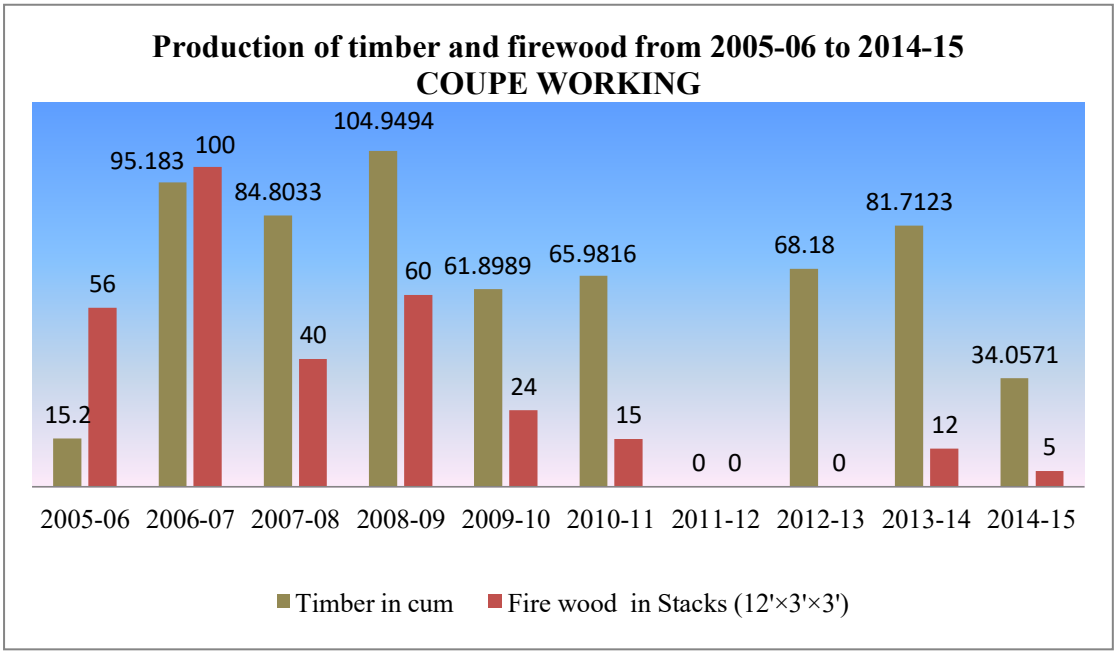
Timber and firewood have been harvested from the timber coupes of Improvement Working Circle during the outgoing plan period by the Odisha Forest Development Corporation, Ltd. The details of timber working from 2007-08 to 2015-16 are given below. Further the salvaged and seized materials have also been delivered to OFDC Ltd.

Production of timber and firewood during last plan period:

Table 66: Coupe Working

Sl. No.	Year	No. of Trees Marked	Out turn			Pole	Value in Rs.	Royalty realized
			Unit	cum	Fire wood in Stacks (12'×3'×3')			
1	1996-97 to 2004-05	0	0	0	0			0
2	2005-06	92	56.750	15.2000	56			49940
3	2006-07	451	198.535	95.1830	100			184638
4	2007-08	302	235.830	84.8033	40	0	670760	245263
5	2008-09	402	310.840	104.9494	60	0	934000	412571
6	2009-10	221	121.090	61.8989	24	0	304700	259700
7	2010-11	350	167.305	65.9816	15	0	--	194289
8	2011-12	277	Not delivered to OFDC as per direction of the RCCF and FD, STR, Baripada. Reason: The timber coupe of Notto felling series, SWC-XVI (B) and (P), is a part of Buffer Area of Similipal Tiger Reserve (STR Buffer), which is very important for movement of Elephants as well as spill over population of tigers to other adjoining areas, hence working of above coupe was temporarly banned by the RCCF and FD, STR, Baripada, vide his memo No. 1651 dt.22.10.2011.					
9	2012-13	137	143.615	68.1800	0	0	--	186125
10	2013-14	210	173.230	81.7123	12	0	--	240270
11	2014-15	116	90.790	34.0571	5	0	--	131280
12	2015-16		No dead and wind fallen trees are available in this coupe.					
13	2016-17		No dead and wind fallen trees are available in this coupe.					
14	2017-18		No dead and wind fallen trees are available in this coupe.					
15	2018-19		No dead and wind fallen trees are available in this coupe.					
16	2019-20		No dead and wind fallen trees are available in this coupe.					
Source : Divisional Manager, OFDC Ltd. , Baripada								

Figure 14: Production of timber and firewood from 2005-06 to 2014-15 Coupe Working



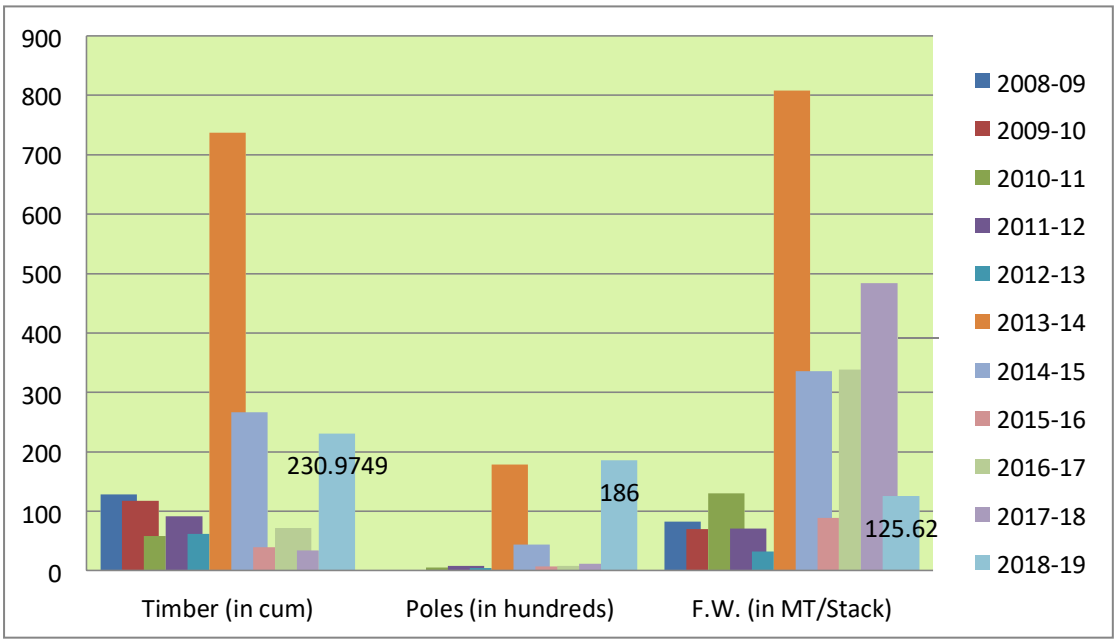
7.2 Recorded Removal of Fuel Wood

The rural masses mainly depend on the forest to collect fire wood for cooking food. The consumption of fire wood has been assessed by socio-economic survey conducted on the fringe villages during the preparation of working plan. The quantity of firewood and number of poles collected by OFDC Ltd. is given below.

Table 67: Recorded Removal of Fuel Wood

Year	Production of salvaged and sized Timber from Dept.		
	Timber (in cum)	Poles (in No.)	F.W. (in MT/Stack)
2008-09	128.4528	0	82.850
2009-10	117.4393	0	69.866
2010-11	58.5373	579	130.443
2011-12	91.2321	767	71.211
2012-13	62.0411	423	32.260
2013-14	737.2765	17862	807.566
2014-15	266.8242	4416	335.940
2015-16	39.6308	726	88.640
2016-17	71.4682	851	338.840
2017-18	34.3561	1139	484.010
2018-19	230.9749	186	125.620
Source : Divisional Manager, OFDC Ltd. , Baripada			

Figure 15: Recorded Removal of Fuel Wood and Pole



7.3 Recorded Removal of Bamboo/ Rattans

There is no bamboo or rattans in forest areas, but in private holdings bamboo clumps are seen everywhere and this Division is major bamboo producing Division. About 500 truckloads of bamboo are exported from Baripada Forest Division every year.

7.4 Recorded Removal of Locally Important NTFPs Including MAPs:

Potential N.T.F.P species of the Division are given below

Amla	*Phyllanthus emblica*
Bahada- Belleric myrobalan	*Terminalia bellerica*
Harida	*Terminalia chebula*
Siali	*Bauhinia vahlii*
Char	*Buchanania lanzan*
Mahua	*Madhuca indica*
Kusum	*Schleichera oleosa*
Karanja	*Pongamia pinnata*
Sal seed	*Shorea robusta*
Neem	*Azadirachta indica*
Dhataki	*Woodfordia fruticosa*

Focus Species of Locality: Species requiring attention for processing, value addition and marketing during the plan period on priority basis locality wise are indicated below:-

Name of the NTFP item	Locality	Name of the Range
Siali Leaves	Bangiriposi, Dukura, Udala, Kaptipada	Bangiriposi, Dukura, Udala, Kaptipada
Sal Leaves	Entire Division	Entire Division
Harida/ Bahada/ Amla	Entire Division	Entire Division
Amla	Entire Division	Entire Division
Mohua Seeds and Mohua Flowers	Entire Division	Entire Division
Neem Seeds	Entire Division	Entire Division
Char Seeds	Entire Division	Entire Division
Karanja Seeds	Entire Division	Entire Division
Kusum	Entire Division	Entire Division

The removal of important NTFP, except sal leaf has not been assessed during the outgoing plan. Sal leaf collection, processing to leaf plates/cups and its marketing has reached above Rs. 20 crore businesses per year from Baripada Forest Division. Mahua flowers and kendu leaves are other major sources of income of local population. Details of sal leaves collected in this Division are given below.

Table 68: Collection of Sal leaves and Royalty Realized

Year	Quantity (in qtl.)	Amount of royalty (Rs.)
2004-05	125000	4510080
2005-06	125000	6638580
2006-07	125000	6908340
2007-08	125000	7587600
2008-09	125000	7381440
2009-10	118750	4507860
2010-11	74464	4467840
2011-12	78084	4685040
2012-13	50896	3366660
2013-14	49214	3543420
2014-15	52820	3803040
2015-16	29500	2291874
2016-17	52651	4527986
2017-18	64307	5530402

Figure 16: Quantity of Sal Leaves Collected (in qtl.)

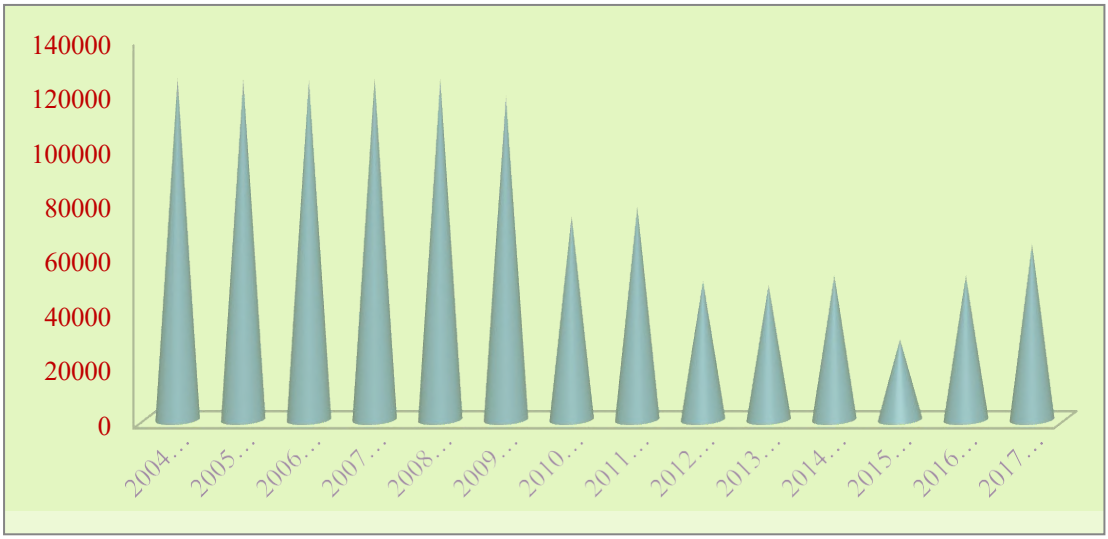
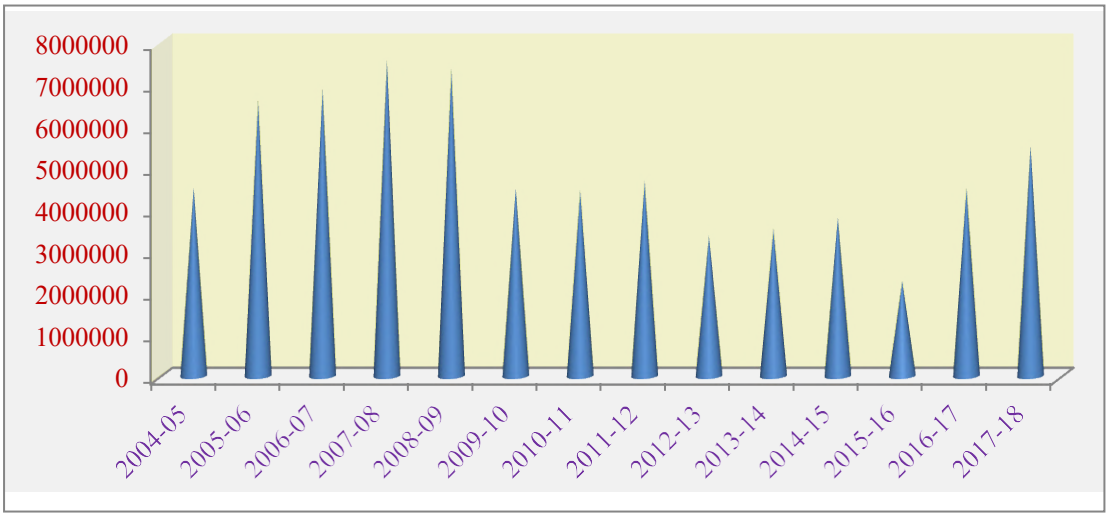


Figure 17: Amount of Royalty Collected from Sal Leaves (Rs.)



7.5 Demand and Supply of Timber and Important Non-Timber Forest Produce

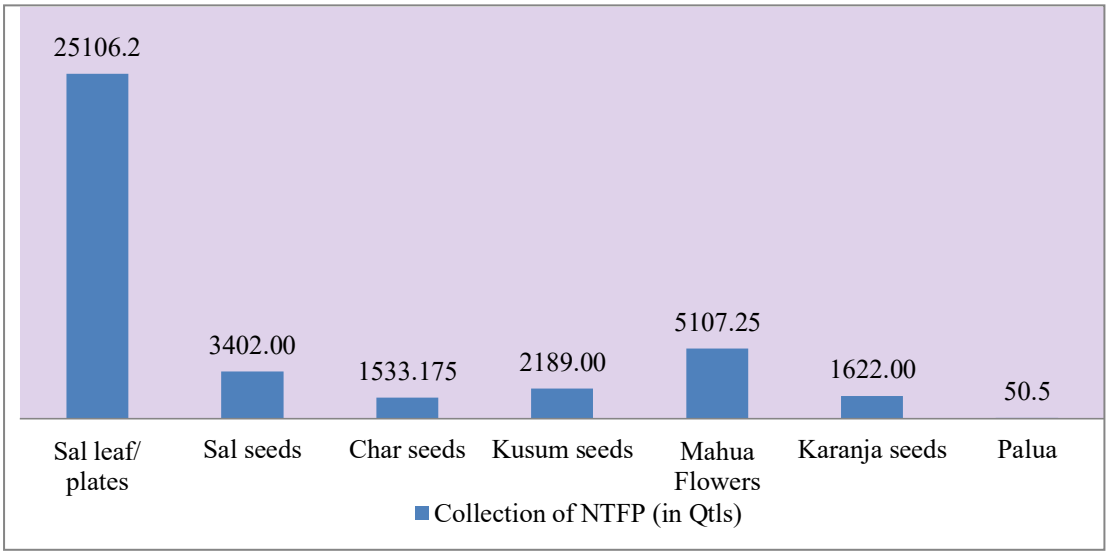
The demand and supply of non-timber forest produce has not been assessed in the outgoing plan. During the plan period, the Odisha Forest Development Corporation Ltd has supplied timber to the local peoples at a concessional rate for their domestic use. The local demand of timber is double of legal production of timber through OFDC Ltd. Because of short supply of timber, businessmen use to import timbers from other districts and Chhatishgarh. The demand of fuelwood in Baripada Forest Division is about 2lakh tonne but the legal supply of firewood is less than 1% of the

demand. This results in illicit removal of firewood from forest. To reduce pressure on forest, village woodlots need to be created at village level.

Table 69: Collection and Marketing of Different NTFP Products in Baripada Forest Division (Data Collected from NTFP Survey Report during 2012-13)

Sl. No.	NTFP category	Collection of NTFP (in Qtls.)	Personal consumption of NTFP (in Qtls.)	Sale quantity of NTFP (in Qtls.)	Value of NTFP sold in market (` in Lakh)
1	2	3	4	5	6
1	Sal leaf/ plates	25106.200	911.740	24194.460	762.0567
2	Sal seeds	3402.000	200.000	3202.000	15.8630
3	Char seeds	1533.175	142.495	1390.680	158.3140
4	Kusum seeds	2189.000	1185.000	1004.000	7.5200
5	Mahua flowers	5107.250	668.480	4238.770	91.2030
6	Karanja seeds	1622.000	788.000	834.000	6.6390
7	Palua	50.500	5.100	45.400	9.0800

Figure 18: Collection of NTFP (in Qtls.)



This Division has one annual coupe in operation at Kaptipada Range, i.e. Notto RF. Forest Produces like Mahua flower, Sal leaf plates, Char seeds, Sal seeds are mainly marketed in the local weekly markets called ‑*Hata*‖ widely situated throughout the area. NTFPs collected from the weekly markets are centrally collected at major business hubs like Udala, Betnoti and Baripada. After further processing and value addition, these are supplied to different places of the country.

7.6 Import and Export of Wood and Wood Products

Import of wood products from south east countries like Malaysia through Calcutta port is observed. Some industries use to collect semul wood from West Bengal for packaging. About 30 truck loads of Teak round logs are purchased by traders from Chhatishgarh state and imported to Baripada Forest Division for local sale after sawing to suitable sizes through Local timber depots. Timber merchants coming from outside use to purchase timber through public auction from OFDC Depots. 500 truck loads of Bamboo are transported outside Baripada Forest Division collected from Farmer‘s Field. Firewood produced from coupes are sometimes taken out of Baripada Forest Division by OFDC ltd. to fetch higher sale price which should be stopped.The locally produced firewood should be used within Baripada Forest Division. Eucalyptus and Acacia plants grown in private plots are exported to paper mills to be used as pulp for production of paper.The sale price of timber in Baripada Forest Division is enclosed as **Appendix – XLII.**

7.7 Import and Export of NTFPs

Sal leaves are usually collected by the women for making leaf plates (Khali) and leaf cups (Chauti). These products after processing in machine finds way to the local market and outside consumption points on commercial basis. Mahua flower, medicinal herb products, sal seed, char seeds are taken outside Baripada Forest Division on commericial basis.5000 metric tonne of processed Sal leaf plates are exported out of Baripada Forest Division.

7.8 Removal of Fodder

Stall feeding of cattle and goats is done in rare cases by collecting branches of trees from nearby trees / forest.

7.9 Valuation of the Products

The valuation of the forest product removed from forest through OFDC can be assessed from Table-46 above. Further the royalty assessed from sal leaves is shown in Table-47. The value of other NTFP is shown in Table-48. The sal leaves procured,

processed and marketed in Baripada forest Division is about Rs. 20 Crore per annum. Value of other Forest produces is about Rs. 10 Crore per annum.

Therefore it is proposed for introduction of scientific process of collection, improvement in storage and adoption of improved processing techeniques of Sal leaves and other NTFPs in Baripada Forest Division to increase productivity and employment to the local people.

Medicinal Plants & their derivatives

The forests are the rich treasure of medicinal plants. Though our country has a particularly rich heritage of medicinal plant wealth, its importance has been of late recognized the world over. The Vedic literature, particularly the _Rigveda‘, _Charak‘, _Samhita‘ & _Susruta Samhita‘ carry exhaustive accounts of a number of plants of medicinal importance and their used in maintaining the health of human beings. With the advent of modern science, the old system of medicine like Ayurveda, Unani, Herbal etc. gradually declined and were neglected (However, the tribal cultures & other forest based communities still derive the benefits of this ancient heritage). Unfortunately, in the process, not only has a lot of knowledge been lost, the systems of exploitation of this resource became such that most species have been unscientifically exploited leading to near extinction for some and rendering others critically endangered. Many such species might have even been lost. Realization of the importance of scientific cultivation technique & exploitation of medicinal wealth has dawned lately, particularly after the _Convention of Bio-diversity‘. This led to formation of National Medicinal Plant Board in the year 2000 followed by our State also constituting the State Medicinal Plant Board headed by the Special Secretary to Govt. of Orissa, Forest & Environment department with the Conservator of Forests, Development circle, Cuttack being its Member-secretary. The main objective of the Board is to oversee all such issues so that the medicinal wealth is preserved for posterity.

IMPORTANT MEDICINAL PLANTS FOR DRUG INDUSTRY			
Local Name	**Botanical Name**	**Family**	**Source**
Gangasuili	*Nyctanthes arbortristis*	Oleaceae	Wild
Patalagaruda	*Rauvolfia sepentina*	Apocynaceae	Wild
Katak	*Strychnos potatorum*	Strychnaceae	Wild
Sunari	*Cassia fistula*	Caesalpiniaceae	Wild
Kochila	*Strychnosnux-vomic*	Strychnaceae	Wild
Banatulasi	*Ocimum gratissimum*	Lamiaceae	Weed
Khokali	*Acalypha indica*	Euphorbiaceae	Weed
Arakha	*Calotropis gigantia*	Asclepiadaceae	Weed
Talmuli	*Curculigo orchiodes*	Hupoxidaceae	Weed
Chavuldhua	*Erythrina variegate*	Fabaceae	Ornaments/ Avenue
Neem	*Azadirachta indica*	Meliacear	Ornaments/ Avenue
Aonla	*Emblica officinalis*	Euphorbiaceae	Medicinal Cultivation
Ghee Kuanri	*Aloe vera*	Liliaceae	Medicinal Cultivation
Gol Mircha	*Piper nigrum*	Piperaceae	Cash Crop
Tambaku	*Nicotiana tabacum*	Solanaceae	Cash Crop

8. CHAPTER – VIII

MAINTENANCE AND ENHANCEMENT OF SOCIAL, ECONOMIC, CULTURAL AND SPIRITUAL BENEFITS

8.1 Number of JFM Committees and Area(s) Protected by Them

JFM Overlapping Working Circle was constituted with the special objective to involve local communities in Forest and Natural Resources Management and make equal partners in forest protection with the forest department. The forest under this overlapping Working Circle was managed through micro-plans prepared by the village committees in consonance with the prescriptions of the current approved Working Plan. Till the last plan period 402 VSS have been constituted covering 37436.55 ha of forest area. The details of VSS list available is enclosed as **Appendix – XVIII.**

8.2 Status of Empowerment of JFMCs

Out of the 402 VSS constituted, 84 VSS have been brought under Baripada Forest Development Agency. They have been funded from the Forest Development Agency (FDA) fund of Divisional Forest Office, Baripada for taking up different developmental activities in their VSS. Every year the General Body Meeting of the FDA is conducted in the Baripada Forest Division at different places. The members of FDA have been empowered with the objectives of forest management and they have participated in the election of the executive committee.

8.3 Labour Welfare

Regular health camps are organized in the fringe villages affected by diseases mainly Malaria by the forest department. The local youths are engaged in anti- smuggling squad, anti-depredation squad and firefighting squad. The local people are also engaged in different forestry activities and due wages are paid to them.

8.4 Use of Indigenous Knowledge

The indigenous traditional knowledge of the local people has been documented by Dr. S. Rout, NOU, Baripada through his book Medicinal Plants and this should be referred to in the Micro-plan, prepared for the concerned VSS in consonance with the prescription of the Working Plan in future.

8.5 Extent of Cultural/ Sacred Groves

Baripada Forest Division has a large population of Shantal tribes who worship their Deities in sacred groves, present in their villages. The people strictly protect the trees within sacred groves as they believe that God and their Associates used to stay in the trees. Cultural and sacred groves have been identified during preparation of Working Plan and interventions have been made to manage and conserve those groves in the Division. The list of sacred groves (Jahira) in Baripada Forest Division is enclosed as **Appendix – XIX.**

8.6 Ecotourism Areas and Activities

The following Eco-tourism areas have been identified in this Division adjoining to the forest area, where tourists visit.

Manchabandha Eco-tourism project is situated in virgin Sal Forest (*Shorea robusta*) over an area of 110 ha. The prolonged stretch of forest is situated at the outskirts of Baripada town besides NH-18. It comes under Pithabata Range of Baripada Forest Division. To develop it into an Eco-tourism complex, attempt was taken up during 2011-12, with an estimated amount of Rs.47,49,730/-. After an expenditure of Rs.20,43,000/- the work was stopped prematurely due to local interference.

* Facilities available:
* 1. Entry gate
* 2. Earthen road-cum-fire line-cum-walkers track of 2 km inside forest
* 3. A bore well of 125mm dia
* 4. A semi-renovated WHS for boating
* 5. Ready-made temporary nylon tout for fixing

Recommendation:

a) A watch tower nearing to picnic spot is suggested.
b) The catering facilities may also be developed and SHG may be assigned to run the catering/ housekeeping and ancillary maintenance.
c) Interpretation centre to be created to encompass details on forest and wildlife for education of local people/ School children and tourists.

MIP-Deuli MIP, Badjor MIP, Kalo MIP and Sono MIP are largely used as eco-tourism areas.

8.7 Social Customs

The local people in the fringe villages worship at different places in the forest and outside the forest as the sacred places earmarked for different Gods and Goddess in different seasons. The tribal people don‘t use branch, fruit or leaf of trees before worshiping branches of the tree during February-March every year.

8.8 Status of Compliance of Forest Rights Act, 2006 (FRA)

After implementation of Forest Rights Act, 2006 the following number of titles have been issued to the individual forest dwellers. The detail Forest block wise information needs to be compiled. This needs to be shown in the forest block map with GPS co-ordinates.

Table 70: Information under Schedule Tribe and Other Traditional Forest Dweller (RoFR) Act.2006 (up to 23.06.2015)

Sl. No.	District level committee (DLC)			No. of certificates of titles distributed	Area (in acres)
	No. of claims approved by DLC to issue titles	Area involved in acres and no. of families			
		Area (in acres)	No. of families		
1	2	3	4	5	6
1	16851	9502.98	16851	12458	6043.37

25.6705 ha. of forest land has been diverted under sub section-2 of section 3 of S.T AND O.T. F.D. (RoFR) Act, 2006 in Baripada Forest Division details of which is enclosed as **Appendix – X.** This needs to be shown in the forest block map with GPS co-ordinates.

8.9 Other Rights and Concessions

No right was admitted in the R.Fs. in Baripada Forest Division. After reorganization of the Forest Department, the position remains the same. Certain rights were granted by the Government for sanctions of relief in distress conditions vide letter no. 71057 dt.02.12.72 of Revenue Department, Government of Orissa in the protected Forests (Khesra Forest or un-Reserved Forests). Concessions were also granted by the Government of Orissa, Forest Fisheries and Animal Husbandry department no. 10F (M) / 14 / 90- 10488 / FFAH dated 11th May 1990 for supply of fuel wood, bamboos, house building materials etc. to public, particularly to nistar-cess paying tenants from B-class and Khesra forests.

Earlier during the princely rule, the rights and concessions were granted to the people in accordance with the provisions contained in section-59 to 74 of Mayurbhanj Forest manual published during year 1911 in exchange of their duties in putting out Forest Fire and clearing forest boundary line. After the merger in the State of Odisha it was governed by the guidelines prescribed by Govt. of Odisha. At present there is no record of any specific rights and concessions or privileges granted to be exercised by any individual village or group of villages over any specific area of forest. This becomes defunct in view of depletion, degradation and dis-appearance of forest growth of the area, over which those rights were being exercised.

As a result of enjoyment of rights, privileges and concessions of over growing population of these villages, over limited forests, most of the Revenue Forests have been depleted and disappeared. Consequently, plain Reserve Forests suffered the burden of rights, concessions and privileges as Revenue Forests were degraded. The plain forests are now in a very bad state of impoverishment and most of them warrant rehabilitation. A large chunk of Revenue forests have been cleared for extensive agriculture and for grant of land to landless. No rights and concessions have been suggested in the outgoing working plan. Hence, there is no proposal for such right and concession in the current revision.

However in order to meet the local needs, enhancement of productivity of forest, efficient development of depleted and degraded forest and effective resource management, Government of Odisha in Forest and Environment Department have

formulated the guideline, vide JFM resolution, 2011. The ST and OTFD (RoFR) Act – 2006 has directed recognition of individual and community rights linked with duties for protection of Forests, Wildlife and Natural water streams.

In addition, 69 items of Non Timber Forest Produce (NTFP) have been allowed to be collected and marketed as per the guideline laid out vide Govt. notification No.5503/ F&E dated 31st March, 2000 and it is regulated through Panchayati Raj Department.

8.9.1 Concession for Collection of Sal Leaves

Sal leaves are usually collected by the women for making leaf plates (Khali) and leaf cups (Chauti). These products after processing in machine finds way to the local market and outside consumption points on commercial basis. The Government of Odisha has also formulated guideline to regulate the collection and disposal of products.

8.10 Dependency of Local People on NTFPs

The people of fringe villages live on eating the fruits, leaves, flowers and roots of different forest trees. In remote villages, they make brooms from broom grass, collect honey and sell to the middle men. The Sal leaf collection and processing is a cottage industry in Baripada Forest Division. Sal leaf plates and cups are exported to major cities of India from Betnoti of Baripada Forest Division. Mahua flower, mahua seed, char seed, kendu leaves use to give substantial income to local tribal population.

8.11 Other Aspects

Baripada Forest Division is famous for production of bamboo in recorded holding plots. About 500 truckloads of bamboo are transported to various places from Baripada Forest Division annually. Various bamboo crafts centers are present in rural areas, where, bed, sofa, chair and small house hold articles are produced out of bamboo and are marketed. The quantum of bamboo grown in private areas and quantum of whole bamboo or bamboo products marketed will be assessed by Divisional Forest Officer. It is proposed to increase the Bamboo Plantation through interested farmers in their farm lands.

8.11.1 River Restoration

Subarnarekha, Sunei, Budhabalanga, Jambhira, Gangahar, Kalo, Deo rivers in Baripada Forest Division needs river restoration.It refers to a large variety of ecological, physical, spatial and management measures and practices. These are aimed at restoring the natural state and functioning of the river system in support of biodiversity, recreation, flood management and landscape development. By restoring natural conditions, river restoration improves the resilience of the river systems and provides the framework for the sustainable multifunctional use of rivers and streams.

River restoration and biodiversity

Rivers are important habitats for a large variety of animals and plants. Fish, amphibians, birds, insects, invertebrates, and reptiles live in rivers, or find their food there. Rivers play a vital role in connecting habitats, and their value to plants and animals extends far beyond the surface area they cover. This habitat connectivity role functions both between upstream and downstream areas, and by connecting both sides of river banks. This necessitates an approach to management that looks at the river basin as a whole rather than just taking into account the river itself.

Aim of River Restoration project:-

1. To improve the physical processes of the river (Controlling river bank erosion).
2. To increase the biological diversity of river section(s).
3. To increase river forms and processes, what will be the benefit for the ecology (specific fauna and flora).
4. To increase ecological (habitat) diversity for a range of fauna and/or flora.

Urgency of River Restoration:-

- When the streams and the landscape have no recreational value because of the unattractive appearance
- When in wet periods the water is discharged with high peaks which leads to periodical flooding downstream
- If there is moisture deficits for agricultural development.
- If the dammed streams have poor ecological value for water flora and fauna.

Important considerations prior to River Restoration activities:-

Adjacent land use	The river restoration scheme may be just part of a larger development area that will have detailed development proposals or a master plan.
Land drainage	We should consider how any existing land drainage strategy will interact with the river works.
Flood risk management	The features of the flood risk management system include :- Land-based loadings (e.g., soil, water, buildings, vehicles, etc.). Current flow, waves, boat. Anticipated future river uses. Durations of all forces, especially peak forces. Frequency and duration of inundation of the area of waterside under consideration. Ground conditions and geology. Gradients of any maximum slopes necessary in the space available and stability of substrates at those gradients. The strength and durability of individual components and the elements included in the design. Water chemistry and factors affecting growth of plants such as wetted area. The overall desired lifespan of the design. Monitoring and maintenance.
Existing green space	We should always encourage and promote natural colonization in the design as this will create locally appropriate communities. Wetlands are an important natural resource, storing and filter water, capturing carbon, providing food and fuel, and supporting a wealth of uniquely adapted wildlife. Working with natural processes will improve local conditions for valued flora and fauna. However, planting may be needed when: There appears to be limited scope for such natural colonization, such as a lack of a seed bank that can reach the site naturally. Early vegetation establishment is required for slope stability Timing of the planting and pre-establishment of species of the correct genetic strain is an important consideration. Plants also need to be selected at the correct size, planted at the correct level, and in appropriate groupings to ensure maximum chance of establishment.
Sustainability of materials	We should use recycled materials in designs wherever feasible, appropriate and functional. Pre planning ensures that natural material can be sourced when they are at their optimum state for installation. Wherever possible, when choosing other construction materials, we should opt for those of the greatest surface roughness for claddings. This is to provide stable colonization by surface-dwelling algae and plants.
Management and communication during the project	This is a crucial element to the success of all river restoration projects. It can manifest itself in many ways from stakeholders‘ expectations, appropriate communication between project designer and contractor, early considerations of necessary consents, through site attendance from the project designer.

9. CHAPTER – IX

ADEQUACY OF POLICY, LEGAL AND INSTITUTIONAL FRAME WORK

Past Policies in Forest Management

The forests of this Division were managed under the prescription of Working plan of the erstwhile State of Mayurbhanj by Sri B.N. Dasgupta from 1947-48. This plan was revised with emphasis on conservation with silviculturally permissible harvest on sustainable basis by Sri Sripal Jee from 1953-54 to 1972-73. Third Working plan by Sri S. Bose was implemented from 1973-74 to 1992-93. The fourth working plan by Sri A.O.F. Bakhla was implemented from 1996-97 to 2015-16. In the timber coupes, subsidiary silvicultural operations are being implemented in the year following the main felling to commensurate with the regeneration felling. ANR, SMC activities are being taken up in the coupes of Rehabilitation Working Circle. Plantation of tree species has been taken up within and outside the Plantation Working Circle areas. Besides, VSS have been formed on the fringe villages demarcating a portion of forest land up to 200 ha. for joint forest management, preparing micro plan following with the prescription of the approved Working Plan of the forest under operation.

9.1. Existing Policy and Legal Framework and Their Compliance

For the management strategy of forests of the division, National Forest Policy 1988 is the foundation and a guiding factor. Also, Indian Forest Act 1927 and Odisha Forest Act 1972 are invoked for administration of the forests.

National Forest Policy 1988

a. Maintenance of environmental stability through preservation and, wherenecessary, restoration of the ecological balance that has been adversely disturbed by serious depletion of the forests of the country.
b. Conserving the natural heritage of the country by preserving the remaining natural forests with the vast variety of flora and fauna, which represent the remarkable biological diversity and genetic resources of the country.

c. Checking soil erosion and denudation in the catchment areas of rivers, lakes, reservoirs in the interest of soil and water conservation, for mitigating food and droughts and for the retardation of siltation of reservoirs.
d. Increasingly substantially the forests/tree cover in the country through massive afforestation and social forestry programmes, especially on all denuded, degraded and unproductive lands.
e. Meeting the requirements of fuelwood, fodder, minor forest produce and small timber of the rural and tribal population.
f. Increasing the productivity of forests to meet essential national needs.
g. Encouraging efficient utilisation of forests produce and maximising substitution of wood.
h. Creating a massive people's movement with the involvement of women, for achieving these objectives and to minimise pressure on existing forests.

All the strategies and implementation works done by Baripada Forest Division has so far been in consonance with the objectives and principles enshrined in National Forest Policy 1988

National Wildlife Action Plan (2017-2031)

a. Sustained funding for wildlife sector.
b. Control of poaching and illegal trade in wildlife.
c. Wildlife health management.
d. Conservation of threatened species.
e. Mitigation of human wildlife conflict.
f. Conservation of inland aquatic ecosystem.
g. Integrating climate change in wildlife management.
h. Tourism management inside wildlife areas and identification of tourism potential.
i. People‘s participation in wildlife conservation.
j. Conservation, awareness and outreach.
k. Development of human resources.
l. Research and Monitoring.
m. Improving compliances of domestic legislations.
n. Integrating wildlife plan with other sectoral programmes.

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognisation of Forests Rights) Act, 2006 and Rules made there under

The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 recognizes the rights of millions of tribals and other forest dwellers in different parts of our country as it provides for the restitution of deprived forest rights across India, including both individual rights to cultivated land in forestland and community rights over common property resources.

JFM Resolution 2011

The National Forest Policy, 1988 envisaged co-operation of the people in conservation and development of forests. In keeping with this policy Government of Orissa adopted the Joint Forest Management (JFM) approach and sought community participation for protection, regeneration and management of the forest wealth. JFM has not only been a tool for forest regeneration, but also a means of employment generation and social empowerment of the forest-fringe dwellers.

In Baripada Forest Division, a total of 402 Van Suraksha Samitis have been formed to take up Joint Forest Management in which various measures such as preparation of microplans, allotment of area to VSS, plantations, protection, cleaning, soil and moisture conservation, farm forestry, construction of community buildings, etc are being implemented.

The Forest & Environment Department, Govt. of Odisha is framing Rules in accordance with policy of the State and Govt. of India. The other important Acts, Rules and policies that guide forest management are

1. The Odisha Forest Act, 1972 and Rules made there under.
2. The Wildlife (Protection) Act, 1972 and Rules made there under.
3. The Environment (Protection) Act, 1986 and Rules made there under.
4. The Forest (Conservation) Act, 1980 and Rules made there under.
5. The NTFP Collection Policy, 2000.

9.2 Status of Approved Working Plan and Compliance

The approved working plan 1996-97 to 2015-16 got expired in 2016 after which Working schemes were in operation for 5 years. The prescriptions of the outgoing

working plan could not be fulfilled entirely due to various field problems. The deviation statement for works not done as per prescriptions of outgoing working plan has been communicated to higher quarters. The summary of action taken report of the approved Working Plan from 1996-97 to 2019-20 is furnished below.

Year wise Compliance in Working of Timber Coupe under SWC during Last Plan Period

Sl. No.	Year	No. of Trees Marked	Coupe Working
1	1996-97 to 2004-05	0	Yes
2	2005-06	92	Yes
3	2006-07	451	Yes
4	2007-08	302	Yes
5	2008-09	402	Yes
6	2009-10	221	Yes
7	2010-11	350	Yes
8	2011-12	277	Not delivered to OFDC as per direction of the RCCF and FD, STR, Baripada. Reason: The timber coupe of Notto felling series, SWC-XVI (B) and (P), is a part of Buffer Area of Similipal Tiger Reserve (STR Buffer), which is very important for movement of Elephants as well as spill over population of tigers to other adjoining areas, hence working of above coupe was banned by the RCCF and FD, STR, Baripada, vide his memo No. 1651 dt.22.10.2011.
9	2012-13	137	Yes
10	2013-14	210	Yes
11	2014-15	116	Yes
12	2015-16	--	No dead and wind fallen trees are available in this coupe.
13	2016-17	--	No dead and wind fallen trees are available in this coupe.
14	2017-18	--	No dead and wind fallen trees are available in this coupe.
15	2018-19	--	No dead and wind fallen trees are available in this coupe.

Short Comings and Suggestion

It is found that no green tree has been marked during the last plan period due to the restrictions imposed by Govt. of Odisha. So the harvest of silviculturally available tree in accordance with the prescribed marking rule has not been carried out during last plan period, but hygienic felling i.e. removal of dead and wind fallen tree has been done for upkeep of the health of the Forest.

Depending on the availability of funds, the subsidiary silvicultural operations are carried out, which has affected the regeneration status of the forests. This can be visualized from year-wise target and achievement of the subsidiary silvicultural operation (SSO) in timber coupes.

The Forests were protected against the fire, illicit removal and encroachment. But due to heavy biotic pressure from adjoining areas for firewood, timber and grazing, the desired level of the objective of improving the productivity of Sal forest species composition and established regeneration could not be achieved.

Notto forest block comes under Buffer Area of Similipal Tiger Reserve (STR). The prescription of the Buffer Zone is more conservatively focused and prescribed for removal of trees, which are ecologically available focusing on species diversity, regeneration and soil moisture Conservation (SMC).

Keeping the above factors in view, the area under IWC is required to be effectively protected against fire, grazing, illicit felling and encroachment. Natural regeneration is to be encouraged by removal of Invasive weeds and supplemented by frequent Aided Natural Regeneration (ANR) with indigenous fodder species consumed by the wild animals. Soil and Moisture Conservation measure be taken up. Hence removal of green trees is recommended and tree cover may be more conservatively focused under Wildlife Overlapping Working Circle.

In-spite of heavy anthropogenic biotic pressure due to protection of forest, fire, illicit felling and encroachment, there was some improvement in wildlife population , check on illicit felling and encroachment, though more action is required in field for early improvement of the forest quality.

Year Wise Target and Achievement under Subsidiary Silvicultural Operation in Timber Coupes is given in the table below.

Year wise Compliance in SSO of Timber Coupes under SWC during Last Plan Period

Sl. No.	Year	Target	SSO Carried Out
1	1996-97	611.47	Moratorium on tree felling was in force from 1992 to 2004, so no SSO operation has been carried out
2	1997-98	870.46	Moratorium on tree felling was in force from 1992 to 2004, so no SSO operation has been carried out
3	1998-99	982.15	
4	1999-2K	792.36	
5	2000-01	650.72	
6	2001-02	950.99	
7	2002-03	720.73	
8	2003-04	873.30	
9	2004-05	707.78	
10	2005-06	547.12	Yes
11	2006-07	611.47	Yes
12	2007-08	870.46	Yes
13	2008-09	982.15	Yes
14	2009-10	792.36	Yes
15	2010-11	650.72	Yes
16	2011-12	950.99	Yes
17	2012-13	720.73	Yes
18	2013-14	873.30	Yes
19	2014-15	707.78	Yes
20	2015-16	547.12	Yes

The impact on Forest due to Non-achievement of Subsidiary Silvicultural Operation – Subsidiary silvicultural operation (SSO) is a practice of Controlling the establishment, growth, composition, health and quality of forest to meet diverse needs and its values. It is essential to conserve timber, wildlife, water resource, top soil etc. of the forest or the whole to keep up the heterogeneity of Forests for our future generation. For a sustainable forest this should not be over-looked during planning.

Year wise Compliance in Silvicultural Cleaning under RWC during Last Plan Period

Sl. No.	Year	Target in ha	Shortfall in ha	Reason of shortfall
1	1996-97	1053.00	+272.000	It is found that the area prescribed for working has not been covered fully due to paucity of funds. Prescription of the plan could not be implemented properly, that has affected the forest growth adversely. Due to non-implementation of silvicultural operation, forest quality has been deteriorated and regeneration status has affected a lot. Out of the allotted area of 20829.92 ha;
2	1997-98	1055.00	- 995.000	13981.017 ha was treated by taking up ANR, Subsidiary Silvicultural operation, Gap planting and SMC measures.
3	1998-99	1049.00	- 819.000	
4	1999-00	1040.00	-1015.983	
5	2000-01	1040.00	-190.000	
6	2001-02	1032.00	-1032.000	
7	2002-03	1033.00	-1033.000	
8	2003-04	1042.00	-1042.000	
9	2004-05	1038.00	-568.000	
10	2005-06	1028.00	-524.000	
11	2006-07	1054.94	-904.940	
12	2007-08	1055.48	+1117.520	
13	2008-09	1050.80	-265.800	
14	2009-10	1040.87	-980.870	
15	2010-11	1039.67	-84.670	
16	2011-12	1033.56	-1013.560	
17	2012-13	1034.43	- 634.430	
18	2013-14	1042.66	+57.340	
19	2014-15	1038.24	+3136.760	
20	2015-16	1029.15	-329.150	
Total		**20829.80**	**- 6848.783**	
** Short fall ... (-) Excess ... (+)*				

During the plan period, 13981.017 ha have been worked out under rehabilitation working circle following the prescriptions, utilizing the funds from different schemes.

Year wise Compliance in Block Plantation under PLWC during Last Plan Period

Sl. No.	Year	Sort fall in ha	Reason of sort fall
1	1996-97	-1758.07	It was found that, the area prescribed for working has not been covered fully, mainly due to non-availability of area. Paucity of timely assured funds and inadequate field level staff and lack of suitable land in PLWC are primary reason for shortfall. Out of the area 17914.44 ha prescribed for the working, only 3990.32 ha. could be achieved. However the result of working is satisfactory and some area under PLWC has higher density crop.
2	1997-98	-1869.31	
3	1998-99	-1691.74	
4	1999-2K	-1697.62	
5	2000-01	-1773.67	
6	2001-02	-1678.7	
7	2002-03	-1680.91	
8	2003-04	-1737.92	
9	2004-05	-1753.09	
10	2005-06	-1807.26	
11	2006-07	+95.41	
12	2007-08	+680.00	
13	2008-09	+175.00	
14	2009-10	+115.00	
15	2010-11	+902.00	
16	2011-12	+151.76	
17	2012-13	+220.00	
18	2013-14	+290.00	
19	2014-15	+520.00	
20	2015-16	+375.00	
Total		**-17448.29**	
* Short fall … (-) Excess … (+)			

During the plan period, 3990.32 ha have been worked out under this working circle following the prescriptions utilizing the funds from different schemes.

The summary of action taken report of the approved Working Schemes from 2016-17 to 2019-20 is furnished below.

Table 71: ABSTRACT OF ACTION TAKEN REPORT ON APPROVED WORKING PLAN SCHEMES OF BARIPADA FOREST DIVISION FROM 2016-17 TO 2019-20

Sl. No.	Item of Work	YEAR OF OPERATION			
		2016-17	2017-18	2018-19	2019-20
1	Targets of SWC in ha	798	697	392	392
	Achievement of SWC in ha	-	-	-	-
2	Targets of RWC in ha	2600	745	1200	990
	Achievement of RWC in ha	2600	720	1200	990
3	Targets of PLWC in ha	200	155	-	50
	Achievement of PLWC in ha	250	115	-	50
4	Coupe Working Target in ha	723	710	723.30	380
	Coupe Working Achievement in ha	-	-	-	-
5	Subsidiary Silvicultural Operation Target in ha	2309.86	745	-	-
	Subsidiary Silvicultural Operation Achievement in ha	1200	720	-	-
6	Subsidiary Silvicultural Operation Target for 2016-17 Coupe in ha	-	697	-	-
	Subsidiary Silvicultural Operation Achievement in 2017-18 in ha	-	697	-	-
7	Bamboo Plantation Target in ha	50	20	-	-
	Bamboo Plantation Achievement in ha	50	10	-	-
8	RDF Target in ha	2600	-	-	-
	RDF Achievement in ha	2600	-	-	-
Source – DFO, Baripada Forest Division					

The shortfall in target under SWC/ RWC/ PLWC continued during Annual Plans. The forest offence cases/ wildlife cases has been furnished vide **Appendix – XX**.

Table 72: Comparison of Areas under Different WC in Out Going / Revision WP.

Name of Working circle	Allotment of area in outgoing WP (in ha.)	Allotment of area in revision WP (in ha.)	Remarks
Improvement Working Circle	7707.080 (SWC)	7707.080	Notto RF coming under buffer zone of S.T.R. has been divided to 10 compartments as per last working plan. Habitat manipulation and control of Forest fire are the main activities. Annual coupe operation (improvement of stand) will be carried out as proposed under improvement WC. The damaged, deformed, injured, crooked, diseased and dead trees will be removed at the time of silvicultural operation. 7707.080 have been included under IWC. These areas were under Selection Working Circle during last working plan but because of notification under Simlipal Tiger Reserve, there is ban in Felling except improvement of the stand.

Name of Working circle	Allotment of area in outgoing WP (in ha.)	Allotment of area in revision WP (in ha.)	Remarks
Rehabilitation Working Circle	20829.920	21302.621	The forests density (11% to 100%) have been included under RWC.These areas need regular silvicultural operation, like climber cutting, high-stump cutting, singling of shoots, removal of weeds and soil and water conservation measures for improving forest quality and regeneration status. Gaps have been developed within natural vegetation and in few plantations as well. In most of the areas, it has endorsed weeds growth like Eupatorium, khada grass etc. Plantations have been raised under Compensatory Afforestation programme, for which the land was provided by the respective User Agencies, as per the guidelines laid for diversion of forest land for non-forestry purposes (**Appendix – XLI**). These areas are suitable to be included in this working circle for its Rehabilitation work, which resulted in increase of area of this working circle. During last working plan a lot of areas having forest growth were included under Plantation Working Circle. These were brought back to Rehabilitation Working Circle.
Plantation Working Circle	17836.74	21029.019	Natural vegetation (0% to 10%) canopy density has been kept under this circle as per government guidelines. The encroached forest areas, blank areas and previously planted areas have also been included under PLWC. Due to protection of forests under JFM; the forests have regenerated to luxurious forests with sal as predominant species.Old over matured Eucalyptus/ Acacia plantations need to be harvested in phases followed by plantations. Teak Plantations need improvement through inter-cultural operations. Areas with vacant patches are also included in this working circle .
Wildlife (O) Working Circle	--	29108.960	Considering the growing importance of wildlife conservation and management in Baripada Forest Division a special working circle has been created to give better justice to Wildlife conservation.
NTFP (O) Working Circle	46373.740	27193.000	Though entire forest area produces NTFP but 27193 ha has sizable potential of NTFP. This working circle is aimed at scientific management of collection, storage, processing and transportations of NTFP and designed for improvement of Socio-economic condition of the rural people through alternative employment. The NTFP policy of the state Government has been implemented since 2002. So required revision is for the greater interest of the forest and its dependants.
JFM (O) Working Circle	--	30368.424	Total area coming under this WC is calculated to be 32868 ha. On introduction of JFM Resolution, the joint Forest Management has undergone some changes. Most of the forest areas come under the direct protection of Vana Surakhya Samiti (VSS), the basic units of JFM management. These changes are compatible with the prescription of the revision working plan. The JFM resolution, Community

Name of Working circle	Allotment of area in outgoing WP (in ha.)	Allotment of area in revision WP (in ha.)	Remarks
			Forest Rights has further empowered the people/ community in sharing of usufruct rights. The Notified Village Forests and Community Forest Rights areas are included under JFM (O) Working Circle. In order to overcome the management problems thereof, a separate working circle is proposed.

The outgoing Working Plan of Baripada Forest Division prepared by Sri A.O.F. Bakhla, IFS was valid till 2015-16. The detailed forest Block wise allocation of area to different working circles in outgoing and revision working plan, a comparative statement annexed vide **Appendix – VIII.**

9.3 Number of Forest Offences

A total number of 23864 offence cases have been booked and 15015 numbers of offenders were booked for prosecution cases during the outgoing plan period i.e. from 2003-04 to 2014-15. The details of the forest offence cases are furnished in **Appendix – XX.**

9.4 Status of Research and Development

The Silvicultural Division, Baripada has created preservation plots and seed collection plots at Jamsole over an area of 20 ha. to study the growth of trees. Research on nursery techniques is also going on to access suitability. This site has been transferred to Baripada Forest Division and research activities are going on through Range Officer Rasgovindpur Range. The binual wildlife census is being carried out over entire forest Division for elephant, tiger, herbivores, aquatic birds etc.

48 Permanent Sample plots have been created in different forest blocks of Baripada Forest Division and 1st year measurement of trees, shrubs, herbs and climbers have been recorded in individual registers. This operation should continue annually to measure growth of vegetation, increase carbon stock and regeneration status. One preservation plot has been created in Notto RF over 20 ha. and 1st year measurement of trees, shrubs, herbs and climbers have been recorded in preservation plot register. This preservation plot is aimed at preserving 10 forest species within the plot.

9.5 Human Resources Capacity Building Efforts

The field staffs of this Division are deputed to forestry Schools and Colleges to receive up-to-date management technology for the management of this Division. Besides this various capacity building workshops and meetings are held to build up capacities of field staff in the forest management. Wildlife census training, GPS training, training on Forest Law, Arms Training, GPS PDA Training, NTFP survey training, Working Plan training etc. are being imparted during last plan period. Human resource and capacity building improves the efficiency of the staff. It is proposed to train at least two-third of the staff in the current plan period of Baripada Forest Division. During revised plan period some of the Foresters and Forest Guards will be trained for tranqulizing wild animals in case of emergency, GIS remote sensing, DGPS Survey, JFM, Forest (Conservation) Act, Drone technology, Camera trap and use of modern tools for forest management.

9.6 Forest Resource Accounting

Forest resources represent a stock of natural capital or wealth with attributes such as growing biomass including wood, carbon, and capability to support human, plant and animal life. They are renewable in nature. As a stock of natural capital they provide several goods and eco-system services. Left to themselves forests regenerate. They can also be augmented or depleted with human and other interferences. If so, this results in a change in the flow of goods and services from them. Examples of such goods and services flowing from forest resources are: tree cover provides leaf biomass (as food, shelter, fodder, fuel), barks, roots, herbs, or sequestered carbon, and health of water regimes and soils.

Forest Resource are accounted through the method of Net Present Value developed by Kanchan Chopra Committee and subsequently accepted by Hon‘ble Supreme Court order dated 28.03.2008.NPV refers to "the discounted sum of rupee values of eco-system goods and services that would flow from a forest over a period of time net of costs incurred." It does not capture the value of the forest wealth or possible change in it, only the flow of goods and services.

For calculating the average Net Present Value per Ha of forest in India, the following monetary value of goods and services provided by the forest have been considered:-

a. Value of timber and fuel wood
b. Value of Non Timber Forest Products (NTFP)
c. Value of fodder
d. Value of Eco-tourism
e. Value of bio-prospecting
f. Value of Ecological services of forest
g. Value of Flagship Species
h. Carbon Sequestration Value

Matrix showing NPV of the different eco-value/ canopy density classes at estimated average NPV value of the country's forest as Rs. 800,000/- per ha.

Net Present Value of different eco-value /canopy density classes			
Eco-Value class	**Very Dense Forest**	**Dense Forest**	**Open Forest**
Class I	10,43,000	9,39,000	7,30,000
Class II	10,43,000	9,39,000	7,30,000
Class III	8,87,000	8,03,000	6,26,000
Class IV	6,26,000	5,63,000	4,38,000
Class V	9,39,000	8,45,000	6,57,000
Class VI	9,91,000	8,97,000	6,99,000

In Baripada Forest Division timber productions from the coupes of Improvement Working Circle have an increasing trend. The density of forest under joint forest management is also increasing. The nalla, streams etc. flowing inside the forest has a tendency from seasonal towards perennial. The intangible benefits of reducing the effect of Green House Gas emission through enhanced carbon sequestration is also a contribution of forest resource. For quantifying the intangible benefits the sample plots in fully stocked forests has been marked for measuring the carbon stock during the Plan period.

9.7 Budgetary Allocation to the Forestry Sector

The budgetary allocation of funds has been increased during the plan period after the allocation of fund for Forestry in 13th Finance commission grant and CAMPA fund. Annual expenditure of Baripada Forest Division during 2019-20 gives account of Annual Budgetary Allotment & Expenditure.

Table 73: Expenditure incurred during 2019-20 Financial year of Baripada Forest Division		
Year	**Name of Scheme**	**Expenditure**
Revenue	**Revenue**	
	22-2406-01-101-0168-02154-Timber	127
	22-2406-01-101-0169-02154-Timber	1453543
	22-2406-01-800-0097-02082-Misc. receipt	1148111
	Total- Revenue	***2601781***
Exp.	**Admn. Expenditure & Programme Expenditure**	
	Admn. Expenditure	6602488
	Public work- (Admn. Expenditure)	900000
	Programme Expenditure	9620138
	CSS-Programme Expenditure	21391277
	CAMPA (General)	58338305
	CAMPA (Wildlife)	13196364
	FDA	7304129
	Total-Expenditure	***117352701***

9.8 Existence of Monitoring Assessment and Reporting Mechanism

Monitoring and evaluation is essential to supervise execution of various programmes. Monthly information systems like MPR and quarterly information system like QPR have been developed under many schemes. All plantation works are supervised by Asst. Conservator of Forests and Divisonal Forest Officer. Plantation journals are maintained to monitor daily plantation activity. Measurement books are used in physical/ construction activities. During office inspection the registers and records of different offices are checked for monitoring activities. Registers of fire, boundary pillar, nursery, RF and offence are maintained for monitoring activities. Parameters of monitoring and evaluation of the prescriptions of the Working Plan is provided as Control Forms in the prepared plan. 48 Nos. of permanent sample plot of 0.1ha. area has been assessed as per Geo Co-ordinates during the preparation of the plan, the details of growing stock has been assessed during the second year. Subsequently growing stock assessment for each permanent sample plot will be taken up every year to assess the increase in Bio-mass and Carbon stock. One preservation plot of 20 ha. has been established at Notto RF to study 10 spp. of plants. The forest growth, the regeneration activities including the plantations in the permanent sample plot will be monitored in the intervals of 12 month.

9.9 Public Awareness and Education

Public discussions/ meetings/ rallies will be organized in the Division level and Range level to explain the impact of Global Warming due to emission of Green House Gas and role of forest in reducing its impact. The increasing frequency of flood and drought due to heavy and irregular rainfall has occurred resulting in heavy loss of life and property. The conservation of forest can mitigate the emission of Green House Gas and check the irregular rain fall. Eco-clubs have already been formed in 700 no of schools / +2 colleges of the Division. The students are being motivated to create awareness among the local people about the impact of forest in the mitigation of effect of climate change. Important days like World Forestry Day (21st March), Earth Day (22nd April), World Environment Day (5th June), Vanamahotsav Week (1st week of July) and Wildlife Week (2nd October to 8th October) are to be celebrated every year.

9.10 Adequate Manpower in Forest Division

Staffs as per sanctioned strength are not in position, as there has been long gap in recruitment. The details of sanctioned strength of all staff and vacancy position of the Division are given in **Appendix – XXI.** Besides the permanent staff, Temporary and Contractual staffs, daily wage staff in anti-smuggling squads, anti-depredation squad and nursery watchers have been engaged. The daily wage staffs are getting wages on monthly basis.

LABOUR RATES IN ODISHA (Rupees per Man Day)				
Category	**2018**	**2019**	**2020**	**2021**
Unskilled	224.30	286.30	303.40	311.00
Semi- Skilled	234.30	326.30	343.40	351.00
Skilled	264.30	376.30	393.40	401.00
Highly Skilled	284.30	436.30	453.40	461.00

Analysis of Wages:-

There is steady increase in the labour rate corresponding to increased cost of living.The labour rates for MGNREGA are lesser than labour rates of Odisha. Therefore difficulty is faced while executing the MGNREGA works in the field.

10. CHAPTER – X

FIVE YEAR PLANS

10.1 General View

10.1.1 Plan Outlay of the Country

After Independence, the first Five Year Plan had been started from the year 1951. As per the outlay in different Plan period, the investment was made to improve the condition of livelihood needs of the people. In every Plan period, the financial allocation in forestry sector is less than 1 % of the total outlay of the country Where as financial allocation in first five years Plan to eight years Plan had been increased from Rs.76.00 million to Rs.40820.00 million respectively.

10.1.2 Forestry Sector

The investment made in the forestry sector is always linked with the livelihood needs of the people. It requires a long gestation period to receive the outputs from the forestry sector. It is always not possible to calculate the benefits in monetary term. However, the pressure on the forest is increasing day by day. Therefore the combined effect of high demand and less financial allocation in every Five Year Plan period resulted in continuous deterioration of forest resources.

10.1.3 Plan Period

The details of each Plan period in forestry sector are given in the table below.

Table 74: Plan Period

Plan No.	Year of plan	Main objects of the plan periods	Expenditure in million Rs.
1	1951-52 to 1955-56	In this period the focus was on the rehabilitation of degraded forest and planting of economically important species.	85.00
2	1956-57 to 1960-61	In the second plan period the focus was on the rehabilitation of the degraded forest, planting of valuable trees and the stress was also on the conservation of Wild Life.	212.00
3	1961-62 to 1965-66	This plan laid special emphasis on measure to meet the long-term requirement of the country. This ensured more economical utilization of the natural resources. The main aim was to increase the output	459.00

Plan No.	Year of plan	Main objects of the plan periods	Expenditure in million Rs.
		from the existing forest through improved techniques of timber extraction and popularizing the minimum use of timber after seasoning and preservative treatment. Several schemes implemented in this period were oriented towards attending self-sufficiency in industrial timber, fuel wood and other forest products. A new centrally sponsored scheme –Plantation of Quick Growing Species'' was introduced. Improved logging tools have been used to reduce wastage of timber. Training of Forest Officers, Lessees and Forest Contractor in logging and efficiency study were started with the assistance of United Nation special fund.	
Annual	1966-67 to 1968-69	In this period three annual plans year have been implemented, where specific emphasis was laid on plantation of quick growing species, plantation technique and modernizing harvesting.	421.00
4	1969-70 to 1973-74	In this plan period, there were mainly three main objectives such as (i) To increase the productivity of forests. (ii) To link up forestry development with various forest based industries. (iii) To develop forest as a support to rural economy. Emphasis was laid on measures to meet the immediate and long-term agricultural and industrial requirements. Further efforts were made at creating large-scale plantations of valuable quick growing species and species of economic and industrial importance. Concerted efforts at regenerating areas were taken, where forest produce was removed for industrial uses. The object was to achieve self-sufficiency in forest products as early as possible, especially for major forest based industries such as pulp, paper, news print, wood panel products and matches so that the import of these items may be replaced and some sizeable exports of pulp of wood panel products built up. In the last two years of the Plan period, several important developments have taken place like promulgation of Wild Life (protection) Act, 1972 and lunching of Project Tiger in 1973.	938.00
5	1974-75 to 1978-79	In this Plan period the main objectives were to take up a dynamic programme of production forestry, aiming at clear felling and creating large scale man made forests with the help of institutional financing and to develop farm forestry, improves degraded forests so as to increase the fuel and timber supply in the rural areas. A network of State Forest Corporations is proposed to crate for the establishment and management of manmade forest and forest based industries. Special efforts were proposed to prepare a number of projects in various States, for immediate and long term benefits in term of increased raw materials for industries and additional revenues.	2088.00

Plan No.	Year of plan	Main objects of the plan periods	Expenditure in million Rs.
Annual	1979-80	In this period only one annual plan has been implemented, where emphasis was laid on plantation for rehabilitation of degraded forests.	683.00
6	1980-81 to 1984-85	In this Plan period, the objective was to increase the productivity through proper land and water management, preservation of genetic diversity for the management of the ecosystem and further sustainable utilization of the resources. This helped in a big way for the future survival and development of the people. The necessity for constitution of Biosphere Reserve was also felt.	6924.00
7	1985-86 to 1989-90	In this Plan period the main objectives were to restore the degraded eco-system through proper schemes, such as land reclamation, forestation, cleaning of water bodies, Research and Training etc. The programme is also geared towards arresting for the damage to ecosystem and the promotion of a conservation based development strategy. It was decided to lay emphasis on the Research and Training aspects also, hence the Botanical Survey of India (BSI), Zoological Survey of India (ZSI) are re-oriented to deal with the lower forms like fungi, bacteria and invertebrates etc. Man and Biosphere Programme were also oriented towards the ecosystem development. Implementation of the Biosphere Reserve Programme has started in the Seventh Plan with the Department of Environment acting as the nodal agency. The conservation programmes in the Reserves has been supplemented by strong component of research studies on the living and non-living resources, rare and endangered species, socio economic interactions with local /surrounding populations and ethno biological relationship. Eco-development programme like restoration of already degraded ecosystems through practical field schemes such as land reclamation, forestation, cleaning of water bodies etc. has been strengthened in this Plan period.	19759.00
Annual	1990-91 to 1991-92	In this period, the main objectives were to protect the environment, increase productivity and generate employments. Emphasis has been given for plantation in degraded area.	12917.00
8	1992-93 to 1996-97	In this Plan period, the main objectives were to protect the environment, increase productivity, formulate a national policy for environment, make individual and institutions more accountable, regenerate/restore degraded ecosystems and increase their productivity and to generate employment through these activities to decentralize control over nature and natural resources, to develop and share an understanding nature and natural processes , to	39930.00

Plan No.	Year of plan	Main objects of the plan periods	Expenditure in million Rs.
		formulate a national policy for environment an appropriate institutional and legal frame work in support of the policy, to ensure coordinated and integrated Governmental action aimed at conserving nature and sustainable use of natural resources, to make individuals and institutions more accountable to the people for their actions impinging on environment and ecosystem. Further National Park and Sanctuaries has been strengthened. Stress has been laid on eco-development, especially around protected areas, so that the human population in these areas is not deprived of the basic life support resources and continues to participate in the protection of the environment.	
9	1997-98 to 2001-02	In this Plan period the main objectives were to empower the people through information generation, involve the industry in both the private and the public sector, involve the right for common property resources, inter-sector co-operation, ensure scientific and technological inputs, participation of people in the forest management through joint forest management, involvement of non-Government organization for awareness building etc. The main emphasis was to the participation of people in the management and sharing of usufruct through Joint Forest Management. The involvement of NGOs was also sought for building awareness and acting as an interface. The priority is also to be given for the development of villages in and around of the forest areas. It is also decided to take up the survey and demarcation of existing forest area. Efforts were made to take advantage of various Employment Generation Schemes of Rural Development Departments to supplement funds for plantation activities. Emphasis was also laid down on the research aspects like tree improvement, non-timber forest produce, agro forestry, alternatives of timber, value addition to the various forest products etc. The efforts were to empower the women by ensuring their involvement from micro planning stage to implementation and usufruct sharing.	68228.00
10	2002-03 to 2006-07	In this Plan period the main objectives were to bring one third geographical area under the forest cover, adopt watershed approach, extensive implementation of food for work programme in forest activities, bio-diesel formation from Jatropha, merge all afforestation programme under National Afforestation Programme which was implemented through Forest Development Agency. The livelihood needs of the people living adjoining to the forests were addressed. JFM was given more thrust for the generation of the degraded forests, efforts was taken to reduce the import of the timber and the timber requirement was met from the community lands,	X

Plan No.	Year of plan	Main objects of the plan periods	Expenditure in million Rs.
		private firm lands and degraded lands, efforts were taken on protecting the natural forest to have a better carbon trading potential to increase the market avenues for forest protection and management, to conserve and protect medicinal plants.	
Sources – Developing Wasteland, Ministry of Environment and Forests			

10.1.4 Financial Achievements up to 4th Five year Plans

Scheme wise details of expenditure incurred on forest development in the country are given in the table below. These figures show that during 1951-69, 23 % has been spent on economic plantation for industrial and commercial uses. The same percentage was maintained in the 4th Plan period. The scheme on firm forestry –cum – fuel wood plantation accounted for 2.2 % of the total expenditure for the period 1951-69.

Table 75: Financial Achievements up to 4th Five year Plans

Sl. No.	Scheme	1st Plan 1951-56	2nd Plan 1956-61	3dr Plan 1961-66	Annual Plan 1966-69	Total 1951-69	4th Plan 1969-74
I	**States Scheme and Centrally Sponsored Scheme**						
1	Economic plantation for industrial and commercial uses	111.91	486.88	163.16	934.01	2695.96	2014.99
2	Rehabilitation of degraded forests	16.42	199.23	380.54	229.84	826.06	322.17
3	Farm forestry-cum-fuel wood plantations			109.54	151.93	261.47	361.25
4	Development of minor forest products			151.74	148.09	299.83	107.44
5	Communications	42.27	247.65	555.98	335.5	1181.4	533.01
6	Consolidation of forests (including survey and demarcation)	14.63	61.83	199.3	194.19	469.95	367.75
7	Development of pastures and grazing			52.93	47.13	100.06	77.82
8	Nature conservation		99.52	175.05	125.32	399.91	435.32
9	Training of staff	41.75	74.00	178.43	136.49	430.67	147.83
10	Timber operations			285.77	246.97	532.74	554.19
11	Forest protection			107.03	62.79	169.82	115.25
12	Working plan organization			121.55	100.90	222.45	132.91
13	Forest research			25.61	46.64	72.25	156.27
14	Publicity			14.03	13.44	27.47	47.41
15	Establishment of statistical cell and planning cell				13.55	13.55	38.63
16	Construction of building	43.97	1115.27	247.40	149.94	556.58	405.99
17	Amenities to staff and labour			48.05	14.63	62.68	31.1

Sl. No.	Scheme	1st Plan 1951-56	2nd Plan 1956-61	3dr Plan 1961-66	Annual Plan 1966-69	Total 1951-69	4th Plan 1969-74
18	Intensification of management				20.57	20.57	29.43
19	Cultural operation				42.89	42.89	71.33
20	Plantation of quick growing species			406.48	939.45	1345.93	1685.59
21	Forest Resources Survey			32.11	34.47	66.54	101.92
22	Miscellaneous Schemes NES	478.83	738.28	248.54	95.47	1561.12	821.79
II	**Central Scheme**						
1	Forest research Institute and colleges		41.85	17.39	27.45	86.69	101.29
2	Delhi Zoological Park		56.2	34.67	6.43	97.3	22.75
3	Pre investment survey of forest resources			8.17	71.54	79.71	143.14
4	Logging training project			3.06	16.19	19.25	35.44
5	Scheme wise details not available	100				100	6.85
	Total	**849.78**	**2120.71**	**4566.59**	**4205.82**	**11742.9**	**8898.86**
Sources – Report of the National Commission on Agriculture –1976, Part-IX, Forestry							

10.1.5 Review of Seventh Plan

Seven Biosphere Reserves have been set up for preserving the genetic diversity in representative ecosystems. Ecological restoration work has been under taken in fragile areas. Schemes have been initiated on breeding of plants and commercial utilization of medicinal plants. A National Environmental Awareness Campaign initiated in 1986 was continued. It has covered a wide spectrum of the population through different media and involving more than 200 Non-Governmental Organizations.

10.1.6 Forest and Wild Life Policy

A ‑National Forest Policy 1988‖ was formulated in December1988 with the principal aim of ensuring environmental stability and maintenance of ecological balance. The Forest (Conservation) Act, 1980 was amended in 1988 to facilitate stricter implementation and to plug certain loopholes. Implementation of 10-point National Wildlife Action Plan (NWAP) has started. The Wildlife Institute of India has published a comprehensive report incorporating a workable bio-geographic classification system.

10.1.7 Afforestation Programme

In the 7th Plan there was considerable increase in the total area brought under afforestation programme. Block plantations, stripe plantations and farm forestry were carried out. Plan funds were made available through Forest Department in the States. There were further supplemented in 15 States with new projects, which received external assistance. While the total afforestation during the 6th Plan period was only 4.65 million hectors, the coverage in the 7th Plan was 8.87 million hectors. A number of programmes on afforestation were taken up to secure people's participation. Under this scheme, priority was given to different items, which are given below.

Table 76: Afforestation Programme

Sl. No.	Items
1	Establishment of decentralized nurseries and school nurseries.
2	Block plantation especially on community land in lands SC/ST and people living below the poverty line.
3	Pasture development through people's institution and involvement
4	Assistance in the implementation of the tree patta schemes.
Sources – Developing Wasteland, Ministry of Environment, Forest and Climate Change	

Social forestry projects that were initiated in 1981-82 for periods ranging from five to eight years continued in the 7th Plan. They envisaged tree planting and afforestation of 19, 84, 600 hectars of wastelands with a total investment of Rs. 911.73 crores. These projects were assisted by several external agencies, including the World Bank, United States Agency for International Development and Overseas Development Agency of United Kingdom, Sweden International Development Agency etc.

Under the National rural Employment Programme (NREP) and Rural Landless Employment Guarantee Programme (RLEGP) carried out by the Department of Rural Development, 25% of funds were specifically earmarked for the social forestry component, during the first four years of the 7th Plan. The afforestation components under these programmes were implemented by the State Forest Department mainly on government and community lands, roadsides and canal embankments. Since the availability of community lands was limited, afforestation was also carried out on degraded forest lands. Bulk of the funds for the forestry sector came from the Rural Employment Scheme under the social forestry component. The area afforested in successive five year Plan is given in the table below.

Table 77: Afforested Area in Successive Five Year Plan

Sl. No.	Five Year Plan period	Area afforested (in Lakh ha.)
1	First	0.52
2	Second	3.11
3	Third	5.83
4	1966-69	4.53
5	Fourth	7.14
6	Fifth	12.21
7	1979-80	2.22
8	Sixth	46.50
9	Seventh	88.70
	Total	**170.76**
Sources – Developing Wasteland, Ministry of Environment and Forests		

10.1.8 Review of Eighth Plan

10.1.8.1 Biodiversity Conservation

The scheme on Biodiversity Conservation was initiated during 1991-92 to ensure proper coordination among various agencies concerned with the issues relating to conservation of biological diversity and to review, monitor and evolve adequate policy instruments for the same. During the Rio Convention, 168 countries, including India signed in the convention on Biological Diversity. India has since ratified the convention.

During the Eighth plan, considerable attention was given to make the Pollution Control Laws more effective and to bring umbrella legislation for protection of environment. A number of Central and State executive authorities have been delegated powers for effective implementation of the Environment Protection Act. The Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 have been amended to bring certain provisions of the Acts at par with those of the Environment (Protection) Act, 1986.

During the Eighth plan, a Centrally Sponsored Scheme _Modern Forest Fire Control Method in India‘ was introduced. The Scheme was launched during the Seventh plan with UNDP assistance as a pilot project in Uttar Pradesh and Maharashtra mainly to protect forests from fire. The project was implemented in 13 states during Eighth Plan.

Afforestation of Degraded Forests – The National Afforestation and Eco-Development Board was created at the time of the bifurcation of the erstwhile

National Wasteland Development Board, under the Ministry of Environment and Forests in July 1992. Areas adjoining to forests and fragile eco-systems were brought under the National Afforestation and Eco-Development Board (NAEB), while other wastelands were covered under the newly created National Wasteland Development Board in the Department of Wasteland Development in the Ministry of Rural Areas and Employment. An outlay of Rs. 461.00 crore was finally allocated to the NAEB for reclaiming degraded forest area adjoining to forests during the Eighth plan. Some of the schemes of NAEB are given in the table below.

Table 78: Various Scheme for Afforestation of Degraded Forests

Sl. No.	Name of the Scheme
1	Integrated Afforestation and Eco-Development Project (IAEPS)
2	Fuel wood and Fodder Project
3	Non-Timber Forest Produce Scheme
4	Grants-in-Aid
5	Encouraging NGOs for taking of Afforestation and Building upon People's Movement.
Sources – Developing Wasteland, Ministry of Environment and Forests	

10.1.9 Evaluation of Ninth Plan

The Scheme of Ninth Five Year plan is generally similar to those taken up during the Eighth plan. The Schemes such as Integrated Afforestation and Eco-Development Project, Fuel wood and Fodder Project, Non-Timber Forest Produce, Grants-in-Aid, Seed Development have been implemented with greater focus and improved technology on the basis of the experience gained during Eighth plan. The Planning Commission had set up a Working group to examine the prospects of leasing out of degraded forest lands to the Private Entrepreneurs or Forest Corporations.

The main term of reference of the Working group was to assess the economic, social and environmental feasibility of leasing or otherwise making degraded forest land available to the Private Entrepreneurs or Forest Corporation. The Working group has submitted its report and has not recommended leasing of forest land to the Private Entrepreneurs either directly or indirectly through Forest Corporations.

10.1.10 Investment in Forestry Sector (in millions of Rupees)

Table 79: Expenditure for Forestry Sector

Plan/ Year	Total Plan		Agriculture Plan		Forest and Wildlife Plan		Forest Outlay
	Outlay	Actual	Outlay	Actual	Outlay	Actual	(% of total)
First Plan (1951-56)	23780	19600	3540	2900	76	85	0.32
Second Plan (1956-61)	45000	46720	5100	5490	212	212	0.47
Third Plan (1961-66)	75000	8577	10860	10890	458	459	0.61
Annual Plan (1966-69)	66250	66225	10370	11070	419	421	0.63
Fourth Plan (1969-74)	159020	157790	27280	23200	894	938	0.56
Fifth Plan (1974-79)	393220	394260	47660	48650	2088	2088	0.53
Annual Plan (1979-80)	126010	121760	18150	19960	683	683	0.54
Sixth Plan (1980-85)	975000	1092920	125390	152010	6924	6924	0.71
Seventh Plan 1985-90)	1800000	2187300	222330	315090	18519	19759	1.09
Annual Plan (1990-91)	647170	583690	91420	85420	6299	5764	0.97
Annual Plan (1991-92)	723170	647500	100580	90600	7831	7153	1.08
Eighth Plan (1992-97)	4341000	x	636420	x	40820	39930	0.94
Ninth Plan (1997-02)	x	x	x	x	68228	x	x
Total up to 8th FYP	**9374620**	**x**	**1299100**	**x**	**85295**	**x**	**0.90**
Sources – Developing Wasteland, Ministry of Environment and Forests							

10.1.11 Activities of Baripada Forest Division in Plan Periods

The different activities have been taken up in this Division during the Plan periods depending on the allocation. Baripada Forest Division has taken up responsibility of sustainable Development of natural resources through initiative in National Afforestation Programme since 2002-03. The programme is being implemented through Forest Development Agency and VSS. The CAMPA scheme came into operation since 2009-10 and has been a good source of fund for infrastructure development and plantation activities. OFSDP scheme started operation in Baripada Forest Division since 2017-18. The details of the work done and the expenditure made for the purposes are available in Division.

10.1.12 Suggestion for Future Five-Year Plan

The Thirteen Five Year Plan period starts from 2017-2018. Keeping an eye on the present condition of the natural vegetation of the area under revision, the following suggestions have been given for improvement of the growing stocks.

10.1.12.1 Plantation

There are some blank areas available in this Division. Therefore, it is suggested that the Divisional Forest Officer should encourage any Scheme for block plantation during the next Five Year plan. The area allotted to Rehabilitation Working Circle has open spaces in patches, where 200-800 seedlings can be planted per hectare. It is advised to prepare Scheme for gap plantation for rehabilitation of degraded forest. The annual area should be distributed equally in all Ranges for smooth execution and better supervision.

10.1.12.2 Climber Cutting

Climber cutting has not been done in the last outgoing plan period except under RDF works. Also due to ban on tree felling there was no operation in most of the annual coupe area due for working in the plan period. As seen in the field the climbers arrest the growth of the trees. It is advised to the Divisional Forest Officer to prepare a special Scheme for cutting of the climbers within an interval of 3 years. He is also advised to appraise the facts before the Superior Forest Officers and get the Scheme approved for implementation of the programme.

10.1.12.3 Fire Protection

Annual ground fire in the forests of this tract is common since 1938. Fire constitutes a serious menace in almost all blocks included in this revision. It is believed that all the fire is intentional. The people living in this tract are setting fire for collection of non-timber forest produces. The tribal people occasionally set fire to the forests in order to drive game. It is very difficult to have a control over the forest fire in this tract. It is suggested that the fire should be detected at early stage. The Divisional Forest Officer shall engage at least two people in each forest fringe villages in summer days to detect and extinguish forest fire before it spreads extensively. A special Scheme for control of the forest fire shall be prepared in each year during the Plan period by the Divisional Forest Officer.

10.1.12.4 Wild Life

The survival and multiplication of the Wild Life depends on the under growth. In every year, the under growth are damaged due to ground fire, which results in poor vegetative growth of herbs and shrubs used by herbivores. It is opined that the total number of Wild Life can be increased to two times to the number presently surviving, if annual ground fire can be stopped continuously over a period of five years. The Divisional Forest Officer is advised to implement properly the Scheme prepared for fire protection over a period of five years. All the field staff shall encourage the villagers to extinguish the forest fire at the early stage by the way of publicity and providing incentive to them.

10.1.13 General Trends in Forestry Investment

The investments in forestry sector require long gestation period and most of the time these inputs are linked with the livelihood needs of the people. It is also difficult to explain the tangible benefits always in monetary terms. Since the commencement of the First Five Year Plan (FYP) in 1951, Rs 85 billion has been spent by the end of the Eighth FYP in 1996-97 on forestry development activities in the whole country. In this period, afforestation activities of about 26.9 million have been carried out. Financial allocation to the forestry sector has been increased from Rs 76 million in the First FYP to Rs 40, 818 million in the Eighth FYP, but it has always been less than 1% of the total plan outlay of the country. This is one of the main reasons for the continuous deterioration of forest resources. The priorities in different plan periods and the achievements are discussed in the paragraphs below.

10.1.14 First Five-Year Plan (1951-56)

The two world wars drew heavily on the forest resources. Major river valley projects, development of industries and communications and other projects so vital to the developing economy of the country also leaned heavily on the utilization of the forests and forest areas. While the fundamental concepts underlying the forest policy laid down in 1894 remained the same, the National Forest Policy enunciated in 1952 emphasized that the forests should be managed on the principle of progressively increasing, and eventually getting the highest sustained yield to meet the requirements of defense, industries and the people, ensuring at the same time that the production of

both wood and fodder is maintained. Therefore attention was focused on rehabilitating the forest that has been over-exploited during the wars, and consolidation and settlement of private forests taken over by the government. A modest beginning was also made to raise plantations of economic species.

10.1.15 Second Five-Year Plan (1956-61)

Most of the schemes of the previous plan were continued. Some of the important new schemes initiated related to the creation of plantations of economically valuable species, conservation of wildlife and preparation of working plans. A number of wildlife sanctuaries were established, some degraded forests were rehabilitated and many new forest roads constructed.

10.1.16 Third Five-Year Plan (1961-66)

While the first two plans centered on rehabilitation and consolidation of forests, in the third plan a beginning was made to lift forest from purely conservative and biological management to increasing production from them by creating man-made forests of quick-growing and valuable species in place of the existing ones. Special emphasis was laid on measures to meet the long-term requirements and more economic and efficient utilization of valuable forest products, and to increase the outturn from the existing depleted forests through better technique of timber extraction, improvement of communication and popularizing the use of secondary timbers after proper seasoning and preservative treatment.

Full assistance from the Centre was given in order to encourage State governments to undertake large scale plantations of quick-growing species, mainly to meet the requirements of the paper and pulp industry.

A new scheme undertaken was ―Pre-Investment Survey (PIS) of Forest Resources‖ implemented in collaboration with the United Nation Special Funds and Food and Agriculture Organization (FAO). This project was designed to investigate by stages the economic availability of surplus forest resources for feeding the wood-based industries. The PIS was the forerunner of the Forest Survey of India of today.

Another project related to the establishment of ‑Logging Training Centre‖ was undertaken with the assistance of the United Nation Special Funds. The object was to train forest officers and field executives of State government and forest lessees and contractors in basic logging cableways, planning and efficiency studies etc., with a view to obtain higher timber yields from forests by minimizing wastage.

10.1.17 Post-Third Plan Period (1966-69)

The progress of departmental activities in forestry during this period was remarkable. Specific emphasis was laid on plantations of quick-growing species and the modernizing of harvesting and plantation techniques. Training of officers and Forest Rangers as Resource managers was undertaken to embark upon the next five-year plan.

10.1.18 Fourth Five-Year Plan (1969-74)

While adhering to the objectives and principles of the third plan, greater emphasis was placed on increased plantation activities and intensive management of forests to attain self-sufficiency. The basic considerations and the guiding principles were: –

(i) Adequate forest cover to prevent floods, conserve soil and moisture, protect water reservoirs;
(ii) Adequate supplies of forest raw materials for wood based industries and of construction timber for which there was a growing demand;
(iii) Adequate supplies of fuel wood; and
(iv) Preserving natural environment for scenic beauty, sports, recreation and scientific study.

Based on these considerations the specific obligations considered were: scientific management of hitherto unorganized forests; stricter protective measures against pilferage of Timbers, excessive grazing, fire, encroachments etc.; formation of manageable units and appointment of adequate staff; replacement of slow-growing and less valuable species by those which are quick growing and valuable; afforestation of barren lands; introduction of improved methods of harvesting; extension of communication; better housing facilities for the staff; wildlife and nature conservation; intensive research and training provision of statistical cells, etc.

10.1.19 Fifth Five-Year Plan (1974-79)

This plan introduced an important element of change in the country‘s strategy in forestry; conservation-oriented forestry was to give way to dynamic progress of production forestry, to increase production of industrial wood and other forest products of economic importance. Extensive man-made forests were to be created, with institutional financing, to feed the existing and prospected industries utilizing forest products. Lands along roads, canal banks, railway lines and flood embankments, mixed plantation for commercial use was to receive greater attention. Farm Forestry and communication were to form an important part of the forestry programme.

10.1.20 Sixth Five-Year Plan (1980-85)

The Sixth Five-Year Plan continued the momentum gathered during the previous plan period. However the thrust was on social and community forestry and development without destruction. The following broad strategy was adopted –

(i) The environment was improved by producing man made forests and undertaking massive afforestation on degraded lands;

(ii) Strict protection was afforded to wildlife and its habitat;

(iii) A massive social and farm forestry and village fuel wood plantation programme was taken up to meet the ever growing energy needs of the rural people;

(iv) Employment was provided to the ever increasing rural population with special attention to the weaker sections of the society; and

(v) The following four programmes of thrusts were introduced during this plan period

  (a) Tree for every child programme
  (b) Eco-development force of ex-servicemen
  (c) Eco-development camps for students
  (d) Agro-forestry programme.

10.1.21 Seventh Five-Year Plan (1985-90)

The role and importance of forests in the general economic development of the country in terms of protection of the eco-system and supply of forest products was better appreciated. The main objectives, approaches and strategies of this plan were:-

(i) Conservation of ecologically fragile eco-systems and preservation of biological diversity in terms of fauna and flora;

(ii) Increasing substantially the vegetative cover by massive afforestation through social forestry, farm forestry and other plantation programmes;

(iii) Meeting the basic needs of the people in respect of fuel wood, fodder, minor forest produce and small timber;

(iv) Ensuring close linkages between Forestry programmes and welfare of the tribal and other communities traditionally dependent upon forests;

(v) Special emphasis on forestry research, education, training and extension

(vi) Implementing the national wildlife action plan for wildlife conservation, and

(vii) Creating a massive people‘s movement for achieving the above objectives.

The main achievements during this plan period were:–

(a) Massive social and farm forestry programmes were taken up;

(b) More emphasis was laid on the afforestation of degraded lands and wastelands. The national wastelands development board (NWDB) was set up.

(c) Research and training were strengthened by the creation of the ICFRE and IGNFA.

(d) More stress was laid on preserving the eco-system and wildlife.

10.1.22 Eighth Five-Year Plan (1992-97)

The eighth five year plan aims at restoration of ecosystem and taking of massive plantation programmes. In other words its objectives are to increase afforestation programmes, preserve the eco-system and wildlife and to strengthen forestry research, education and training.

The major objectives for this Plan are:

1. To protect the natural environment;
2. To regenerate and restore degraded ecosystems and increase their productivity and to generate employment through these activities;
3. To de-centralize the control over nature and the natural resources;
4. To develop and share an understanding of nature and natural process;
5. To formulate a national policy for environment and an appropriate institutional and legal framework in support of the policy;
6. To ensure co-ordinated and integrated Governmental action aimed at conserving nature and sustainable use of natural resources;
7. To make individuals and institutions more accountable to the people for their actions impinging on environment and ecosystem; and
8. To monitor the state of environment.

10.1.23 Ninth Five-Year Plan (1997-2002)

The main objectives of this plan are:

* Empowering the people through information generation, dissemination and access
* Involving the Industry in both the private and the public sector.
* Integrating environment with decision making through valuation of environmental impacts; evolving market based economic instruments as an alternative to the command and control form of environmental regulation; appropriate pricing of natural resources based on their long-term marginal cost of supply; appropriate fiscal reforms and natural resource accounting.
* Evolving the rights for common property resources.
* Inter-sectorial co-ordination and co-operation.
* Ensuring scientific and technological inputs.
* Participation of people (particularly women) in the management and sharing of usufruct through Joint Forest Management.
* Involvement of NGOs for awareness building and as an interface between forest department and the people is encouraged during the Ninth Plan.

10.1.24 Tenth Five-Year Plan (2002-07)

India was privileged to host the Eighth Conference of the Parties (COP8) to the UNFCCC in Oct-Nov, 2002. The Hon'ble Prime Minister Shri Atal Bihari Vajpayee in his speech at the High Level Segment of the COP8 asserted the high priority given to the forests. In his own words –India accords high priority to conservation of forests and wildlife for long-term ecological and environmental security. The participation of local communities is ensured through the _Joint Forest Management' programme. I am happy to say that this has helped to increase our forest cover significantly‖.

The tenth five year plan is a measure landmark in the history of development in India. It is the first five year plan of the new century. It aimed at achieving GDP growth of 8% average annual growth during tenth plan. A.B. Vajpayee, the then Prime Minister had given opening remarks at the 50th meeting of the National Development Council, New Delhi, 21 December, 2002 while Approach Paper to the tenth plan was unanimously approved by NDC. He made specific suggestions for the consideration of that meeting.

1. The Governance reforms, with Special Reference to e-governance
2. Barriers to Internal Trade
3. Creating an investor friendly climate
4. Financial and Administrative Empowerment of Panchayati Raj Institutions.

The scheme titled National Afforestation Programme (NAP) was formulated by merger of four centrally sponsored afforestation schemes of the Ministry of Environment and Forests namely, Integrated Afforestation and Eco-Development Projects Scheme (IAEP), Area Oriented Fuel wood and Fodder Projects Scheme (AOFFPS), Conservation and Development of Non-Timber Forest Produce including Medicinal Plants Scheme (NTFP) and Association of Scheduled Tribes and Rural Poor in Regeneration, of Degraded Forest (ASTRP) with a view to reducing multiplicity of schemes with similar objectives, ensuring uniformity in funding pattern and implementation mechanism, avoiding delays in availability of funds to the field level and institutionalizing peoples participation in project formulation and implementation. The Scheme was operated by the National Afforestation and Eco-

Development Board, Minister of Environment and Forest as a 100% Central Sector/ Centrally Sponsored scheme.

The main objectives of this plan are:-

* Bringing one third geographical area under the forest cover.
* Adopting watershed approach to develop and maintain the forest cover.
* The livelihood needs of the people living adjoining to the forests would be addressed.
* JFM would be given more thrust for the regeneration of the degraded forests.
* Efforts would be taken to reduce the import of the timber and the timber requirement would be met from the community lands, private farm lands and degraded lands.
* Food for work programme would be extensively implemented in the forest pockets to ensure food security and productive employment.
* Efforts would be taken on protecting the natural forests to have a better carbon trading potential to increase the market avenues for forest protection and management.
* The conservation and protection of the medicinal plants is given priority.
* The bio-diesels coming from plants like Jatropha, Pongamia etc., would be promoted to encourage the livelihood opportunities of the rural masses.
* It is also decided to merge all Afforestation programmes under National Afforestation and Eco-development Board (NAEB) into one scheme called _National Afforestation Programme‘ and it would be implemented through Forest Development Agency (FDA)

10.1.25 Eleventh Five Year Plan (2007-12)

Ministry of Environment and Forests had an approved outlay of 10,000 crore for the Eleventh Five Year Plan, 2007-12. Annual Plan 2007-08 had an approved outlay of 1,351.00 crore against which the actual utilization amounted to 1,349.73 crore. In 2008-09, it has allocated an outlay of 1,500.00 crore, against which the actual utilization amounted to 1,483.02 crore. Annual Plan 2009-10 had an approved outlay of 1,880.00 crore, reduced at RE stage to 1,650.00 crore under economy instructions, against which the actual utilization amounted to 1,630.69 crore. Annual Plan 2010-11

had an approved outlay of 2,200.00 crore, against which the actual utilization amounted to 2,181.58 crore. In the last year of the Eleventh Plan, the Annual Plan 2011-12 had an approved outlay of 2,300.00 crore, against which the actual expenditure amounted to 1825.44 crore.

Forests not only provide livelihood to the rural poor and create opportunities for wage employment but also plays a key role in maintaining ecological stability and help in reducing the impact of natural calamities. As per the Eleventh FYP approach paper, the Forestry Sector Development would adopt an approach combining elements of asset creation, institutional development and social development to promote sustainable forest management practices. It would focus on conservation, protection and development of dense forests, regeneration of open forests, afforestation, capacity building of the forest department and promotion of eco-tourism.

India is a party to the United Nations Framework Conventions on Climate Change, the objective of which is stabilization of the greenhouse gas concentrations in the atmosphere at levels that would prevent dangerous anthropogenic interference with the climate system. In consonance with the Govt. of India strategy, the Odisha Climate Change Action Plan has formulated the State Climate Change Action Plan. The scoping study was undertaken to understand the range of issues. An ambitious undertaking, it covered several sectors including agriculture, fisheries, animal husbandry, energy, forestry, health, industry, mining, transport, urban planning and others.

11. CHAPTER – XI

PAST SYSTEM OF MANAGEMENT

11.1 General History of the Forests

During 1913-14 the working plan Range was created by Ruler of Mayurbhanj. Enumeration of trees for assessment of stocks was conducted for exploitation by contractors. During 1914-15 forest boundary survey of Similipal RF was completed and working plan block boundary lines were demarcated. Sabai grass was leased to Titagarh paper mills. Tassar crop produced annual revenue of Rs.12836/-, out of total forest revenue of Rs.324862/-. Total expenditure of forest Department was Rs.100407/-. During 1917-18 out of 97427 sound trees and 51830 unsound trees, 39553 trees were marked for felling by contractor B.T. Co. who felled 10369 trees and paid royalty of Rs.66005/-. Total revenue out of forest Department was Rs.396446/-. In 1921-22 out of 92289 sound and 29384 unsound trees, 12091 trees were marked for felling by B.T. Co. In 1927-28 survey of Similipal hills was completed. B.T. Co. felled 21993 trees out of 33703 mark trees and extracted 205429 sawn timbers equivalent to 470459 cft. B.R.L Mandal extracted 45350 cft. sawn timber. Departmental Lac cultivation experiment started at Kanchinda. During 1928-29 B.T. Co. converted 23463 trees and extracted 88307 B.G. sleepers, 73485 M.G. sleepers, 22022 N.G. sleeper and 28000 other sleepers. During 1929-30 6147 dead and 63 sound trees were marked for felling. During 1930-31 B.T. co. felled 28106 trees and deposited royalty of Rs.91500/-, B.R.L Mandal extracted 89658.4 cft. timber and deposited Rs.54516/-. B.J.C. Kumar extracted 10784.5 cft. and deposited Rs.6550/-. The total receipt from forest Department was Rs.698883/-. During 1931-32 B.T. Co. felled 43171 trees and deposited royalty of Rs.123500/-, B.R.L Mandal felled 13471 Sal trees of 121223 cft. and deposited Rs.71030/-, B.J.C. Kumar extracted 10608 cft. timber and deposited Rs.6338/-. Babu N.N. Kumar extracted 7000.1 cft. and deposited Rs.3500/-. During 1934-35 B.T. Co. felled 33904 trees and deposited Rs.92200/-, B.R.L Mandal felled 38588 trees and deposited royalty of Rs.82499/-. 6 other Contractors felled 25226 trees and deposited royalty of Rs.78050/-. Total receipt from forest Department was Rs. 581283/-. These figures are

for Mayurbhanj District and throw some insight to management of forest during pre-independence period.

Right from Pre-British period to Post-Independence period covering, the 1st Five Year Plan period to the 12th Five Year Plan period, the forests have undergone various changes. During the past 132 years the main focus has been on sustainable management with due emphasis on regulation of felling and regeneration.

The changes witnessed by forest managers during the last 132 years can be represented as follows:

* Conservation (up to 1900)
* Production (1900-1985)
* Total ban on felling (1988 to 2005)
* Conservation of bio-diversity with sustainable management (2007 – till date)

The different Working Plans prescribed by WPOs for the management of forests are precisely prepared and revised as under.

The history of management of the forests of Baripada Forest Division is very old. It was under the rule of princely state till the merger of Mayurbhanj in the state of Odisha during, 1949. During princely rule, there was a separate department for management of forest resource of the state. After merger, Baripada Forest Division came into existence during 1949 under the Administrative control of Forest Department of State of Odisha. Forest management in Mayurbhanj probably started with the visit of Mr. C.C. Hat, during the year 1885-86. It was aimed at exploiting good size of trees particularly Sal for railway sleeper. Lease was granted in favor of one major company namely M/s B. Barooah and Co. for such harvest. The exploitable girth was 6‘ and above. Stipulated out turn was minimum three lakh cft to maximum of five lakh cft. Subsequently, it was enhanced to eight lakh cft per annum. In view of such escalation, the exploitable girth was reduced to 5‘ and then to 4.5‘. This led to ruthless exploitation of the Similipahar forests. Since the estimation of growing stock and the incremental out-turn had not been assessed at that time prior to fixation of the yield the worst casualty happened to the forest. Considering such grave situation, the then ruler of erstwhile State of Mayurbhanj adopted a scientific

management of the forest towards the fag end of princely rule through preparation of first working plan for the Division by Sri B. N. Dasgupta during the year 1947-48. This plan was written for the period from 1947-48 to 1966-67, but it was revised during 1952-53 after six years due to the merger of princely state in the state of Odisha. Since then, the emphasis has been given on conservation with silviculturally permissible harvest on sustainable basis. In the meanwhile, the management has seen a sea change due to different developmental scheme for the people by the welfare democratic state. There is a paradigm shift in management from exploitation to scientific harvest with adequate conservation.

The focus is on the enhancement of forest, both in area and quality, with improvement of livelihood of forest fringe dwellers. The subsequent plans implemented in this Division are in following sequence.

It is seen that working plan of twenty year duration has been implemented in this Division with an intervening gap of four years between third and fourth working plan. Now it is proposed to prepare a plan for ten years duration. Similarly the jurisdiction of Baripada Forest Division has been changed from time to time with reorganization during 2003 & 2019. During 2003 reorganisation two new forest Divisions i.e., Balasore Wildlife Division and Bhadrak Wildlife Division were carved out from the old Baripada Forest Division along with parting of some area for creation of a part of Rairangpur Forest Division. During 2019 reorganisation the Similipal Sanctuary portion was shifted to Similipal North and Similipal South Divisions. Earlier this Division had covered entire pre re-organized Balasore district and part of Mayurbhanj district. At present, it is confined to two Revenue Sub-Divisions namely Baripada and Kaptipada under Mayurbhanj district. As per 2003 reorganisation, there are eight number of Ranges namely Kaptipada, Udala, Pithabata, Dukura, Bangiriposi, Deuli, Rasgovindpur, Betnoti Range and one unified check gate (UCG) i.e. Jamsola Unified Check Gate. Therefore, the past history has witnessed the change both in administrative set up and the management practices.

11.2 Past System of Management and Their Results

The then Maharaja of Mayurbhanj created Forest Department in 1888 for management of Forests. Reserve Forests of Mayurbhanj were under management and

control of Forest Department whereas Protected Forests were under management of Revenue Department. Reserve Forests were permanent in Nature and Protected Forests were meant to fulfill the requirements of ROYATs and Residents. Departmental exploitation continued in a small scale till 1904. In 1906 forest survey was conducted from Talabandha to Similipalgarh to form a Working Circle for giving lease to M/s Borooah and Co. In 1916, M/s Borooah and Co. took 30 years lease to work in Western Similipal. In 1904 Mayurbhanj narrow gauge Railway Line was built up to Baripada with main objective to transport Timbers. There was no systematic working of forests, till merger of State of Mayurbhanj in 1949.

The first working plan was prepared by Mr. C.C. Hart in 1896-97. This was revised by Mr. B. N. Dasgupta in 1946. In 1953-54 Mr. Sripal Jee prepared working plan for Mayurbhanj District after merger of Mayurbhanj State in Odisha. In 1973-74 Sri S. Bose revised working plan of Baripada Forest Division.

Despite practicing commercial forestry, supply railway sleepers and other utility timbers outside Mayurbhanj, the Ruler was very rigid in forest protection. Protection of forest and wildlife suffered after merger of State in Odisha. State of Odisha declared complete moratorium on tree felling in 1988 after which the vegetation improved.

The working of forests of this Division through prescriptions of working plan started with the working plan prepared by Sri B.M. Dasgupta from 1947-48 to 1966-67 followed by working plan of Sri Sripal Jee from 1953-54 to 1972-73. Next Working Plan was written by Sri S. Bose, for the period from 1973-74 to 1992-93 and the last working plan was prepared by Sri A.O.F. Bakhla from 1996-97 to 2015-16. The management practices adopted in these working plans are described in nutshell below.

11.2.1 1ST Working Plan

The first working plan was drawn by Sri B.M. Dasgupta, D.D.R. (Rtd.) under direction of Sri A. Dash, IFS (Rtd.) F.R.S.E. Chief Forest Officer, for the period 1947-48 to 1966-67. Though the plan was drawn with a sanction for 20 years but remained applicable from 1947-48 to 1952-53 for 6 years. According to this plan whole of the Similipahar forests were put under a selection system of working. 4 felling series were formed and a felling cycle of 20 years was adopted. The main

felling was to be followed up with cleanings. Exploitable girths were fixed for different species as given in the table below.

Table 80: Exploitable Girth during 1947-48 to 1953-54

Sl. No.	Species	Girth	Sl. No.	Species	Girth
1	Sal	5′ 6″	4	Piasal, Semul, Gudikoim and Bankhira	6′
2	Champa	7′	5	Charala	5′ 6″
3	Kuruma and Asan	6′ 6″	6	Others	5′

11.2.2 Result of Dasgupta Plan

Under this plan, the number of felling series being too small, the annual coupes were too big to supervise and control. It was for this large size of annual coupes, the main felling could not be followed up with cleaning. There were too few exploitable girth trees. In one enumeration, there was only 3 nos. of sal trees of exploitable girth per acre of forest. Prescriptions were never properly carried out. Marking was revenue oriented. Improvement and cleanings were not done. About 60% of annual yield was from trees of 3′ to 5′ girth. As a result the condition of the forest deteriorated further.

Plain forests of Deuli and Udala ranges were worked for big trees by contractors from the very beginning from the time of construction of Calcutta-Madras railway line. System of exploitation was selected without proper control over the yield and method of work. The fellings were unplanned and haphazard without any working plan which led to further depletion of forests. After 1920 these Forests were worked under coppice with standard system with a rotation as low as 15 years. The defect of the system of management and even worsening condition of the forest was not recognized and therefore, no attempt was made to check the deterioration.

11.2.3 2ND Working Plan

It was prepared by Sri Sripal Jee, for the period from 1953-54 to 1972-73. There were 5 nos. of working circles namely Selection WC, Improvement WC, Coppice WC, Bamboo WC, Protection WC. After merger of Mayurbhanj Ex- state in the year1949 it was felt that the working plan of Similipal forest prepared by Sri Dasgupta was having inadequate provision to meet silvicultural requirements of the forests. Further other reserve forests of plain area which were worked under sketchy schemes with

only tabular statement of felling, was covered in a comprehensive plan consistent with the policy and continuity of management. Hence a plan was prepared by Sri S. Jee, I.F.S. for the reserve forests of Mayurbhanj district for the period of 20 years from 1953-54 to 1972-73.

This plan had five working circles. (1) Selection Working Circle. (2) Improvement Working Circle. (3) Coppice Working Circle. (4) Bamboo Working Circle. (5) Protection Working Circle.

All the valuable high forests situated in Notto RF were put in Selection Working Circle. System adopted was selection with a felling cycle of 20 years. Yield was regulated by area with retention percentage 33 of exploitable sized trees. Thus removal of two exploitable sized trees was prescribed out of three exploitable sized trees. Exploitable girth at breast height as fixed in Sri Jee‘s plan is given in the table below.

Table 81: Exploitable Girth in Notto RF (1953-54 to 1972-73).

Sl. No.	Species	Other FS
1	Sal	5′
2	Piasal, Koim	6′
3	Banakhira, Gambhari	6′
4	Champa	7′
5	Pangan	3′
6	Sisoo	4′
7	Nageswar	5′
8	Asan	5′ 6″
9	Gudikoim	6′
10	Jamu	5′
11	Simuli	6′
12	Toon	6′
13	Chhachinam, Charala, Bhurtudam, Panigamari	6′
14	Sidham Sal, Salai, Panigamari, Kadam	5′
15	Mahul	5′
16	Dhaw	5′
17	All others	5′

All the good quality plain Sal Forests were put in improvement working circle and light improvement felling. 30 years felling circle in three felling series were prescribed under selection system for future working under conversion to uniform system. Choice of species and exploitable girth is given in the table below.

Table 82: Exploitable Girth in Plain Sal Forest (1953-54 to 1972-73).

Sl. No.	Species	Girth	Sl. No.	Species	Girth
1	Sal	5′	5	Sisoo	3′ 6″
2	Piasal	5′	6	Pangon	3′
3	Banakhira	5′	7	Asan	5′
4	Gambhari	3′ 6″	8	All others	5′

All the remaining Forest areas except Sabai plantation in Jamsola compartment I, Bamboo plantation areas, areas with poor growth capacity such as Nabra block were kept in protection working circle. Total 88 FS were formed for working with a rotation of 40 years. Yield was regulated by area. Retention of 10 trees per acre of Sal, Piasal, Sisoo and Gambhari was prescribed in addition to all eligible fruit bearing trees such as Mango, Mahul and Char subject to maximum of 5 trees/ acre. Therefore retention prescribed was maximum 25 trees/ acre.

Bamboo plantation was included in Bamboo working circle for working the bamboo and a cutting cycle of 3 years through clump selection basis. No bamboo exists at present in forest areas. Sabai plantation was included in protection working circle, where protection against grazing and illicit felling was prescribed.

11.2.4 Result of Sri Jee's Plan

In fact the Working plan prepared by Sri Jee, I.F.S. was the first comprehensive plan for the management of all the Reserve Forest blocks of Mayurbhanj district. It will be proper to analyze the plan prescriptions working circle-wise.

11.2.5 Selection Working Circle

The exploitable girth for Notto F.S. was fixed on lower side and no retention percentage was fixed for exploitable trees. As a result marking done was heavy and oriented towards more revenue. In other Felling Series, retention prescribed 33% of exploitable sized tree was low. Seeing the history and stock of forest, it was desirable to keep this limit to a minimum of 50%. Though the project was to improve the crop but marking rule was aimed at getting more revenue.

Subsidiary silvicultural operations after timber cutting were neglected as the produce obtained was not saleable and the operation was found uneconomical. Attention was not paid to Wildlife management and as a result their population diminished.

11.2.6 Improvement Working Circle

The objects was to remove only dead dying and diseased trees to improve the crop but in practice marking rules were modified to remove all matured trees to get more revenue from coupes. Though marking was principally different from Selection Working Circle, but there was no difference in practice.

11.2.7 Cyclone Damage

Cyclone damage in 1971 deteriorated the crop condition. Crop condition deteriorated and regeneration condition could not be improved because of lack of subsidiary silvicultural operations. There was no adequate safeguard against grazing, illicit felling, encroachments, etc.

11.2.8 Coppice Working Circle

In absence of the protection against grazing illicit felling, fire, removal of standards, etc. the desired result could not be obtained in this Working circle. Though realized by Sri S. Jee that a rotation of 60 years will be appropriate, he kept it to 40 years only, and yield was not proper.

11.2.9 Bamboo Working Circle

The working circle management resulted into failure as planted bamboo areas were denuded and unproductive with continuous browsing and illicit removal.

11.2.10 Protection Working Circle

In practice no protection could be afforded and the management failed except the management of Sabai plantation in Jamsola Block.

On the expiry of Jee‘s plan, forests of Baripada Forest Division were managed according to the prescription of the working plan of the Baripada Forest Division prepared by S. Bose, IFS for the period of 20 years from 1973-74 to 1992-93. Hence

it will be appropriate to discuss plans and their results with the subsequent developments in order to arrive at the present strategy to be followed in the revision.

11.2.11 3RD Working Plan

It was prepared by Sri S. Bose period from 1973-74 to 1992-93. This plan had four working circles namely Selection, coppice, rehabilitation and plantation working circles. The principal object of this plan was the improvement and retention of forest cover and to get maximum sustained yield consistent with these objectives. Selection Working Circle included all the areas of this working circle in Sri Jee‘s plan except those included in core area of Project Tiger plan forests which were so far worked in coppice with standard system, were included in coppice working circle for working under coppice with reserve system. Degraded sal rooted waste areas were kept in Rehabilitation working circle.

11.2.12 Selection of Working Circle

Silvicultural system followed was selection system on 20 years felling cycle. Total 8 FS were formed and two sets of exploitable GBH were prescribed first for 7 FS and second for 8th F.S. Notto FS. Choice of species and exploitable girth are given in the table below.

Table 83: Exploitable Girths in Forest Sector during 1973-74 to 1992-93

Sl. No.	Species	Exploitable GBH for 7 FS in cms.	Exploitable GBH for Notto FS in cm.
1	Sal	150	105
2	Piasal	210	210
3	Sisoo	150	90
4	Champa	270	90
5	Gambhar	180	120
6	Bankhira	180	120
7	Panjan	105	90
8	Nageswar	150	90
9	Koim	--	120
10	Asan	195	120
11	Godikoim	180	90
12	Jamu	180	120
13	Toon	180	90
14	Sidha	150	120
15	Simil, Rimli, Chachina	180	90
16	Kadam	150	90
17	Charla, Bhrukunda, Mango	180	90
18	Kasi	195	120

Sl. No.	Species	Exploitable GBH for 7 FS in cms.	Exploitable GBH for Notto FS in cm.
19	Mahul	150	120
20	Dhua	150	90
21	All others	150	90

About 75% trees felling of exploitable trees are prescribed in Kuliana and Champajhar FS and 50% in Devkund FS. Marking rules consisted four parts. _A' for thinning, marking and _D' for climber cutting, etc. Prescriptions were made for cleaning. Supplementary fellings, sowing and planting in subsidiary silvicultural operations, protection against grazing and fire were other regulations. Yield was regulated by area.

11.2.13 Coppice Working Circle

In Coppice with reserve system, a 40 year's rotation was adopted and the area of working circle was divided into 13 felling series. Yield was regulated by the area. Sal, Piasal, Sisoo, Asan, Koim was useful species and rests were taken as inferior. The marking rules prescribed retention of all trees below 45cm. girth, 20-25 healthy trees of principal species per hectare and all edible fruit bearing trees species. Marking was prohibited for Bija, Sisoo, and Gambhar up to 120 cm. GBH, on blank area with scattered vegetation, nalla banks, river and road side up to 10 meters and steep slopes. Subsidiary/ Silvicultural operation included cleaning, supplementary felling, sowing and planting and thinning prescription. Protection against grazing and fire were other regulations.

11.2.14 Rehabilitation Working Circle

14 rehabilitation series for rehabilitation measure at 20 years cycle were made. Rehabilitation measures included fencing for protection. Soil conservation measures like contour trenches, bunds, gully plugging, etc. with tending operation and artificial planting in gaps. Yield was not expected and species chosen for treatment were as under.

Table 84: Species for Plantation in Gaps

Sl. No.	Principal	Useful	Guest and others
1	Sal, Piasal, Gambhar and Sisoo	Bankhira, Panjam, Asan and Koim	All NTFP yielding species, species eaten by Elephant and all medicinal plants.

11.2.15 Plantation Working Circle

Existing plantation for tending and areas proposed for plantations were included in this working circle. Species recommended were based on site categories. Area divided into 4 categories. Category-I consisted degraded plain areas, II-Frost affected grassy blanks, III – suitable for Teak planting and IV – Planted up areas.

11.2.16 Result of Shri S. Bose Plan

In Selection Working Circle, permissible exploitation prescribed (75% in felling series, 66% in 3 FS and 50% in 1 FS) was very high for the crop existing. On the misinterpretation of average diameter for approach class, the value of _t' in Smith's formula was wrongly taken as 20 years instead of 40 years. Therefore the removal of exploitable sized trees as given above in the crop of working circle which had about 9.5 exploitable sized trees per hectare and average was on higher side.

The ratio of exploitable sized trees (Class – I) to approach class tree II and to the tree below approach class in different FS at the time of preparation of plan is given in the table below.

Table 85: Ratio of Exploitable Approach Class and below Approach Class Tree

Sl. No.	Name of FS	Exploitable	Approach Class	Below Approach Class
1	Kuliana	1	3	32
2	Notto	1	2	29

From this analysis it appears that the crop in Devkund, Taldiha was not for any commercial exploitation. Exploitable GBH for Notto was kept on lower side. No permissible exploitation percentage was fixed. The exploitation continued as per marking based on in nearest coupe and 66% of exploitable sized trees were removed which appeared heavy in Notto condition which had poor crop. The marking provided enough scope for mis-interpretation to conclude marking as revenue oriented.

Subsidiary silvicultural and other regulations were generally neglected whether on economic consideration or due to the lack of supervision and control. Adequate attention was not given to wildlife management, management of catchment areas and marking in steep slopes. Due to above mentioned reasons and the perpetual theft of

timber from the area, the composition as well as density of the crop deteriorated over the year instead of improvement, which was aimed at.

11.2.17 Coppice Working Circle

This system failed because the trees left were later removed by the people and the area which consists of small scattered blocks could not be protected from heavy biotic interference. As a result, the system has failed miserably and the crop has degraded to the extent that rehabilitation measures with strict protection can only improve the situation.

11.2.18 Rehabilitation Working Circle

Result of this working circle has remained same.

11.2.19 Plantation Working Circle

Successful plantation of Eucalyptus hybrid and *Acacia auriculiformis* have been raised in most of the forest areas included in this working circle.

11.2.20 4TH Working Plan

It was prepared by Sri A.O.F. Bakhla, IFS, Working Plan Officer, Keonjhar from 1996-97 to 2015-16. There are 5 nos. of working circles namely Selection WC, Rehabilitation WC, Plantation WC, Wildlife (Over lapping) WC, Minor Forest Produce WC (Over lapping).

11.2.21 General Objective

The general objective of management of forest is in harmony with the National Forest Policy 1988, Forest (Conservation) Act, 1980, Wildlife Protection Act, 1972 and Orissa Forest Act, 1972. National Forest Policy, 1988 is an instrument designed to represent broad framework of objectives and cardinal principles that should govern development of flora and fauna of the forest of the country and the people dependent thereon.

The National Forest Policy and the Forest (Conservation) Act, 1980 has reflected the provision relating to (1) ban on clear felling (2) environmental considerations to replace the revenue considerations (3) the needs of the forest dwellers and rural poor

to be the first charge of forest produce (4) shifting the burden of producing industrial wood from forest (5) no forest be exploited without approved working plans, and (6) checking indiscriminate de-reservation and diversion of forest lands for non-forestry purposes.

The principal aim of the forest policy is to ensure environmental stability and maintenance of the ecological balance for sustenance of all life forms, human and plants.

The general objectives of management of the forest covered by the Working plan are given in the table below.

Table 86: Objective of Management in Outgoing Plan

Sl. No.	Objective
1	To protect the existing Forest and forest lands from illicit felling, encroachments, fire, grazing and shifting cultivation.
2	To improve the productivity of forests.
3	To promote afforestation in blank, barren and waste lands with the active participation of the local people.
4	To check land degradation and to regenerate degraded forest lands as well as vegetative cover and augment the production of fuel wood, fodder and forest produce, especially from community and degraded forest lands by involving village community / local people on the programme such as tree planting, agro-forestry, silvi-pasture development, horticulture and soil moisture conservation.
5	The working plan aims at conservation and improvement of Minor forest produce/Non Timber Forest Produce including medicinal plants by effective protection and silvicultural practices. The minor forest produce or non-timber forest produce provides employment, sustenance and income to tribal people and other communities residing in and around forest.
6	To conserve diversity of plants, wildlife and micro-organisms by providing facilities for education, awareness and training for effective participation of people living in and around sanctuary and National Parks.
7	To encourage the use of alternatives of timber substitute of fuel wood and planting of trees on private lands like farm bunds, fallow lands, or non-forest lands and unused agricultural lands, in order to develop self-reliant sustainable timber, fodder and fuel wood production system.
8	To promote and maintain watershed models in order to improve adequate soil cover in the forest area, which will safeguard against soil erosion and rapid run off by rain water by adopting soil and water conservation measures.

11.2.22 Working Circles

Three main working circles and two overlapping working circle had been prescribed in Bakhla's plan. The total area included in his Working plan is 46373.740 ha. The Wildlife and NTFP over lapping Working Circles extended over the total Working Plan area. The distribution of area of working circle Range wise is given in the table below.

Table 87: Range and Working Circle wise Area in ha in Out Going Plan

Sl. No.	Range Name	SWC	RWC	Plantation	Total
1	Kaptipada	7707.080	491.560	0	8198.640
2	Pithabata	0	3168.870	1440.650	4609.520
3	Deoli	0	7517.210	3275.980	10793.190
4	Udala	0	524.790	2856.480	3381.270
5	Dukura	0	818.090	1696.800	2514.890
6	Betnoti	0	8309.400	8566.830	16876.230
	Total	**7707.080**	**20829.920**	**17836.740**	**46373.740**

11.2.23 Impact and Critical Analysis of the Implementation

The implementation, critical analysis of the result, short-comings and the suggestion for the revision has been discussed in respect of each working circle individually and the same are furnished as under for each working circle separately.

11.2.24 Selection Working Circle (SWC)

The constitution and prescription of this working circle is given in the table below.

Table 88: Prescription of SWC in outgoing plan

Sl. No.	Items	Description
1	General Constitution	It includes Notto blocks.
2	General observation to vegetation	Average quality is III/ IV. Canopy density 0.3 to 0.7
3	General objectives of management	Increase proportion of Sal to encourage regeneration, full stocking, to improve ecological condition.
4	Area of allotment	7707.080ha.
5	Silvicultural system	Selection felling over exploitable girth, removal of dead, dry and uprooted trees are included for felling.

Sl. No.	Items	Description
6	Rotation of conversion period	150 years
7	Exploitable girth/ diameter	Sal, Bandhan is 150cm and 105cm respectively. Sisoo and rest are 90cm. to 120cm girth respectively.
8	Felling cycle	20 years
9	Table of felling	One felling series in Baripada Forest Division.
10	Method of executing felling	Before marking, demarcation should be taken up. Stone cairns should be erected. Sign boards giving details should be fixed.
11	Method of exploitation	Demarcated and marked coupe shall be delivered to O.F.D.C. Ltd. For exploitation of Timber and Fire wood.
12	Subsidiary Silvicultural operation	Cleaning, climbers cutting and badly damaged stems should be cut.
13	Artificial regeneration	Sowing and planting of economically important species.
14	Miscellaneous regulations	Fire Protection is necessary. Controlled grazing with restriction.
15	Effect of restriction	Fully stocked vegetation
16	Environment of eco-system	Improve Eco-system, regeneration and percentage of Sal.

11.2.25 Impact, Analysis of Result and Observation

During the plan period, moratorium on felling was in force from 1992 to 2004. After lifting of the aforesaid moratorium vide notification No.10F (TF) 26/203-16498/ F&E dt.20.09.2005 the implementation of the prescription has been done in this working circle. Dead and dying trees are available silviculturally for felling. The details of trees marked, felled and out turn are given in the table below.

Table 89: YEAR WISE OUT TURN FROM TIMBER COUPE

Sl. No.	Year	No. of Trees Marked	Out turn			Pole	Value in Rs.	Royalty realized
			Unit	cum	Fire wood in Stacks (12'×3'×3')			
1	1996-97 to 2004-05	0	0	0	0			0
2	2005-06	92	56.750	15.2000	56			49940
3	2006-07	451	198.535	95.1830	100			184638
4	2007-08	302	235.830	84.8033	40	0	670760	245263
5	2008-09	402	310.840	104.9494	60	0	934000	412571
6	2009-10	221	121.090	61.8989	24	0	304700	259700
7	2010-11	350	167.305	65.9816	15	0	--	194289

Sl. No.	Year	No. of Trees Marked	Out turn			Pole	Value in Rs.	Royalty realized
			Unit	cum	Fire wood in Stacks (12'×3'×3')			
8	2011-12	277	Not delivered to OFDC as per direction of the RCCF and FD, STR, Baripada. Reason: The timber coupe of Notto felling series, SWC-XVI (B) and (P), is a part of buffer area of Similipal Tiger Reserve (STR), which is very important for movement of Elephants as well as spill over population of tigers to other adjoining areas, hence working of above coupe was banned by the RCCF and FD, STR, Baripada, vide his memo No. 1651 dt.22.10.2011.					--
9	2012-13	137	143.615	68.1800	0	0	--	186125
10	2013-14	210	173.230	81.7123	12	0	--	240270
11	2014-15	116	90.790	34.0571	5	0	--	131280
12	2015-16	--	No dead and wind fallen trees are available in this coupe.					--
13	2016-17	--	No dead and wind fallen trees are available in this coupe.					--
14	2017-18	--	No dead and wind fallen trees are available in this coupe.					--
15	2018-19	--	No dead and wind fallen trees are available in this coupe.					--

11.2.26 Short Comings and Suggestion

It is found that no green tree has been marked during the last plan period due to the restrictions imposed by Govt. of Odisha. So the harvest of silviculturally available tree in accordance with the prescribed marking rule has not been carried out during last plan period, but hygienic felling i.e. removal of dead and wind fallen tree has been done for upkeep of the health of the Forest.

Depending on the availability of funds, the subsidiary silvicultural operations are carried out, which has affected the regeneration status of the forests. This can be visualized from year-wise target and achievement of the subsidiary silvicultural operation (SSO) in timber coupes.

The Forests were protected against the fire, illicit removal and encroachment. But due to heavy biotic pressure from adjoining areas for firewood, timber and grazing, the desired level of the objective of improving the productivity of Sal forest species composition and established regeneration could not be achieved.

Notto forest block comes under Buffer Area of Similipal Tiger Reserve (STR). The prescription of the Buffer Zone is more conservatively focused and prescribed for removal of trees, which are ecologically available focusing on species diversity, regeneration and soil moisture Conservation (SMC).

Keeping the above factors in view, the area under SWC is required to be effectively protected against fire, grazing, illicit felling and encroachment. Natural regeneration is to be encouraged by removal of Invasive weeds and supplemented by frequent Aided Natural Regeneration (ANR) with indigenous fodder species consumed by the wild animals. Soil and Moisture Conservation measure be taken up. Hence removal of green trees is recommended and tree cover may be more conservatively focused under Wildlife Overlapping Working Circle.

In-spite of heavy anthropogenic biotic pressure due to protection of forest, fire, illicit felling and encroachment, there was some improvement in wildlife population , check on illicit felling and encroachment, though more action is required in field for early improvement of the forest quality.

Year Wise Target and Achievement under Subsidiary Silvicultural Operation in Timber Coupes is given in the table below.

Table 90: Year wise Target and Achievement of SSO in Timber Coupes in ha.

Sl. No.	Year	Target	Achievement
1	1996-97	611.47	Moratorium on tree felling was in force from 1992 to 2004, so no SSO operation has been carried out
2	1997-98	870.46	
3	1998-99	982.15	
4	1999-2K	792.36	
5	2000-01	650.72	
6	2001-02	950.99	
7	2002-03	720.73	
8	2003-04	873.30	
9	2004-05	707.78	
10	2005-06	547.12	40
11	2006-07	611.47	165
12	2007-08	870.46	115
13	2008-09	982.15	165
14	2009-10	792.36	75
15	2010-11	650.72	230
16	2011-12	950.99	230
17	2012-13	720.73	422

Sl. No.	Year	Target	Achievement
18	2013-14	873.30	95
19	2014-15	707.78	35
20	2015-16	547.12	40

The impact on Forest due to Non-achievement of Subsidiary Silvicultural Operation – Subsidiary silvicultural operation (SSO) is a practice of Controlling the establishment, growth, composition, health and quality of forest to meet diverse needs and its values. It is essential to conserve timber, wildlife, water resource, top soil etc. of the forest or the whole to keep up the heterogeneity of Forests for our future generation. For a sustainable forest this should not be over-looked during planning.

Due to non-achievement of subsidiary Silvicultural operation the following negative impacts on forest have been observed.

(1) Invasive growth of unwanted weeds like *Lantana* etc. and climbers ultimately created hindrances to natural regeneration and its success.
(2) Growth of desired trees has been hindered.
(3) The chance of forest fire has increased.
(4) Reduction in number of mother trees caused less natural regeneration.
(5) Increase of sterile and diseased trees ultimately spread diseases among healthy trees.
(6) Increased imbalance in native ecological flora and fauna.
(7) Soil and moisture conservation measures have been hindered, ultimately causing Soil erosion.
(8) Ultimately, the health of natural forest has been affected adversely.

11.2.27 Rehabilitation Working Circle (RWC)

The constitution and prescription of this working circle is given in the table below.

Table 91: Prescription of RWC in outgoing plan

Sl. No.	Items	Description
1	General Constitution	It includes all compartments and blocks of coppice and Rehabilitation Working Circle of last working plan.
2	General observation to vegetation	It occurs in hilly and plain forests. It contains Sal crops from rooted waste.
3	General objectives of management	To get maximum protection, adopt water and soil conservation, provide natural regeneration of Sal to

Sl. No.	Items	Description
		develop the density of depleted and degraded forest. Restocking of Barren and Blank patches by planting.
4	Area of allotment	20829.92 ha.
5	Analysis of valuation of crops	Sal in shrub and pole stage along with drought hardy species.
6	Silvicultural system	No silvicultural system is prescribed. Only rehabilitation measures.
7	Rotation of conversion period	No rotation period is fixed.
8	Exploitable girth/ diameter	No exploitable girth is required for execution of this working circle.
9	Rehabilitation cycle	20 years repeated after 10 years.
10	Table of Rehabilitation	25 Rehabilitation series in Baripada Forest Division.
11	Method of executing Rehabilitation	Demarcation, preparation and treatment map and area orientation approach to previously worked area.
12	Execution	Coppice coupe, Sal rooted waste eroded areas, Hill slopes, Mine spoiled and Old plantation under rehabilitation execution.
13	Subsidiary Silvicultural operation	Cleaning of irregular crop should be taken up at 6^{th}, 12^{th} and 18^{th} years of the working.
14	Artificial regeneration	Marking of dead, dry and uprooted trees, climber cutting, vegetative fencing.
15	Miscellaneous regulations	Suitable changes may be made, if necessary.
16	Effect of Prescription	To make the area fully stocked and check soil erosion
17	Environment of eco-system	Reduce erosion and improve site quality.

11.2.28 Impact, Analysis of Result and Observation

Analysis of Year Wise Target Achievement, Shortfall/ Deviation with reason for shortfall or deviation of Rehabilitation Working Circle in Past System of Management is given in the table below.

Table 92: Impact, Analysis of result and Observation of RWC

Sl. No.	Year	Target in ha	Achievement in ha	Shortfall in ha	Reason of shortfall
1	1996-97	1053.00	1325.000	+272.000	It is found that the area prescribed for working has not been covered fully due to paucity of funds. Prescription of the plan could not be implemented properly, that has affected the forest growth adversely. Due to non-implementation of
2	1997-98	1055.00	60.000	- 995.000	
3	1998-99	1049.00	230.000	- 819.000	
4	1999-00	1040.00	24.017	-1015.983	
5	2000-01	1040.00	850.000	-190.000	
6	2001-02	1032.00	0	-1032.000	
7	2002-03	1033.00	0	-1033.000	
8	2003-04	1042.00	0	-1042.000	
9	2004-05	1038.00	470.000	-568.000	
10	2005-06	1028.00	504.000	-524.000	
11	2006-07	1054.94	150.000	-904.940	

Sl. No.	Year	Target in ha	Achievement in ha	Shortfall in ha	Reason of shortfall
12	2007-08	1055.48	2173.000	+1117.520	silvicultural operation, forest quality has been deteriorated and regeneration status has affected a lot. Out of the allotted area of 20829.92 ha; 13981.017 ha was treated by taking up ANR, Subsidiary Silvicultural operation, Gap planting and SMC measures.
13	2008-09	1050.80	785.000	-265.800	
14	2009-10	1040.87	60.000	-980.870	
15	2010-11	1039.67	955.000	-84.670	
16	2011-12	1033.56	20.000	-1013.560	
17	2012-13	1034.43	400.000	- 634.430	
18	2013-14	1042.66	1100.000	+57.340	
19	2014-15	1038.24	4175.000	+3136.760	
20	2015-16	1029.15	700.000	-329.150	
Total		**20829.80**	**13981.017**	**- 6848.783**	
** Short fall ... (-) Excess ... (+)*					

During the plan period, 13981.017 ha have been worked out under this working circle following the prescriptions, utilizing the funds from different schemes.

11.2.29 Short-coming and Suggestion

It is found that the area prescribed for working has not been covered fully due to paucity of fund. Non-implementation of the prescriptions properly has affected the forest growth adversely. Due to non-implementation of silvicultural operation forest quality has deteriorated and regeneration status was affected. In most of the areas, it has endorsed weeds growth like *Eupatorium*, *Lantana* etc. Encroachment of forest land is another cause, which has reduced the forest coverage causing ecological imbalance. Out of the allotted area of 20829.92 ha, 13981.017ha was treated by taking up ANR, Subsidiary Silvicultural operation, Gap planting and SMC measure.

The entire area of the working circle was protected from fire, illicit felling, encroachment, despite heavy biotic pressure from surrounding villages checking the deterioration of forests to some extent. Hence, this working circle should continue with change of area.

11.2.30 Plantation Working Circle (PLWC)

The constitution and prescription of this working circle is given in the table below.

Table 93: Prescription of PLWC in outgoing plan

Sl. No.	Items	Description
1	General Constitution	Area includes barren, depleted, encroached previously planted areas.
2	General observation to vegetation	Vegetation comprises of dry plain Sal forest and northern dry mixed deciduous forest.
3	General objectives of management	To reforest the barren and depleted area to meet the local demand of fire wood. To encourage the bio-diversity of locally used eco-system.
4	Area of allotment	17914.44 ha.
5	Analysis of valuation of crops	Mainly deciduous species, old plantation.
6	Silvicultural system	Selective felling of old plantation followed by plantation. Plantations are barren land as per the bio-diversity afforestation model.
7	Rotation of conversion period	A planting series comprising of 10 annual plantation units.
8	Exploitable girth / diameter	Theoretically rotation of 10 years is fixed as it varies from species to species and areas to areas.
9	Plantation cycle	10 years and repeated after 10 years.
10	Table of Plantation	15 plantation series in Baripada Forest Division.
11	Method of executing felling	Selective felling followed by artificial regeneration.
12	Method of Plantation	As per Bio-diversity afforestation model.
13	Subsidiary Silvicultural operation	Planting operation could be followed as prescribed in the plantation manual 1977.
14	Artificial regeneration	Gap filling by planting tree species.
15	Miscellaneous regulations	The area shall be closed to grazing at least for 5 years from the year of formation. It shall be protected from fire. No interim revision of plan is anticipated. The plantation activity will follow the prescriptions of Forest Plantation Manual 1977.
16	Effect of prescription	To reforest the blank areas
17	Environment of eco-system	To improve the eco-system and to check pollution of environment.

11.2.31 Impact, Analysis of Result and Observation

Analysis of year wise target and achievement, short falls or deviation of plantations is given in the table below.

Table 94: Impact, Analysis of result and Observation of PLWC

Sl. No.	Year	Target in ha	Achievement in ha	Sort fall in ha	Reason of sort fall
1	1996-97	1783.07	25.00	-1758.07	It was found that, the area prescribed for working has not been covered fully, mainly due to non-availability of area. Paucity of timely assured funds and inadequate field level staff and lack of suitable land in PLWC are primary reason for shortfall. Out of the area 17914.44 ha prescribed for the working, only 3990.32 ha. could be achieved. However the result of working is satisfactory and some area under PLWC has higher density crop.
2	1997-98	1889.31	20.00	-1869.31	
3	1998-99	1746.74	55.00	-1691.74	
4	1999-2K	1797.62	100.00	-1697.62	
5	2000-01	1773.67	0	-1773.67	
6	2001-02	1778.70	100.00	-1678.7	
7	2002-03	1780.91	100.00	-1680.91	
8	2003-04	1797.92	60.00	-1737.92	
9	2004-05	1759.24	6.15	-1753.09	
10	2005-06	1807.26	0	-1807.26	
11	2006-07	0	95.41	+95.41	
12	2007-08	0	680.00	+680.00	
13	2008-09	0	175.00	+175.00	
14	2009-10	0	115.00	+115.00	
15	2010-11	0	902.00	+902.00	
16	2011-12	0	151.76	+151.76	
17	2012-13	0	220.00	+220.00	
18	2013-14	0	290.00	+290.00	
19	2014-15	0	520.00	+520.00	
20	2015-16	0	375.00	+375.00	
Total		**17914.44**	**3990.32**	**-17448.29**	
** Short fall ... (-) Excess ... (+)*					

During the plan period, 3990.32 ha have been worked out under this working circle following the prescriptions utilizing the funds from different schemes. The detailed list is given in Volume II.

11.2.32 Short-comings and Suggestion

It is found that, the area prescribed for working has not been covered fully, mainly due to non-availability of area owing to settlement of rights under Forest Rights Act, 2006, paucity of timely assured fund and inadequate field level staff and high density vegetation in areas prescribed for PLWC. Out of the area 17914.44 ha prescribed for the working, only 3990.32 ha (22%) could be achieved. The survival percentage of species like Teak, *Acacia*, *Eucalyptus* is satisfactory and in case of other browsable and slow growing species, it is poor. The overall composition of local species in plantation could not be achieved. Preferred species remained mainly Teak, *Acacia*, which are non-browsable and fast growing. However the result of working is

satisfactory and some areas have been upgraded to higher density crop. Further there are some old plantations which require either tending or harvesting operation followed by planting. No prescription on harvesting of matured plantations in the working plan led to over-maturity of plantations over 1226.88 ha. and consequent loss due to illicit felling and up rooting of over-matured trees.

11.2.33 Wildlife Management (Overlapping) Working Circle

This is an overlapping working circle of the Forest Division. No area in present Baripada Forest Division was alloted to this working circle. This Division is very rich in faunal composition as well as density. The special objects of management of this Working Circle are:

(1) To improve, maintain and preserve the environment in and around such sanctuary areas, so as to improve the habitat of wild animals.
(2) To conserve the diversity and integrity of biotic communities of plants and animals within natural eco-system and to safeguard the genetic diversity of species on which their continuing evolution depend.
(3) In consistent with the above objectives to carry out ecological, scientific, cultural, economic and environmental research, particularly base line studies, both within and adjacent to these reserves.

During the plan period, wildlife rich pocket i.e. Kuldiha Wildlife Sanctuary has been transferred to Balasore Wildlife Division during the process of re-organization in the year 2003. Similarly the Similipal RF pertaining to the Similipal sanctuary has been transferred to Similipal South Division and Similipal North Division during 2019 for effective management and monitoring. However, improvement of wildlife habitat, integrated development etc. has been implemented. Elephant proof trench, Creation of new water bodies, renovation of existing water bodies and WHS, Corridor development, Pasture development, Salt lick improvement etc. have also been taken up during the plan period.

11.2.34 Impact, Analysis of Result and Observation

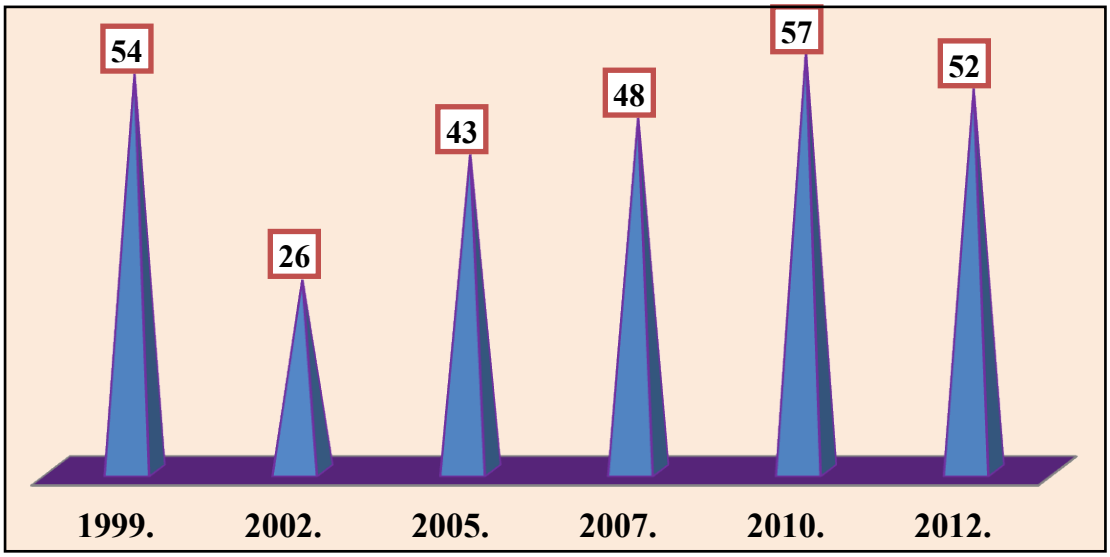
It is observed that due to the aforesaid habitat improvement activities the population of wildlife has been increased as revealed from periodic census carried out in the

Division. On the other hand there is increase in poaching, hunting, traping the wild animals which reduced their numbers. The Human Elephant Conflict is on rising trend particularly due to movement of elephants out side Similipal Sanctuary and annual elephant movement from Dalma Sanctuary, Jharkhand to Nilgiri Forest areas of Balasore Wildlife Division. The Elephant depredation and the compassionate amount are being paid regularly on priority basis. Further Eco-tourism sites have been developed for recreation and to act as an ulternative tourist destination to reduce pressure on Similipal Sanctuary.

Table 95: Year Wise Elephant Census Data

Sl. No.	Year	Male	Female	Sub-adult	Calf	Total
1	1999	12	39	-	3	54
2	2002	-	-	-	-	26
3	2005	-	-	-	-	43
4	2007	8	25	6	9	48
5	2010	5	22	18	12	57
6	2012	5	26	4	17	52

Figure 19: Year Wise Elephant Census



No other census figure related to wildlife population, except that of Elephant is available though there is increasing trend of herbivorous population.

11.2.35 Short-comings and Suggestion

In-spite of different measures taken by the Division to address the aforesaid programme, it is felt that the steps taken so far is not adequate enough to combat problems successfully. So it is suggested to emphasize on Elephant depredation and human wildlife conflict in view of present scenario. The elephant movement areas should be notified as elephant corridors and the electric transmission line should be repaired to prevent sagging of wires which may electrocute elephants. This Division has a number of scenic sites having potentiality for Eco-tourism. Manchabandha eco-tourism spot has been developed during this plan period. This should be encouraged for both conservation of Forests and Wildlife resources and livelihood support to the surrounding dwellers.

11.2.36 NTFP (Overlapping) Working Circle

This is an overlapping working circle covering the entire area of the Forest Division. There are a number of Non-timber Forest produce available in this Division. The special objects of management of this Working Circle are as under.

(1) To develop the Minor Forest Produce potential in the forests with the objectives to alleviate the economy of rural and tribal people.
(2) To develop skills and capabilities of local inhabitants through extensive training, so that during collection of NTFP, there is least damage to forest.
(3) Creating Alternative Avenue of income generation and also permanent assets which could directly contribute to house-hold economy.
(4) Effective exploitation and marketing in order to provide maximum revenue to State exchequer.

During the plan period emphasis was given on NTFP to provide gainful opportunity of earning livelihood to the Forest fringe villagers and other traditional dwellers. The number of activities has been undertaken, like capacity building the local people for scientific harvest, processing storage and marketing of NTFP. Training camps, drying yards, market linkage etc. have been organized for this purpose. Survey of NTFP species has been carried out and the results have been documented for future plan.

11.2.37 Forest Protection (Over lapping) Working Circle

This overlapping Working Circle covered all the forest blocks which need immediate protection from biotic interferences including the blocks and compartments existing in ecologically fragile areas i.e. the area having 30% or more slopes and susceptible to environmental degradation. Due to intense biotic pressure of human and cattle large number of forest blocks of the Division is under threat and at various stages of degradation. These forests required strict protection from illicit felling, grazing and fires. Protection measures coupled with soil and moisture conservation measures were required to be taken up in respect of the forests included in this Working Circle.

11.2.38 Results Observed

During the plan period, the protection activity in the Division has been strengthened with receipt of funds under CAMPA and 13th FC Grant. Anti-smuggling squad, Critical endangered area squad, Anti-depredation squad have been formed in the Division. VSS activities have been strengthened. Adequate measures have been taken for fire protection with incentives to VSS. In spite of this arrangement illicit felling has not been substantially checked.

Critical Analysis of Bakhla's Plan

Bakhla's Plan was for 20 years from 1996-97 to 2015-16. The plan could not be worked out from 1996-97 to 2004-05 in SWC area due to moratorium on tree felling from 1992 to 2004. The shortfall noticed in RWC area is 6848.783 ha. and in PLWC area is 17448.29 ha.

Comparison of Area with Past Plan

The area managed under different Working Circles from 1996-97 to 2015-16 and to be managed From2021-22 to 2030-31 is furnished as **Appendix – VIII**.

11.2.39 Annual Schemes from 2016-17 to 2020-21

After completion of Sri A.O.F. Bakla's Working Plan of Baripada Forest Division from the year 1996-97 to 2015-16, 5 annual working schemes have been approved by Govt. of India and have been implemented in the field. The brief highlights of approved annual working schemes are given below.

Objectives and other essentials of forest management planning during 2016-17 to 2020-21:

- Sustainable management of forests, its biodiversity and environment under the guidelines of the national forest policy.
- To maintain forest cover on hill slopes and catchments of rivers and water bodies to check soil erosion.
- To give a check to deforestation which is the most hazardous factor for conservation of forests and its eco-systems.
- To protect and manage wildlife resources with a view to conserve and enrich bio-diversity.
- Involve people so as to address the above problems by meeting their livelihood needs through promotion of eco-tourism, creation of opportunities for smooth and sustainable collection of NTFP and provision of marketing facilities.

GENERAL OBJECTIVE OF MANAGEMENT

General Considerations

Sustainability of forest eco-system is an essential component of the environmental conservation efforts and any degradation of forests would have an adverse impact on various systems such as water resources, agriculture, bio-diversity, environment, climate and human health besides the life of tribal people and other communities living in and around the forest areas. Therefore, the ecological functions are of vital importance for the welfare of the present and future generations.

The National Forest Policy, 1988 emphasizes highest priority to the environmental role of forest and advocates ensuring environmental stability and ecological balance including atmospheric equilibrium, which are vital for the sustenance of all life forms; human, animal, and plants, subordinating the direct economic benefit out of it. The policy aims at maintenance of the environmental stability through preservation and wherever necessary, restoration of ecological balance that has been adversely disturbed by serious depletion of forests. This policy also aims at increasing the productivity of the forests to meet the ever-increasing needs of the essential goods and services, which the forest provides. Thus the forests of the country should not be

managed as a source of revenue but with a conservation orientation with the active involvement of stakeholders who are living in and around the forests.

The ever increasing population, change in life style and increasing demand on the forest products have exerted tremendous pressure on the existing forest resources of the tract of the Division. Due to this increasing pressure on forests, there has been general degradation and denudation of many forest blocks of the Division. In fact, due to low diversification of the local economy, the dependence of the people on agriculture and forests for their sustenance continued to be high. The principles of the National Forest Policy, 1988 were the guiding factors for the general objectives of forest management in these revised working schemes.

The general short-term objectives of these schemes were as follows:

(i) To prevent further degradation of the forests by regulating the felling of trees and giving more emphasis on conservation and protection of the existing flora and fauna.

(ii) To maintain permanent closed canopy on the hill slopes and catchments of rivers and reservoirs to check soil erosion, to regulate water yield and maintain hydrological balance.

(iii) To restock the barren, degraded and unproductive areas through appropriate techniques and prescriptions.

(iv) To improve the composition and productivity of these forests by increasing investments and through scientific management.

(v) To protect and manage wild life resources with a view to conserve the bio-diversity.

(vi) To meet the needs of the local people in keeping with the aforesaid environmental imperatives.

(vii) To provide opportunities for sustainable livelihood security to the people dependent on forests.

(viii) To enlist people‘s participation in achieving the aforesaid objectives.

CONSTITUTION OF WORKING CIRCLES

Following working circles were proposed for the working schemes for the period from 2016-17 to 2020-21.

1. Selection Working Circle
2. Rehabilitation Working Circle
3. Plantation Working Circle
4. Wildlife Management Working Circle (Over-lapping)
5. N.T.F.P Working Circle (Over-lapping)
6. JFM Working Circle (Over-lapping) only in 2016-17 and 2017-18.

Table 96: WORKING CIRCLE WISE AREA ALLOTTED (under annual scheme)

Year	Selection Working Circle	Rehabilitation Working Circle	Plantation Working Circle	Wildlife Management Working Circle (O)	N.T.F.P Working Circle (O)	JFM Working Circle (O)
2016-17	2436.53	1950.47	750.04	-	36858	33771
2017-18	2418.72	1891.05	731.8	-	36858	33771
2018-19	392.36	2309.86	1746.47	-	-	-
2019-20	380	2080.87	1792.62	-	-	-
2020-21	380	2079.61	1773.67	-	-	-

SELECTION WORKING CIRCLE (under annual scheme)

Specific provisions for Silvicultural operations in this working circle were as below. Regeneration cleaning along with climber cutting was proposed to be done on regular interval. Special attention was proposed to be given for Fire control measures and Soil Conservation measures. The proposed constitution and prescription of this working circle is given in a tabular statement, that below.

Sl. No.	Items	Description
1	General Constitution	It includes Notto Forest Blocks.
2	General observation to vegetation.	Average quality is III/IV. Canopy density 0.3 to 0.6
3	General objectives of management.	1. Increase in proportion of Sal, encourage regeneration full stocking to improve ecological condition. 2. To stabilize the environment and ecology with enrichment of the vegetation both in quality and quantity through proper silvicultural treatment. 3. To Encourage and establish the natural regeneration of the crop with special emphasis on hill

<table>
<tr><th>Sl. No.</th><th>Items</th><th>Description</th></tr>
<tr><td></td><td></td><td>slopes and other eco-fragile areas.
4. To limit the harvest of mature crop to silviculturally and environmentally permissible extent through selection felling.
5. To ensure the general hygiene of the forests through removal of dead and uprooted trees and strangulating climbers.
6. Appropriate Soil and Moisture Conservation measures was to be taken up, for ensuring the streams, nalas and ultimately the rivers to become perennial and to increase the fertility of the soil.
7. Effective control of biotic interference to protect and promote the forests.
8. Eradication of invasive weeds where ever necessary.</td></tr>
<tr><td>4</td><td>Silvicultural system</td><td>The Notto forest block was to be worked under Selection system felling i.e. dead, dying and uprooted trees was to be removed to improve the health of the forest.</td></tr>
<tr><td>5</td><td>Exploitable girth class</td><td>
<table>
<tr><th>Sl. No.</th><th>Name of the species</th><th>Exploitable girth at BH (in cm)</th></tr>
<tr><td>1</td><td>Sal</td><td>150</td></tr>
<tr><td>2</td><td>Bija, Champa, Kaima, Mundi & Kasi.</td><td>180</td></tr>
<tr><td>3</td><td>Teak</td><td>120</td></tr>
<tr><td>4</td><td>All other species</td><td>150</td></tr>
</table>
</td></tr>
<tr><td>6</td><td>Felling series</td><td>One felling series in Baripada Forest Division.</td></tr>
<tr><td>7</td><td>Felling cycle</td><td>The felling cycle was fixed to 10 years coinciding with the plan period.</td></tr>
<tr><td>8</td><td>Yield calculation</td><td>The yield was to be regulated by area with riding factor on the number of silviculturally available trees of exploitable girth class based on Smyth‘s safe guarding formula.</td></tr>
<tr><td>9</td><td>Sequence of felling</td><td>The felling was to be phased and sequential in the forest blocks to maintain the order of rotation for the next plan period.</td></tr>
<tr><td>10</td><td>Subsidiary Silvicultural operation</td><td>Cleaning, climbers cutting and badly damaged stems were to be cut.</td></tr>
<tr><td>11</td><td>Artificial regeneration</td><td>Sowing and planting of economically important timber, NTFP and fodder species.</td></tr>
<tr><td>12</td><td>Miscellaneous regulations</td><td>Fire Protection is necessary. Controlled grazing with restriction.</td></tr>
<tr><td>13</td><td>Environment of eco-system</td><td>Improve Eco-system, regeneration and percentage of Sal.</td></tr>
</table>

Sl. No.	Items	Description
14	Marking Rules	1. All dead and uprooted trees excluding the retention of those absolutely necessary for congenial habitat of Wild Life was to be marked for felling throughout the entire coupe area. 2. Marking was strictly prohibited in the areas where the slope of the terrain is more than 30° except for dead and uprooted trees. 3. No live standing tree was to be marked within 50 meters of road side and on either side of the bank of nallas, streams, rivers and other water bodies. 4. Marking not to be done within 50 meters radius around the key habitats of wild animals such as den, saltlick, wallows, game tank and waterholes. 5. No fruit bearing trees namely Mahula, Mango, Tamarind, Kusuma, Karanja, Amla, Harida, Bahada, Chara, Bela, Ambada, Kendu, Jamu etc. having significant importance was to be marked. 6. Trees above the prescribed exploitable / harvestable girth at breast height were eligible for marking, but the number and location of the trees to be marked for felling was to be controlled by the prescribed ceiling of number of trees for the coupe as per yield calculation and the silvicultural permissibility. 7. Notwithstanding the general principle and practice of silviculture, a tree was considered as silviculturally permissible / available for marking on following criteria:- a. That its removal should not create a permanent gap in the canopy. b. That its removal would not affect the regeneration and fauna particularly the habitat of wild animals. c. That its removal would not allow the invasion of weed growth. d. That its removal would promote the growth of crop of middle and under storey. e. That its removal would encourage regeneration. f. That it is not putting on a valuable increment and has become unsound, diseased and deformed. 8. Climbers strangulating the growth of tree crop were to be cut to facilitate the development of the crop. 9. For areas coming under Buffer Area of Similipal Tiger Reserve, marking was to be carried out.

Sl. No.	Items	Description
		10. Instead of species preference, growing vigour, dominance and healthy conditions was to be taken into considerations while choosing among the trees of exploitable girth for retention.

Impact and Critical analysis of the implementation

No coupe working was carried out due to absence of available tree in assigned coupes of Notto RF under Selection Working Circle. However marking of trees should have been carried out to show No. of dead/ wind fallen trees available for felling. Subsidiary Silvicultural Operation was also neglected.

REHABILITATION WORKING CIRCLE (under annual scheme)

The objectives and treatment of Rehabilitation Working Circle were as follows. The constitution and prescription of this working circle is given in a tabular statement below.

Sl. No.	Items	Description
1	General Constitution	It includes all compartments and blocks of coppice and Rehabilitation Working Circle of last working plan.
2	General observation to vegetation	Areas located in hilly and plain forests. It contains Sal crops from rooted waste.
3	General objectives of management	To get maximum protection, adopt water and soil conservation measures, provide natural regeneration of Sal to develop the density of deleted and degraded forest. Restock of Barren and Blank patches by planting.
4	Analysis of valuation of crops	Sal in shrub and pole stage along with drought hardy species.
5	Silvicultural system	No silvicultural system was prescribed along with Rehabilitation measures.
6	Rotation of conversion period	No rotation period was fixed.
7	Exploitable girth/ diameter	No exploitable girth was required since no felling was proposed.
8	Rehabilitation cycle	10 years.
9	Rehabilitation Series	8 Rehabilitation Series in Baripada Forest division.
10	Method of executing Rehabilitation	Demarcation, preparation and treatment map and area orientation approach to previously work.

Sl. No.	Items	Description
11	Execution	Coppice coupe, Sal rooted waste eroded areas, Hilly slopes, Quarry spoiled and Old plantation under rehabilitation execution.
12	Subsidiary Silvicultural operation	Cleaning of irregular crop was to be taken up at 6th, 12th and 18th years of the working.
13	Artificial regeneration	Marking of dead and wind fallen trees climber cutting and vegetative fencing.
14	Miscellaneous regulations	Suitable changes could be made, if necessary.
15	Effect of Prescription	To make the area fully stocked and check soil erosion
16	Environment of eco-system	Reduce erosion and improve site quality.

Impact and Critical analysis of the implementation

The achievement under Rehabilitation Working Circle is less than proposed area.

PLANTATION WORKING CIRCLE (under annual scheme)

The old plantations already existing were included in Selection Working Circle. In this working circle all new plantations taken up were included.

The special objectives of this Working Circle were as follows:-

(i) To restock the degraded and blank areas with artificial regeneration/ Artificial Natural regeneration by uprooting weeds, if available.

(ii) To enhance the land productivity through soil and moisture conservation.

(iii) To increase the bio-diversity for improvement of local ecology.

(iv) To reduce the grazing pressure on forest by supply of fodder grasses.

(v) Old matured plantation was to be proposed for removal and restocked.

Sl. No.	Items	Description
1	General Constitution	It includes the blank areas available in different forest blocks which were suitable for plantation.
2	General observation to vegetation	Area was blank, practically devoid of substantial tree growth but with some sparse scrubby vegetation.
3	General objectives of management	To increase the forest cover and protect the barren land from further degradation and prevention of soil erosion and conservation and improvement of moisture regime.

Sl. No.	Items	Description
4	Analysis of valuation of crops	Not required, since new plantation was to be taken up
5	Silvicultural system	No silvicultural system was necessary for this working circle.
6	Rotation of conversion period	No rotation period was fixed.
7	Exploitable girth/ diameter	Not necessary.
8	Plantation cycle	10 years
9	Plantation Series	7
10	Method of executing Plantation	A generalized method cannot be prescribed due to variable nature of plantation sites. Site specific schemes were prepared by the Range Officer and method of plantation prescribed in that scheme was adopted
11	Execution	Plantation was executed as per the above scheme and in accordance with the provision of plantation manual as well as guideline issued by the higher authority from time to time.
12	Tending operation	It was carried out depending on the condition of the plantation both growing stock and density
13	Miscellaneous regulations	Suitable prescription, if necessary.

List of ANR plantations raised during plan period and till 2018-19 is enclosed as **Appendix – XV** and List of AR plantations raised during plan period and till 2018-19 is enclosed as **Appendix – XVI.**

Impact and Critical analysis of the implementation

The achievement of block plantation is much less than proposed target from 2016-17 to 2020-21.

WILDLIFE (OVER-LAPPING) WORKING CIRCLE (under annual scheme)

Under Wildlife (Over-lapping) Working Circle there was proposal for socio-economic development of local communities, creation of check dams to provide drinking water to wildlife, planting of favourable species for wildlife and planting of grasses etc. which has been complied with some extent.

N.T.F.P. (OVER-LAPPING) WORKING CIRCLE (under annual scheme)

Under N.T.F.P. (Over-lapping) Working Circle there was proposal to develop skills and capabilities of local inhabitants through extensive training to reduce damage to the forests and to provide proper marketing avenues to increase income of forest fringe villagers. There was proposal for training in proper drying, grinding and storage of seeds collected from forests and proper plucking, drying and storage in case of leaves collected. Forest based alternate income training like rope making from grasses, siali leaf plate and sal leaf plate making etc. were proposed. Limited progress has been achieved in above proposals.

JFM (OVER-LAPPING) WORKING CIRCLE (under annual scheme)

Under JFM (Over-lapping) Working Circle there was proposal to increase co-operation with the people protecting nearby forests through JFM Resolution/ CFM Resolution. 454 Nos. of JFM Commitees were operating, protecting an area of 30368.424 ha of forest land.

ABSTRACT OF ACTION TAKEN REPORT FOR THE YEAR FROM 2016-17 TO 2019-20 OF BARIPADA FOREST DIVISION

Sl. No.	ITEM OF WORK	YEAR OF OPERATION			
		2016-17	2017-18	2018-19	2019-20
1	Targets of SWC in ha	798	697	392	392
	Achievement of SWC in ha	-	-	-	-
2	Targets of RWC in ha	2600	745	1200	990
	Achievement of RWC in ha	**2600**	**720**	**1200**	**990**
3	Targets of PLWC in ha	200	155	-	50
	Achievement of PLWC in ha	**250**	**115**	-	**50**
4	Coupe Working Target in ha	723	710	723.30	380
	Coupe Working Achievement in ha	-	-	-	-
5	Subsidiary Silvicultural Operation Target in ha	2309.86	745	-	-
	Subsidiary Silvicultural Operation Achievement in ha	**1200**	**720**	-	-
6	Subsidiary Silvicultural Operation Target for 2016-17 Coupe in ha	-	697	-	-
	Subsidiary Silvicultural Operation Achievement in 2017-18 in ha	-	**697**	-	-
7	Bamboo Plantation Target in ha	50	20	-	-
	Bamboo Plantation Achievement in ha	**50**	**10**	-	-
8	RDF Target in ha	2600	-	-	-
	RDF Achievement in ha	**2600**	-	-	-
Source – DFO, Baripada Forest Division					

Impact and Critical analysis of the implementation

The coupe working was discontinued from 2016-17 till date, with the observation that there is no availability of trees suitable for felling. No marking of tree is conducted to assess the availability of trees of exploitable girth. It is recommended that marking of tree should be conducted every year to assess availability of trees suitable for felling.

Silvicultural Research Plot:

There is a ‑Silvicultural Research Station‖ at Jamsole over an area of 20 ha. Silvicultural Research was being carried out by the state Silviculturist, Bhubaneswar. Presently the site has been transferred to Baripada Forest Division under Rasgobindpur Range.

11.3 Special Work Improvement Undertaken

Firefighting squads have been formed with provision of vehicles to control the forest fire. All the forest roads have been repaired; wooden culverts have been replaced with concrete culverts and bridges. Rest houses, Nursery sheds have been renovated nicely. Range Offices, Baracks have been constructed, conference hall have been modernized; Watch towers have been constructed in the remote forest areas. Railway Control Rooms have been set up to monitor the movement of Elephants and other wild lives in the railway tracks and causality of Wild lives have been checked. VHF sets, walky-talkies, cell phones, motor cycles have been provided to the field staff for the protection of the forest. Forest Kalyan Samiti has been formed with the construction of Kalyan Mandap and Halls.

It is observed that the demand on NTFP collection is on rise and it is a good source of livelihood to the local people particularly tribal people. This tangible benefit from the forest is a recurring one. Due to the aforesaid activities under taken during last plan period there is visible impact of gainful income made by the local people. The only defect is the destructive collection leading to the damage of crop ultimately hampering the production. Though people used to collect the NTFP since time immemorial, but there is necessity for building their capacity to collect scientifically and optimally with proper storage, processing, value addition and marketing. Since the regulation of collection and trade of NTFP has been transferred to Panchayati Raj Department, the role required playing by the department to enhance the production in

the Forest and capacity building of the primary gatherers is wanting. Though some improvement has been achieved, but there is a lot yet to be done in this regard.

11.3.1 Short Comings and Suggestion

When the production of timber is on declining trend, the most viable option for providing income to the local community lies on non-timber forest produce. Both silvicultural practices to boost the production with simultaneous capacity building of the gatherers are highly essential.

11.3.2 Constrains in Implementation of Prescriptions of Working Plan

Scheduled Tribe and Other traditional Forest Dwellers (RoFR) Act, 2006. There was increasing expectations to occupy more and more forest land after 13/12/2006 under the shadow of the above Act. This created problems for smooth implementation of prescription of working plan. The titles issue under FRA left lesser blank patches in forest blocks for plantation activity.

Allotment of target of afforestation programme under different schemes is not at par with the prescription of the Working Circles.

Implementation of newly emerged people friendly programmes to provide livelihood options to the forest dependent communities, sometimes created barrier for implementation of working plan.

Moratorium on felling was in force from 1992 to 2004. After lifting of the aforesaid moratorium vide notification No.10F (TF) 26/203-16498/ F&E dt.20.09.2005 the implementation of the prescription has been done.

11.3.3 Future Guidance and Suggestion – (After compilation of Part-II)

The Working Plan is based on scientific management of its forest and wildlife without contradicting the genuine interest of the people. The area allotted to Plantation Working Circle (PLWC) has been reduced in the aforesaid proposal. The consistent JFM activities have resulted in regaining vegetation in forested areas, thereby reducing the scope for further artificial regeneration. In absence of suitable site for block plantation, ANR plantation with equal no. of seedlings may be planted. Other biotic pressure like settlements of encroachment under ST and OTFD (RoFR) Act,

2006 has lots of contributions for shrinkage of suitable sites for the purpose. The Acts, rules and regulations associated with management of forests is looked into properly; as a result, it will not become a barrier for the implementation of prescriptions of the Working Plan. The following Acts and Rules came into force during the current plan period need critical examination for smooth implementation in the field.

* The Forest (Conservation) Rules, 2003
* The Orissa (Rewards for detection of Forest offences) Rule, 2004
* The Scheduled Tribes and Other Traditional Forest Dwellers (RoFR) Act, 2006
* The Scheduled Tribes and Other Traditional Forest Dwellers (RoFR) Amendments Rules, 2012

11.3.4 Points Needing Attention

There is specific provision in Working Plan for management of old Eucalyptus plantations raised by the department before 1995 which have crossed its harvesting period.

Harvesting of plantations raised by the social forestry wings under different components which have crossed the exploitation period can be harvested as prescribed in the JFM Dalil with provision for replanting out of value of harvested produce.

The responsibility and accountability of the VSS and beneficiaries of forest rights holder under FRA has been well defined and this should be intimated to them by the Divisional Forest Officer through Range Officer.

11.4 Past Yield, Revenue and Expenditure

Past yield from timber coupes with year wise out-turn has been furnished in Table-90.

Table 97: Detailed Revenue Collected in Baripada Forest Division.

Year	Revenue (in Rs.)
2014-15	11560658
2015-16	6877537
2016-17	2,33,08,847.45
2017-18	90,95,570
2018-19 (up to Nov-18)	66,78,433

Table 98: Annual Revenue & Expenditure in Baripada Forest Division during 2019-20		
Year	**Name of Scheme**	**Expenditure**
Revenue	**Revenue**	
	22-2406-01-101-0168-02154-Timber	127
	22-2406-01-101-0169-02154-Timber	1453543
	22-2406-01-800-0097-02082-Misc. receipt	1148111
	Total- Revenue	***2601781***
Exp.	**Admn. Expenditure & Programme Expenditure**	
	Admn. Expenditure	6602488
	Public work- (Admn. Expenditure)	900000
	Programme Expenditure	9620138
	CSS-Programme Expenditure	21391277
	CAMPA (General)	58338305
	CAMPA (Wildlife)	13196364
	FDA	7304129
	Total-Expenditure	***117352701***

12. CHAPTER – XII

STATISTICS OF GROWTH AND YIELD

The growing stock was assessed by taking up sample point enumeration based on random sampling as per sample point prescribed by NRSA and ORSAC. After completion of the enumeration, the total bio-mass of the growing stock is calculated. Till date for total bio-mass calculation no research work has been taken up in the Baripada Forest Division to know the influence of the climatic and edaphic factors on the growth of the forest nor is any local volume table or yield table available to assess the yield. During this sample point enumeration, sample plots are selected to assess the growth of forest.

Statistics of Growth and Yield

Local statistics of growth and yield are not reliable. No conclusion could be arrived. There are no sample plots in the area nor have any systematic studies been undertaken for the purpose. In absence of complete information on growth, yield, out turn, the published literature on growth statistics for different species can be used for various purposes. Further, scientific study is required in this regard to gain more knowledge. From the published literature on growth statistics for some important species, information on Sal *(Shorea robusta*), Teak (*Tectona grandis*), Kuruma (*Haldina cordifolia*), Moi (*Lannea grandis*), Dhaura (*Anogeissus latifolia*), and Karada (*Cleistanthus collinus*) are available.

Few field trial data of indigenous species collected from State Silviculturist are furnished in the table below for ready reference.

Table 99: Field Trial of Different Species

Species	D. No.	Place of trial	Year of trial	Av. Ht.	Av. Dia	MAI		Survival %
						Ht.	Dia	
Adina cordifolia	41/81	Koshala	1981 (31)	1455	8.8	46.94	0.28	63
Dalbergia latifolia	25/87	Khandagiri	1987 (25)	639	7.1	25.56	0.28	39
	25/87	Koshala	1987 (25)	1510	8.9	60.4	0.36	20
	5/95	Koshala	1995 (17)	812	4.8	47.76	0.28	55
	11/96	Koshala	1996 (16)	649	3.4	40.56	0.21	44
Lannea grandis	25/83	Baragaon	1983 (29)	796	18.4	27.45	0.63	25
Pterocarpus marsupium	43/85	Baragaon	1985 (27)	826	13.4	30.59	0.50	31
	41/86	Baragaon	1986 (26)	791	12.9	30.42	0.50	29

Species	D. No.	Place of trial	Year of trial	Av. Ht.	Av. Dia	MAI		Survival %
						Ht.	Dia	
Pterocarpus marsupium	9/92	Koshala	1992 (20)	980	9.2	49	0.46	49
	15/96	Koshala	1996 (16)	795	7.3	49.69	0.46	60
Shorea robusta	41/87	Khandagiri	1987 (25)	858	9.9	34.32	0.40	21
	27/91	Khandagiri	1991 (21)	616	6.7	29.3	0.32	35
Tectona grandis	33/76	Koshala	1976 (36)	1917	15.2	53.25	0.42	27
	158/95	Khandagiri-P1	1985 (17)	669	4.8	39.35	0.28	45
		Khandagiri-P2	1995 (17)	558	4.4	33.82	0.25	30
	14/96	Khandagiri	1996 (16)	669	4.5	41.81	0.28	43

Estimation of Capital Value of Forests

At present forest is not considered as revenue yielding component of the state. The ecological value of the forest can be assessed to ascertain its capital value. Environmental impact survey, along with creation of employment opportunity for the rural poor can be taken in to consideration for evaluation of capital value of the Forest. Mostly we consider the tangible product of the forest while calculating the value but on the other hand the most important part of forest is its intangible effect. The Ministry of Environment, Forests and Climate Change has formulated a guideline to determine the value of the forest considering all factors according to crop density class.

12.1 Statistics of Forest Carbon Stock

Introduction: Carbon is an element commonly found on earth in various forms. It is an essential element of all forms of life. The bodies of living organisms contain a substantial portion of carbon. Carbon is also found in large quantities in non-living things like oil, nature gas, coal, rocks and air. Globally carbon is held in a variety of different stocks as oceans, fossil fuel deposits, terrestrial system and the atmosphere. In the terrestrial system, carbon is stores in rocks, sediments, swamps, wetlands, forests, forest soil, grassland and agricultural. About two thirds of global terrestrial carbon is contained in forests and forest soil. In addition, there are some non-natural human-created carbon stocks as wood products and waste dumps.

The exchange of carbon among its various forms from the atmosphere, oceans and land is called the carbon cycle. The most significant from of carbon exchange is by the plant. Plants draw in carbon dioxide (CO_2) from the atmosphere through the process of photosynthesis and turn it into biomass (wood, leaves, fruits etc). A part of

the CO_2 taken in by plants is returned to the atmosphere through respiration. Thus, the carbon cycle is renewed and continues interminably.

The delicate balance maintained by nature is being overturned by anthropogenic factors. The extraction of fossil fuels from the earth and many other human induced activities are overloading the atmosphere with carbon dioxide and other greenhouse gases thereby raising serous issues including the very survival of the human race.

Excessive quantities of greenhouse gases disturb the balance of transfer of heat though the atmosphere, Normally solar radiation absorbed by space heats the earth while infrared radiation lost to space cools the earth. The presence of excessive anthropogenic greenhouse gas emission (mostly carbon dioxide from fossil fuel burning) in the atmosphere reduces the Earth‘s ability to cool to outer space through infrared radiation. The result is a heightening of the greenhouse effect, a nature process by which gases as CO_2 absorb and reflect long-wage radiation retaining much of that heat in the Earth‘s atmosphere and consequently warming the planet.

Human induced disturbance to the carbon cycle have been both direct and indirect. Direct effects include the addition of new carbon to the active global carbon cycle through the combustion of fossil fuels and land use change leading to modification of the vegetation structure and distribution. Indirect human impacts on the carbon cycle include changes in other major global biogeochemical cycle, alternation of the atmosphere composition through the additions of pollutants as CO_2 and changes in the biodiversity of landscape and species. Currently about three-quarters of the direct human induced disturbances to the global carbon cycle are due to fossil-fuel combustion. Emission currently exceeds 6 GT C/yr (gigatonnes of carbon per year) and is still increasing.

Carbon and Forest Eco-System

Forests play an important role in mitigation and adaptation of climate change, Forests sequester and store more carbon than any other terrestrial ecosystem and are an important natural _brake‘ on climate change. Carbon sequestration by forest has attracted much interest as a mitigation approach, as it has been considered a relatively inexpensive means of addressing climate regimes. The large geographical area, varied topography, long coastline and the possession of the oceanic island have endowed it

with a diversity of natural biomass from desert to alpine meadows, from tropical rain forests to temperate pine forests, from mangroves to coral reefs and from marshland to high altitude lakes.

Research it still in progress to understand the effect of climate change on life forms and ecosystem. It has been suggested that the increased proportion of carbon dioxide in the atmosphere increase fertilization effect and enhances growth in plants. In t6hat case warming and an increase in atmosphere CO_2 should productivity and increase the sink potential of vegetation (assuming nutrient supply is adequate and enough inoisture is available). A study on the effects of CO_2 fertilization on vegetation and soil in temperate forest ecosystem suggests that plant C increase in response to excess atmospheric CO_2 (Downing et al., 1992).

The main carbon pools in tropical forest ecosystems are living biomass of trees and under story vegetation and the dead mass of litter, woody debris and soil organic matter. The carbon stored in the aboveground living biomass of trees is typically the largest pool land the most directly impacted by deforestation and degradation.

While living trees are growing, they continued to store carbon and therefore acted as carbon sinks. Consequently, mature forests are huge storehouses of carbon. The young trees which grow faster rates also work as carbon sinks. The bigger (and older); the trees, the higher is their ability to cycle and sequester carbon (Morris Bishop, 1998). Though, it is important to consider the annual rate which is as more critical factor (Harmon et al., 1990). In India, a more effective management practice is selective felling of those trees which have already attained a matured age and no more work as sink. On felling such trees, younger trees are planted which sequester more carbon.

Forest that play a potentially significant role in climate change adaptation, maintenance of ecosystem services and provision of livelihood options, are increasingly threatened by deforestation, fragmentation, climate change is likely to be on forest to provide soil and water protection, ;habitat for species and other ecosystem services. The potential negative impacts of climate change on dry forests are of particular concern since dry forest soil are more of particular concern since dry forest soil are more susceptible to wind and water erosion. According to the Millennium

Ecosystem Assessment, dry land occupy 41% of the earth‘s land area and home to more than 2 billion people. Intensive human intervention as fire, grazing, agriculture, firewood collection, has adversely transformed many forests.

Methodology for the Assessment of Forest Carbon

The ‗Good Practices Guidance (GPG) developed by Intergovernmental Panel on Climate Change (IPCC) is universally accepted source book for concepts, definitions, various pools, methods, defaults values, various required equations etc. for preparing account of forest carbon stocks (FCS). Since the subject has been developing in last two decades, many new concepts and methods have emerged but still many challenges remain. The GPG uses the term ‗Categories‘ to refer specific sources of emission/ removals of greenhouse gases. As per the IPCC GPG 2003, the categories are: Forest land, Cropland, Grassland, Wetlands, Settlements and other land, each land-use category is further subdivided. The following sub-categories are considered for the sector:

Forest Land Remaining Forest Land: An increase in the carbon stocks of Forest Land remaining Forest Land would mean improvement in canopy density and growing stock of forest. A decrease in the carbon stock of Forest Land remaining Forest Land is generally considered as degradation of forest resources.

Land Converted to Forest Land: Any non-forest and converted to Forest land would generally be considered as afforestation.

According to GPG, the calculation of GHG inventories require information on extent of area (in case of LULUCF) of an emission/ removal category termed as ‗Activity date‘ and emission or removal of GHG per unit of area (removal of CO2 per ha. of added forest area) termed as ‗Emission factors. The main aim is to estimate there factors for the reporting unit. Once these are estimated, the emission or removal, can be ascertained using the change in carbon stocks.

The different approaches are given in the GPG to present the activity data (the change in area of different land categories). **Approach 1** identifies the total area for each land category; it only provides ‗net‘ area. **Approach 2** identifies the land conversion between categories by tracking and provides tabular information about land-use

conversion. **Approach 3** involves, in addition, the spatial tracking of land-use conversion.

In general, moving to higher tiers improves the accuracy of the inventory and reduces uncertainty, but the complexity and resources needed for conducing inventories also increase with higher tiers.

The Tier 1 approach employs the basic method and default emission factors provided in the IPCC Guidelines (Workbook), Tier 1 methodologies usually use activity data that are spatially coarse, such as nationally or globally available estimates of deforestation rates, and agricultural production statistic and global land cover maps.

The Tier 2 approach applies emission factors and activity data which are defined by the country. Tier 2 can also apply stock change methodologies based on country-specific data. Country-defined emission factors/ activity data are more appropriates for the climatic regions and land use system in the country.

At Tier 3, higher order methods including models and inventory measurement are repeated over time and supported by high-resolution activity data and disaggregated at sub-nation level. Such systems may use Remote Sensing and GIS tools for tracking land use change over time.

In Forest ecosystem, enormous carbon is stored which is classified in five pools by GPG. The living portion of biomass carbon is classified in two approaches to emission accounting: the inventory approach and the activity based approach, which are outlined below. Both approaches are supported under IPCC guidance (IPCC, 2003) and are based on the underlying assumption that the flows of GHG to or from the atmosphere are equal to changes in carbon stocks in the biomass and soils.

Trees species absorb Carbon dioxide (CO_2) from the atmosphere through chlorophyll of leaves for preparation of food for their growth. The more the growth of tree species, the more is the absorption of Carbon dioxide (CO_2) from the atmosphere and also the more is the storages Carbon inside the trunks of the trees. The Carbon content of a tree is approximately the half of dry weight of the tree. In the National Working Plan Code-2014, it has been provided to calculate the Carbon stock of forest by laying grid based sample plot of 0.1ha area.

The permanent sample plots (PSP) are visited and the carbon stocks of the permanent sample plots are estimated as per the methodology. If the carbon stock of the sample plots will increase, then it can be ascertained that carbon have been sequestrated. The amount of carbon sequestration can be found out from the following equation.

$$\Delta C = \frac{Ct_2 - Ct_1}{t_2 - t_1}$$

Where ΔC = Amount of carbon sequestration, Ct_1 = Carbon stock of the current year, Ct_2 = Carbon stock after the time period _t'.

When the value of Δ C is positive carbon have been sequestrated and forest growths have improved but when ΔC is negative the forest growths have degraded.

The carbon stock of the 48 nos. of the permanent sample plots in different strata of under different Forest Ranges are shown in the table in the **Appendix – XVII.**

12.1.1 Methodology Adopted

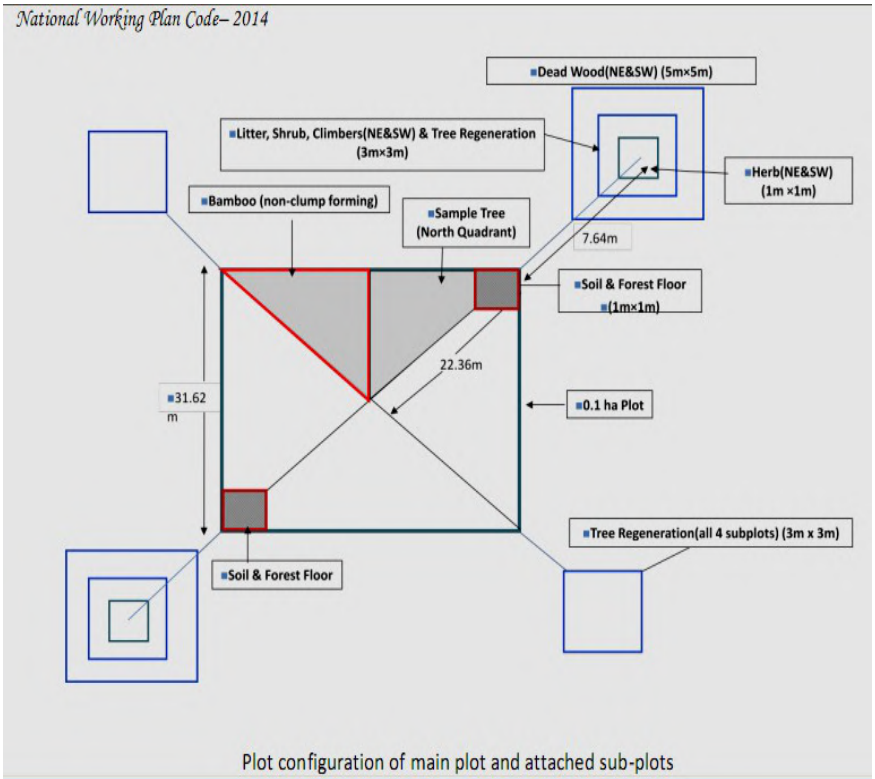
For assessment of growing stock as well as carbon stock, the following methodology is adopted;

1. The Sample point was derived by utilizing satellite imagery by NRSA, Hyderabad. The location lat. and long. is the centre of the sample point. Four nos. of diagonals are laid at an angle of 45° NE, 135° SE, 225° SW and 315° NW, each diagonal measuring 22.36mtrs, so that a square plot of 1ha. has been formed. Enumeration of 1 sample plot measuring 0.1ha. is taken up for bio-diversity assessment.
2. After marking the grids, the Geo-coordinates of the centre of the grid are found out from the digitized toposheet and navigated with the help of GPS. On the centre of Sample Plot, one bamboo stick/pole of 1.5mtrs height is fixed. The code of the Sample Plot is written in white paint on the top of the stick/pole and a nested quadrate of 1m × 1m is laid at NE and SW corners.
3. Nested quadrates of size 3m × 3m and 1m × 1m are laid at a distance of 30 mtrs from the central point along the four diagonals, one more quadrate of size 5m × 5m at NE and SW direction is laid.
4. While approaching the Sample Plot, stock assessment and mapping (Earmarking the stocked area on the map) and ground silviculture of remote

sensing data is done by traversing the forests (Compartment / Management. Unit) so as to cover the entire area making assessment of site quality, tree species composition and its health, density, crop age, etc. and Plot Approach Form (Form-I) is filled up. Changes at all locations are described in this Form. Grassy patches, scattered trees, plantations raised, etc. is described in Form-I. Regeneration status of main species is observed. Information on undergrowth, climbers, important herbs, grasses, shrubs, MAPs, NTFP yielding species, flagship faunal species and their traces, eco-tourism potential areas, special wildlife habitats and their interface with humans, biotic factors is recorded. GPS tracking facility is used to develop GIS based maps.

5. The general information around the Sample Plot over an area of 2ha. *i.e.* at a radius of 80mtrs from the centre of the Sample Point is recorded.
6. All trees having GBH 30 cm and above is enumerated, species wise and girth class wise and recorded. Trees touching north and west border lines of the plot are enumerated and trees touching the east and south border lines are not enumerated. Enumeration of trees starts from NE corner of the plot and proceeds in clock wise direction and recorded. Height of all the trees in North-quadrant should be measured and recorded. The data of shrub, climbers and regeneration status from all four quadrates of 3m × 3m is collected and recorded. The data of herbs from all nested quadrates of 1m × 1m laid within each quadrate of 3m×3m is collected and recorded.
7. Along with nested quadrates of 3m × 3m and 1m × 1m, one more quadrate of size 5m × 5m at NE and SW direction is laid out for the estimation of carbon stock. In 5m × 5m, all the dead wood above 5cm diameter (15cm girth) are collected, weighed and recorded. In 3m × 3m, all the woody litter *i.e.* branches below 5cm diameter (15cm girth), are collected, weighed and recorded. In 3m × 3m, all shrubs and climbers are up-rooted, weighed and recorded. In 1m × 1m plot, all herbs/grasses including leaf litter are collected, weighed and recorded. In 1m × 1m plot, forest floor are swept, collected, recorded and a portion is kept for carbon analysis. After that a pit of 30cm × 30cm × 30cm is dug at the centre of these1m × 1m plots and a composite sample of soil weighing 200gm is kept for organic carbon analysis.

The diagram of laying of Sample Plot for inventory of forest resource and carbon stock is given below.



Carbon Stock in Range:

Range wise carbon stock of forest area under working plan in Baripada Forest Division is calculated 7805803.923 tonne per ha.

Table 64: RANGE WISE CARBON STOCK OF FORESTS UNDER WORKING PLAN

Name of the Range	Plan Area in Ha.	Blank Area (in Ha.)	Forest Cover in Ha.	Range wise Biomass (t/ha)	Total Range Biomass (t/ha)	Range Carbon stock (t/ha)
Bangiriposi	2272.358	411.852	1860.506	165.12	307206.7507	153603.3754
Betnoti	12571.684	2730.334	9841.35	676.93	6661905.056	3330952.528
Deuli	11036.824	2235.152	8801.672	246.37	2168467.931	1084233.965
Dukura	3679.218	771.686	2907.532	177.44	515912.4781	257956.239
Kaptipada	8294.462	196.115	8098.347	292.09	2365446.175	1182723.088
Pithabata	3634.12	398.574	3235.546	556.46	1800451.927	900225.9636
Rasgobindpur	5068.866	970.465	4098.401	207.02	848450.975	424225.4875
Udala	3481.188	897.296	2583.892	365.25	943766.553	471883.2765
Division Total	***50038.72***	***8611.474***	***41427.246***		***15611607.85***	***7805803.923***

PART - II

FUTURE MANAGEMENT

1. CHAPTER – I

FUTURE MANAGEMENT

Basis of Proposals

1.1 Objective of Management:

The objective of this working plan is to provide a basic approach for sustainable management of forests & preserve its bio-diversity in light of National Forest Policy, encompassing the environmental, economic and socio-cultural dimensions. The objectives for attaining this goal include conservation of forests, reducing forest degradation, maintenance of eco-system services, enhancement of forest productivity together with establishment of regeneration to improve forest health and vitality. Silvicultural requirements of species for increasing growing stock and carbon sequestration potential needs to be taken care of. The biological diversity, soil and moisture conservation, people‟s involvement in planning & management of forests, fulfilling socio-economic & livelihood needs of the people will be the activities to achieve objective of this working plan.

General Principles and Objectives:

The guiding principles of National Forest Policy in addition to the general policy of the State Government and the actual condition of the forests in Baripada Forest Division have been the guiding factors for finalizing the general objects of management for forests. An area of 50488.734 ha (124 RF = 46373.74 ha, 15 PRF = 2484.45 ha, 06 PF = 989.23 ha. 127 VF = 588.314 ha and UF = 53 ha.) has been considered for management in this revision. The area diverted/ de-reserved is 397.014 Ha and the UF is 53 ha. Therefore, the balance area considered in this revision is 50038.72 ha (RF = 45992.176 ha. PRF = 2469.33 ha., PF = 988.9 ha. & VF = 588.314 ha.). The main objects of management are given in the table below.

Table 100: Objects of Management

Sl. No.	Object of Management
1	To conserve and improve the existing vegetative covers for soil and water conservation with a view to ensure ecological and environmental stability.
2	To endeavor to meet the requirements of people for agricultural small timbers, firewood, bamboos and other forest produces.
3	To improve the composition and productivity of the forests for the production of timber and non-timber products.
4	To protect and manage Wildlife resources with a view to conserve, help and enrich bio-diversity.
5	To promote development of sustainable and non-destructive livelihood opportunities for local communities.
6	Promote Joint Forest management involving Vana Surakhya Samiti for sustainable management of forests.
7	Ensure sustainable production of Non-timber forest produces and thus enhance livelihood opportunities of the communities dependent on forests.
8	To rehabilitate the depleted forest through artificial regeneration and tending of the existing vegetation.
9	To ensure proper protection of the Village Forest, Revenue Forest, DLC Forest and Tree outside forest area. Promotion of commercial forestry.
10	To promote development of Ecotourism area.

1.1.1 Dynamic of Forests and Stands

Dynamics of Forest and Stands

Forest is a living dynamic entity which changes its species composition, growth pattern and bio-diversity with passage of time. **Forest dynamics** describes the underlying physical and biological forces that shape and change a forest ecosystem. The continuous state of change in forests can be summarized with two basic elements: disturbance and succession.

Disturbance

Forest disturbances are events that cause change in the structure and composition of a forest ecosystem, beyond the growth and death of individual organisms. Disturbances can vary in frequency and intensity and include natural disasters such as fire, wind, and outbreaks of insects, fungi, and other pathogens, animal-caused effects such as grazing and trampling, and anthropogenic disturbances such as logging, pollution, the clearing of land for urbanization or agriculture, and the introduction of invasive species.

Small-scale disturbances are the key to creating and maintaining diversity and heterogeneity within a forest. Small-scale disturbances are events such as single-tree blow downs, which create gaps that let light through the canopy to the understory and forest floor. This available light allows early-successional shade-intolerant species to colonize and maintain a population within the dominant forest, leading to the complex spatial mosaic forest structure recognized as old-growth.

The sets and patterns of natural disturbances that characterize a particular area or ecosystem are referred to as the ecosystem‟s *disturbance regime*. A natural community is closely linked with its natural disturbance regime. Notto Reserve Forest of Baripada Forest Division have a disturbance regime consisting of high-frequency but small-scale events, result in a highly complex forest dominated by very old trees.

Succession

Forest succession is the process by which species recover and regenerate after a disturbance. The type of disturbance, the climate and weather conditions, the presence of colonizing species and the interactions among species all influence the path that succession will take. In plain forests of Baripada Forest Division, illicit felling followed by community protection led to creation of sal dominated forest with less species diversity. After a stand-replacing disturbance, Sal dominated miscellaneous forest spreads over majority of plain forest of Baripada Forest Division.

Many successional trajectories follow a basic four-stage development pattern. The first of these stages, *stand initiation*, occurs after a major disturbance and involves many species arriving in the area of abundant light and nutrients. The second stage, *stem exclusion*, describes the growth and competition of these species as resources become less available; likely one or a few species outcompetes and becomes stand-dominating. The third stage, understory re-initiation, involves further disturbance and the creation of gaps; at this point stratification develops, with layers of canopy, mid-storey, and understory appearing. The final stage, known as old-growth, is the extension and completion of the understory re-initiation; a complex multi-aged and multi-layered forest.

This plan aims at: -

- Enhancing species composition towards a climatic climax, comprising species of higher economic value.

- Ensuring sustainable production of annual biomass.
- Enhancing bio-diversity of the forest.
- Enhancing production of NTFP as alternative source of income to the local people.

1.1.2 Forests and Soil

The forest enhances the soil condition through addition of leaves and debrishes enriching the fertility and soil organic content. When soil is degraded, it also affects the vegetation. Soil organic matter and humus help in growth of favourable soil micro-organisms which help the vegetation. Notto RF is a hilly tract with medium dense vegetation. This forest land is highly prone to soil erosion in barren patches. We need to maintain good vegetation to protect soil against erosion. In all other forests of Baripada Forest Division, soil erosion is visible near the streams in rainy season. In order to keep the soil healthy, this plan sets following objectives: -

- To protect forest against grazing.
- To check soil erosion through check dams, gully plugging.
- To conserve humus layer on the forest floor.
- To maintain vegetative cover in plain forests and grass cover in slopes.

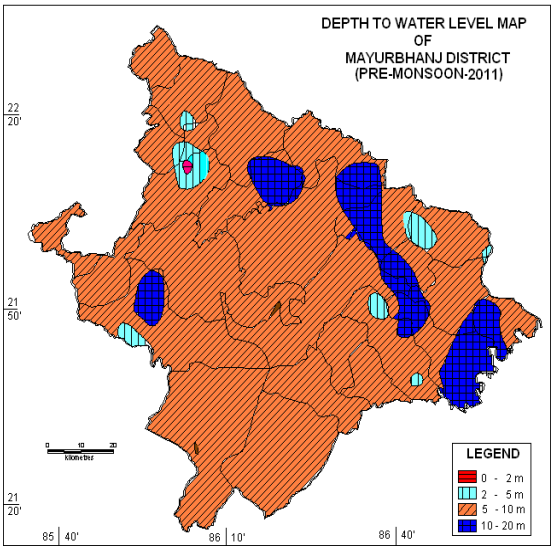
1.1.3 Forests and Water

Forests are store house of water. All the nalas/ springs originate from forests. The flows of water in the spring/ nala/ rivulets depend on water holding capacity of the forest floor. Recharge of ground water table mostly depends upon runoff time, percolation of surface water. Reduced time of percolation increases runoff. Availability of surface water throughout the year is essential for supply of drinking water to the wildlife.

Ground Water Resources: As per the ground water resources assessed during 2009, the net ground water resources availability in Baripada Forest Division is very good. Annual rainfall in this Division is 1400-1700 mm, which is highest in Odisha. The distribution of rainfall is also good. Perennial rivers like Budhabalang, East Deo, Sono, Kalo. Salandi and many small nalas flow from Similipal Tiger Reserve and enrich the ground water resource of this Division. The dense forest vegetation in Baripada Forest Division helps in penetration of rain water to recharge ground water

resource. Soil and moisture conservation measures are necessary to stop soil erosion and recharge ground water. Plantation across the slope is recommended to conserve soil and water.

Plate No.2



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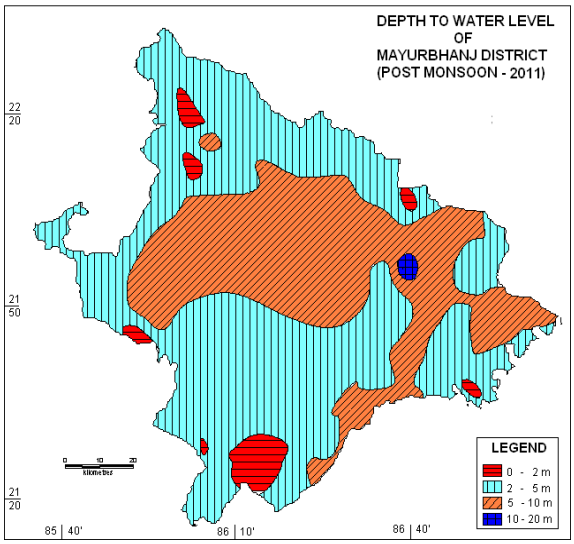
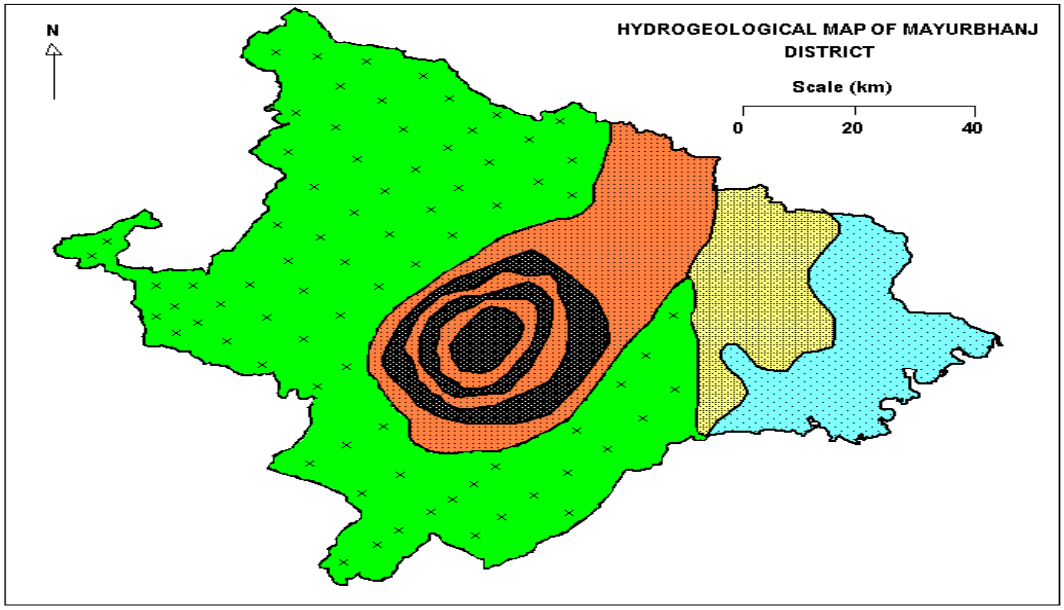


Plate No. 4



LEGEND

Age Group	Lithology	Hydrogeological Condition & Groundwater Potential
Quaternary Upper Tertiary	Recent Alluvium, Clay, Silt, Sand, Gravel, Pebble etc.	Fairly thick regionally extensive unconfined/confined aquifer down to 30m yield up to 25lps.
	Older Alluvium and laterite, silt, sand ferruginous/Calcareous, concretion, lithomergic clay	Moderately thick and regionaly extensive confined/unconfined aquifer down to 150m yield less than 15lps.
Precambrian	Volcanics, Epidorites etc.	Groundwater resticted to weatherd residuum/fracture zones having secondary porosity yield 5-10lps. Low yield 1-5lps.
	Slate, Phyllites, Schist, Gneiss, Marble	
	Granite & Granite Gneiss	Groundwater restricted to weathered residuum and farcture zone yield 5 lps. In weatherd mantle and 10-15lps. In fracture and fissured formation

and digging of water conservation pits in plain forests.

- To protect and maintain thick vegetation on both sides of nala/ rivulets.

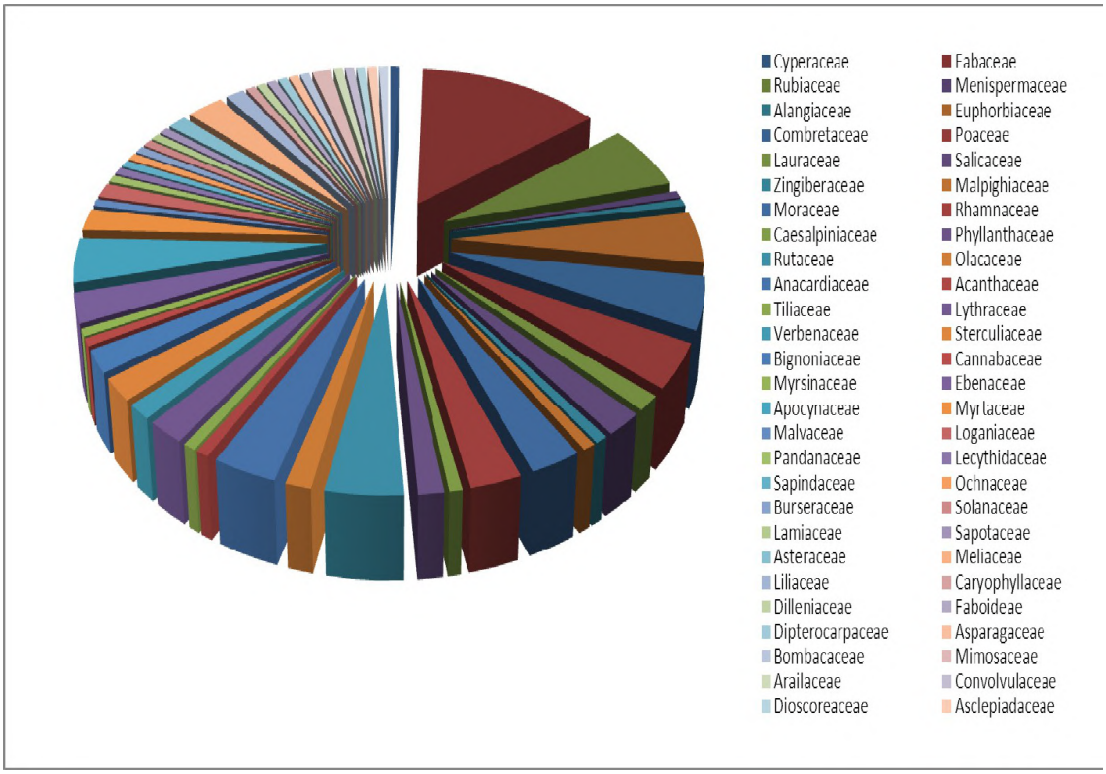
- To treat catchment areas of nala/ rivulets to enhance sustainable flow of water in rivers/ rivulets/ nalas.
- To create water bodies within forest blocks and improve existing natural water bodies.

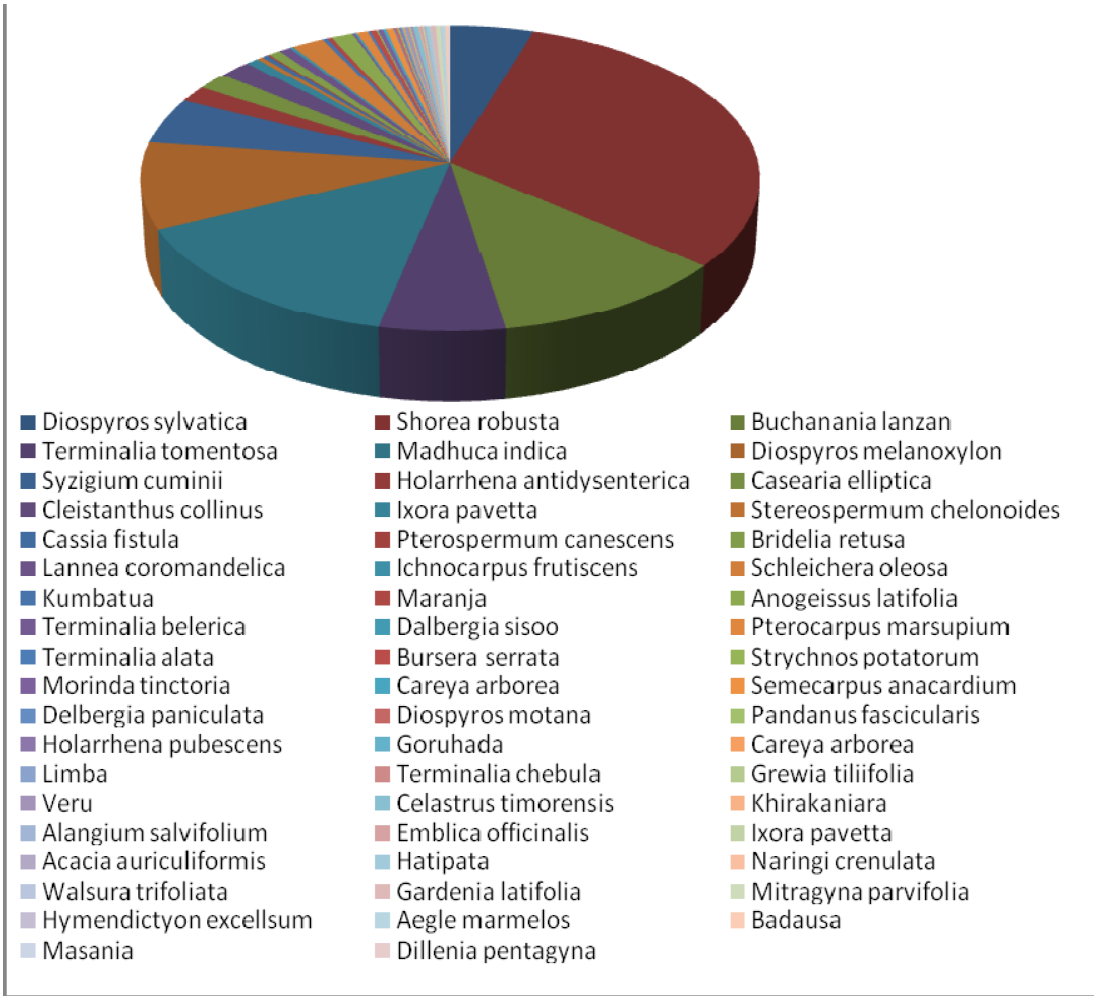
Drainage:

The Division is mainly drained by the Budhabalanga, Salandi, East-deo, Jambhira, Sono and several other tributaries originated from Similipal hills. All these rivers exhibit dendritic type of drainage pattern and are structurally controlled.

1.1.4 Forest Biodiversity

The vegetation of Baripada Forest Division is rich in plant and animal diversity. In Kaptipada Range alone there are 87 tree species, 24 shrub and 28 herb species found during NTFP survey. Family wise and tree wise distribution of the plant species recorded in Kaptipada Range is given below.





Sub-tropical forests offer a diverse set of habitats for plants, animals and micro-organisms. Consequently forests hold the majority of the world‟s terrestrial species. However these biologically rich systems are increasingly threatened, largely as a result of human activity. This plan aims: -

- To preserve bio-diversity of natural forests.
- To take appropriate steps, to prepare bio-diversity register of the locality.
- To prevent mono-culture during artificial re-generation.
- To encourage planting of medicinal plant species, fodder species and NTFP species.

1.1.5 Climate and Forests

The relationship between climate and forest is complementary to each other. The climate influences the forest composition and forest ameliorates the climate of the region. Extreme climatic condition like cyclonic storm, drought damages the forests.

Forests are sensitive to climate, and so climate change can have a great effect on the dynamics of the ecosystem. Rising carbon dioxide levels can increase the productivity and growth of trees, which will then decrease as other nutrients become limiting. Changes in temperature and precipitation can affect the success of various species and the resulting species assemblage. Many factors of climate change can also affect an ecosystem‟s disturbance regime, making the forest more or less susceptible to different disturbances and altering or even preventing recovery after a disturbance. Increasing provisions of soil and moisture conservation will help the plants in dry weather and creation of water holes along the water streams will supply drinking water to wild animals in dry summer days. In order to combat climate change following objectives have been outlined for this plan.

- To improve the crop density of forest vegetation.
- To increase tree cover outside forest.
- To reduce emission of greenhouse gases.
- To create carbon sink through farm forestry.
- To create more village woodlots.
- To introduce alternate/ renewable source of energy through JFM resolution.

1.1.6 Socio-Economic considerations and generation of forest based employment opportunities and livelihood options

Forest management aims at community welfare. Hence community participatory management practices have been introduced through JFM since, 1985. Subsequent JFM Resolutions also expanded scope of participatory forest management through constitution of VSS. Baripada Forest Division is famous for sal leaf plate and sal leaf cup production in large scale. Presently the volume of trade of sal leaf materials is around Rs.20 crore. About 70% of sal leaf plate and Cup is manufactured at Betnoti. We need to create such manufacturing centre in Block Headquarters for distribution of income and low transportation cost. We also need to improve the quality of processing of all NTFP species for increasing employment opportunities and livelihood options. The objectives intended to be fulfill in this plan are as follows: -

- To involve VSS in forest micro-planning and forest management.
- To enhance/ support various forest-based livelihood opportunities involving forest produces.
- To strengthen usufruct sharing mechanism for interim/ final harvest.
- To organize skill development training for VSS members.
- To support the VSS in adopting scientific method in collection of NTFP, processing, storage and marketing of NTFP.
- To support VSS to use alternative energy source replacing fuel wood.
- To protect local culture and practices of local people involving forest.

1.1.7 Tool for integrated development

For overall development of forest resources in the Division dovetailing of various development schemes, adoption of modern technology in forest management, nursery raising, tissue culture etc. are required to be implemented. The District Administration and other line Departments are to be integrated for improving economic condition of forest fringe villagers. Forests provide medicinal plants for local cure of ailments. Local people use to collect fruits, flowers and leaves of forest plants for consumption. Cattle of the locality use the local forests for grazing. Perennial streams coming out of forests provide irrigation water to nearby agricultural fields. Dry and dead branches of the trees are used as fuel wood for cooking. Mahua flower, Mahua seeds, Kusum seeds, Sal seeds, Char seeds, Harida fruits, Bahada fruits and amla fruits are collected and sold by local people for their income and employment. Sal leaf plates and cups have become cottage industry in villages near forests which engages the local women and gives them income at their door step.

Forest Development Agency and OFSDP programs use to involve coordination of other line departments like Agriculture Dept., Horticulture Dept., Soil Conservation Dept. and Sericulture Dept. in socio-economic development of villagers. Steps should be taken to increase such coordination activities in future. This plan aims: -

- To develop forest resources through various schemes like MGNREGA.
- To improve planting stock through tissue culture.
- To identify and protect “plus trees”.

- To imbibe knowledge on modern scientific technology in soil conservation to improve forest.
- To use satellite imagery output for forest management.

1.1.8 Performance Indicators for Objectives of Management

The objectives of the outgoing plan have not been fully achieved. The prescribed prescriptions have not been implemented. Therefore it is difficult to analyses it"s results. The productivity of forest of the Division has been reduced due to lack of proper and timely silvicultural operations. Therefore, the forests have in general degraded during the outgoing plan period. In some forest blocks, the crop condition has improved mainly because of active participation of the local people in protecting and conserving forests in the intervening period. In most of the forest blocks, the crop condition has been degraded possibly because of lack of interest of the local people in Forest Protection. This indicates the necessity to assess the performance of working plan practices in enhancement/ enrichment of forest vegetation and other activities taken up.

In order to assess the performance on above outlined broad objectives, a set of performance indicators are given below to evaluate/ assess the performance in a periodical basis. First year of the plan (2021-22) may be taken as base value and subsequent results may be compared to evaluate the achievements.

Performance Indicators

Sl. No.	objectives	Parameters for Assessment	Frequency	Remarks
1	Dynamic Forests & Stand	Species composition.	1st, 6th & 10th Year	Sample survey method.
		Annual Bio-mass Production.		Basal area method (M^2/ha.).
		Sustainable production of timber.		Annual production in Cum per annum.
2	Forests & Soil	Gully formation/ silt in run off.	1st, 6th & 10th Year	Analysis of runoff water.
		Humus layer in the forest floor.		Study of forest soil profile.
		Grazing pressure		Random assessment in November & December.
3	Forests & Water	Thick vegetation in catchment of nala.	1st, 6th & 10th Year	Interpretation of satellite imagery.
4	Forest Bio-diversity	Bio-diversity Register	1st, 6th & 10th Year	Bio-diversity registers to be maintained for comparison.
		Natural re-generation		Regeneration survey.

Sl. No.	objectives	Parameters for Assessment	Frequency	Remarks
5	Climate & Forests	Crop density	1st, 6th & 10th Year	FSI report.
		ToF		FSI report.
		Fuel wood dependency/ use of renewable energy		Participatory rural appraisal.
6	Socio-Economic Considerations & Generation of Forest Based Employment Opportunity & Livelihood Options	Forest Based Employment & Livelihood Opportunity	1st, 6th & 10th Year	Local Survey
		Usufruct sharing mechanism	Annual	Records of distribution of harvest in JFM areas.
		Skill development training on value addition of NTFP	Annual	Survey on NTFP products.
7	Tool for Integrated Development	Improvement of forest resource through MGNREGA & other Schemes	Annual	Fund flow from other agencies.
		Improvement of planting stock through tissue culture.	Annual	Inspection of nursery.
		Adoption of modern technology in soil conservation	Annual	Result evaluation
		Use of satellite input	Annual	Self-assessment

1.2 Method of treatment to be adopted

The prescriptions made in the outgoing plan/scheme were with the objectives almost similar to the ones set for the present revision. Moreover, for lack of proper and sufficient cultural operations, the productivity of forest has been drastically reduced, particularly with regard to over matured plantations and congestion of forests due to deviations of prescriptions of last working plan. Hence, the forests have in general degraded during the outgoing plan/scheme period though at many places, crop condition has shown improvement mostly because of active participation of local people along with forest department. All these ground realities have necessitated the need for protection and improvement of forests as the prime methodology of management.

Since, dependence of the people on forests cannot be done away with for variety of obvious reasons, the management practices to be prescribed should also lay special emphasis on the people‟s participation in the process of regeneration, protection and development *vis-à-vis* their *bona fide* requirements of different forest produces. Thus, in this changed situation, the treatments prescribed in the revision are commensurate with these requirements as well.

The forests of Baripada Forest Division are broadly categorized as below.

- Hilly miscellaneous forests of Notto RF, Sukhuapata PF and some hilly patches of Bangiriposi Range.
- JFM forests with even aged Sal dominated forests protected by villagers.
- Forest adjoining to Similipal Sanctuary, inhabited by wild animals.
- Large forest blocks like Deuli RF and Suliapada RF, used frequently by wild animals.
- Plantation blocks like Jamsole RF, part of Manchabandha RF, Itamundia RF, Nahara RF, Baisinga RF etc.

1.2.1 Plantations Raised under Social Forestry Scheme in Notified Village Forest Blocks.

All the 127 notified Village Forests have been included under this working plan for the 1st time and has been included under Plantation Working Circle. These areas need demarcation and pillar posting. These 127 Village Forests have been planted under Social Forestry Scheme. These plantations will be harvested as per the approved scheme in phases after getting permission from the Divisional Forest Officer, Baripada Forest Division. The Divisional Forest Officer will divide the plantation into two or more patches for phase-wise removal and re-planting on the next monsoon out of sale proceeds obtained through harvest of part of plantation. Without assurance of re-planting, plantation will not be allowed to be harvested. The sharing of produce in village forests managed by VFC will be regulated as per Rule-9 of the Odisha Village Forest Rules, 1985.

1.2.2 Eucalyptus/ Acacia Plantations Raised in Forest Blocks.

It is observed that there are over matured Eucalyptus/ Acacia plantations in Reserve forest blocks, planted prior to 1995, which are not harvested in time because of lack of provision in previous working plan. In Rasagobindpur Range there are 53.484 ha., Deuli Range 150 ha., Betnoti Range 440.81 ha., Dukura Range 150 ha., Udala Range 150 ha. and Bangiriposi Range 65 ha., totaling 1059.294 ha over-matured Eucalyptus/ Acacia plantations are available in Baripada Forest Division. In addition 553.674 ha. of over matured Social Forestry Plantations exist in 127 Village Forests. These Eucalyptus and Acacia trees are above 20 years and are fit for harvest followed by re-plantation of indigenous species. In the areas of movement of elephants, species eaten

by elephant and other wildlives should be given priority. The Divisional Forest Officer will divide the plantation into patches as recommended for phase-wise removal and re-planting on the next monsoon as per year wise proposal enclosed. The sharing of Forest produce in case of VSS areas will be regulated as per Para-11 of Joint Forest Management Resolution, 2011. In case of village forests, managed by VFC the sharing of forest produce will be regulated as per **Rule 9 of the Odisha Village Forest Rules, 1985**.

1.2.3 Teak Plantations Raised in Forest Blocks.

Teak plantations have been raised in Jamsole RF, Manchabandha RF, Badsahi R.F. and K.C. Pur RF which have not been attended for decongestion or thinning. The Divisional Forest Officer will inspect the plantation and take decision on requirement of thinning/ branch cutting to improve the quality of plantation.

1.2.4 High Forest

Most of the hilly forest tracts included in this revision is located at South-Western tract in Notto RF with preponderance of sal mixed intimately with miscellaneous crop. The prevalence of annual fire makes the treatment more challenging. Big mother trees of important species other than sal need to be protected and preserved for profuse seeding and establishment of seedling and sapling. Notto RF is a single patch of 7707.08 ha. of hilly terrain adjacent to Similipal Sanctuary. This is the best habitat for wild animals like Tiger, Elephant, Bear, Boar, Sambar, Birds, and Reptiles etc. Notto RF is rich in plant-diversity. 87 tree species, 24 Shrubs and 28 Herbs are found in Notto RF during NTFP survey which belongs to 54 families of plants. Trees of exploitable diameter are available in this forest for which 7707.08 ha. has been included under Improvement Working Circle.

1.2.5 Degraded Forest

The existing crops in the degraded forests have extensive eroded patches. These degraded forests are to be protected from human interferences to enable this crop to re-establish. Re-stocking the blank patches through assisted natural regeneration (ANR) has been suggested. The wildlife habitat as far as possible will not be disturbed by any technical operation. Annual forest fire shall be controlled by creating awareness amongst the inhabitant of all forest fringe villages. Green felling has not been prescribed here. Big mother trees of important species other than sal

need to be protected and preserved for profuse seeding for adequate regeneration. Young even aged Sal crops of 20-30 years age constitute about 70% of the tree number of these forests, which are mostly protected by villagers through JFM/ CFM. These forests constitute the majority of forest areas of Baripada Forest Division. These forests should be improved under Rehabilitation Working Circle. Soil and Moisture conservation measures, Water percolation pits, contour trenches, Contour bonding, etc. will be created. Invasive weeds are to be uprooted in every five year within Forest block.

1.2.6 Forest Block Areas under Encroachment/ Affected by Quarry Operation

One DGPS survey was conducted during 2010-11 to assess the amount of encroachment in forest blocks of Baripada Forest Division. The NRSC map prepared during working plan showed "no forest" area within forest blocks. It is assessed that 4243.029 Ha. of Forest areas within the notified Forest Blocks have been encroached by the villagers. These areas have been included under Plantation Working Circle for bringing the area under vegetative cover. Some forest lands adjoining to Similipal Sanctuary, part of Kuliana RF and part of Sukhuapata PF are affected by quarry operation. These areas have been included under Plantation Working Circle for bring in the area under vegetative cover.

1.2.7 Forest Development Agency Plantations

It is observed that some VSS have not utilized funds received through Forest Development Agency, Baripada Forest Division and the funds meant for plantation are lying in the Passbook of the concerned VSS. Steps may be taken for utilization of the funds advanced for plantation activities. The existing FDA plantations are in degraded state. These planting area are to be protected from encroachment, removal of stone and illicit felling to enable this crop to establish. Re-stocking the blank patches through artificial regeneration has been suggested. The wildlife habitat as far as possible will not be disturbed by any technical operation. Annual forest fire shall be controlled by creating awareness amongst the inhabitant of all forest fringe villages.

1.2.8 Participatory Forest Management through JFM/ CFM

Forest fringe villagers have been assigned with the responsibility of protection and management of forests & wildlife under provision of JFM/ CFM. Participatory Forest Management through JFM/ CFM Resolution should be extended to all forest areas protected by communities, but not yet coming under Joint Forest Management/ CFM. These JFM/ CFM forests will be managed under JFM (Over Lapping) Working Circle.

1.2.9 Wildlife Management

Inter-state migration of wild elephants is a common phenomenon in Baripada Forest Division. Hundreds of elephants originating from Jharkhand (Dalma Sanctuary) enter Baripada Forest Division through West Bengal and move to Nilgiri Sub-division of Balasore District. This working plan proposed for creation of sufficient ponds and planting trees used by elephant as food all along elephant corridor / path used by elephants. Further it is proposed to construct forest rest houses/ forest rest sheds along the elephant corridor to act as camp for the elephant depredation prevention team. Baripada Forest Division is rich in wildlife particularly tiger, Elephants, bear, deer, sambar etc. In the outgoing plan, prescriptions were made for management of these wildlife resources. The prescription has not been implemented properly. The heavy traffic on the road and entry of people into the habitat disturbed the reproduction and multiplication of wild animals. Poaching of wildlife is very serious during Makar Sankranti and Pana Sankranti, which should be stopped. Absence of water holes in dry summer is forcing the wild animals to enter human habitat for drinking water. The population of the wildlife is alarmingly decreasing. Natural water holes will be improved and new water holes will be created for use by wild animals during summer. Therefore, prescription has been given in this plan to improve the habitat and implement strategies for wildlife protection.

1.2.10 Management of Tree Outside Forests

Tree Outside Forest area in Baripada Forest Division is 5805.78 ha.. All plantations outside RF, PRF, PF, VF, Revenue Forest and DLC Forest are called tree outside forest. Avenue plantations, trees in non-forest Govt. land, trees in private land, constitute Tree Outside Forests. It is proposed to facilitate raising of commercial forestry crop for use in industries like Emami Paper Mills Ltd., Balasore, JK Paper Mills, Rayagada etc. in private holdings for increasing income of farmers and

increasing tree cover. Permit free species will be preferred for easy harvest and transportation by farmers. Teak, Piasal and other economic species can also be planted under commercial forestry.

1.2.11 Special Rehabilitation Treatment

Special rehabilitation treatment should be taken in the forest blocks like, Sukhuapata PF, Udala RF, Kanpura RF, Kuliana RF, Dighi RF etc. A list of such forest blocks should be prepared which is denuded and degraded needing special rehabilitation treatment. Efforts ranging from complete protection from biotic interference to tending and rehabilitation measures supplemented by artificial regeneration in gaps can be taken up for rehabilitation of these forest areas.

1.2.12 Boundary Pillar

In most of the blocks, boundary lines are not being maintained properly and some of the pillars are in a dilapidated condition. Therefore, the need is to consolidate the block boundaries with RCC pillars to check encroachment and posting of all boundary pillars with their coordinates. Signboards should also be fixed at prominent places for the blocks and compartments. These measures will ensure strict protection of forests from encroachment.

1.2.13 N.T.F.P. Management

Non timber forest produces are the main stay of rural economy of this tribal district. There is necessity to increase the productivity of all such NTFP items and monitor its collection and disposal in the interest of the forests and the collectors. Sixty- four NTFP items have been transferred to the control of local bodies. No step is being taken by Panchayati Raj Department to ensure minimum support price for NTFP till date. Forest department should continue efforts / measures to recommend appropriate authority on block wise minimum support price for NTFP for gaining the confidence and cooperation of the local people so that they would be willing to assist in the process of protection and improvement of the forests. Appropriate method of collecting NTFP without damaging forest, quality storage of NTFP through construction of NTFP godowns and improved/ scientific processing of NTFP can go a long way in providing additional employment and income to the local people.

1.2.14 Eco-tourism Spots

The existing crops in the forest blocks adjoining to Eco-tourism spot need intensive protection. These forests are to be protected from encroachment, removal of stone and illicit felling to enable this crop to reestablish. Re-stocking the blank patches through artificial regeneration has been suggested. The wildlife habitat as far as possible will not be disturbed by any technical operation. Annual forest fire shall be controlled by creating awareness amongst the inhabitant of all forest fringe villages. Green felling has not been prescribed here. The prescriptions of Forest (Conservation) Act should be followed in managing eco-tourism spots.

1.2.15 Sacred Groove, the Jahira

The place of worship of tribal people is called Jahira. Mayurbhanj is a tribal dominated district of Odisha. Invariably most of the tribal villages have their own Jahira, where they perform community puja and cultural programmes attached to their tribal culture and heritages. There are about 250 nos. of Jahira where developmental works have been taken up since 2014 within this Forest Division. In most of the Jahira, we observed over-matured trees without any regeneration. In case the area is not restocked through artificial regeneration, this patch of vegetation will be tree less soon. Steps may be taken to improve the vegetation of Jahira through planting Sal seedlings.

1.2.16 Forest in Higher Slopes

The existing crops in the higher slopes are extensively eroded. These degraded forests are to be protected from human interferences to enable this crop to re-establish. Re-stocking the blank patches through artificial regeneration has been suggested. The wildlife habitat as far as possible will not be disturbed by any technical operation. Annual forest fire shall be controlled by creating awareness amongst the inhabitant of all forest fringe villages. Green felling has not been prescribed here.

1.3 Constitution of Working Circles:

1.3.1 Working Circle

In order to achieve the set objectives vis-à-vis duly considering the treatments required on the face of ground realities, the prescriptions have been made for

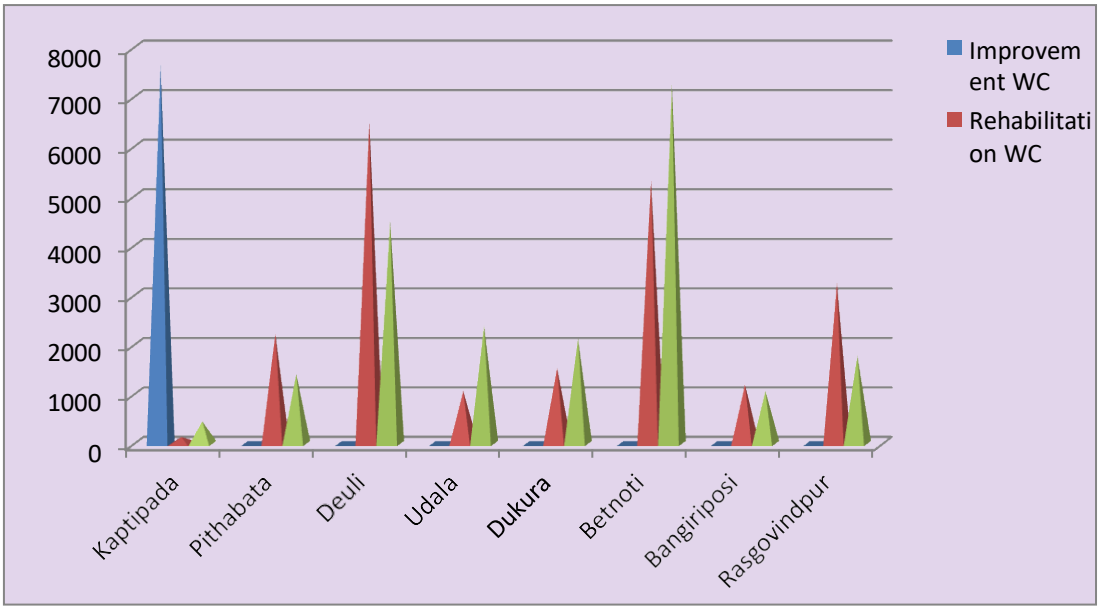
management of the forests of the Division. Emphasis has been laid on watershed approach and involvement of local people in management of forests

To achieve the objectives of management, the total forest area of Baripada Forest Division is divided into 03 main working circles and 03 overlapping working circles. With the guiding factors as stated above for scientific management of forest resources, following working circles are prescribed as per National Working Plan Code, 2014. The forest area of 50038.720 ha is available for Working Plan has been allotted to three working circles and three over-lapping Working Circles as below.

- Improvement Working Circle (Area assigned: 7707.08 ha.)
- Rehabilitation Working Circle (Area assigned: 21302.621 ha.)
- Plantation Working Circle (Area assigned: 21029.019 ha.)
- NTFP Over Lapping Working Circle (Area assigned: 27193.000 ha.)
- Wildlife Over Lapping Working Circle (Area assigned: 29108.960 ha.)
- JFM Over Lapping Working Circle (Area assigned: 30368.424 ha.)

Name of the Range	Plan Area	Improvement WC	Rehabilitation WC	Plantation WC	NTFP (O) WC	WL (O) WC	JFM (O) WC
Kaptipada	8294.462	7707.080	134.085	453.297	6558.000	8290.960	1503.832
Pithabata	3634.120	0.000	2227.077	1407.043	1880.000	1911.000	2584.200
Deuli	11036.824	0.000	6518.596	4518.228	5221.000	5882.000	6816.834
Udala	3481.188	0.000	1079.723	2401.465	2705.000	2250.000	2607.488
Dukura	3679.218	0.000	1545.344	2133.874	750.000	1450.000	1185.498
Betnoti	12571.684	0.000	5320.533	7251.151	7000.000	6231.000	9208.040
Bangiriposi	2272.358	0.000	1199.123	1073.235	879.000	969.000	586.448
Rasgovindpur	5068.866	0.000	3278.140	1790.726	2200.000	2125.000	2326.434
TOTAL	**50038.720**	**7707.080**	**21302.621**	**21029.019**	**27193.000**	**29108.960**	**30368.424**

Working Circle wise Forest Area in Each Range (in ha.)



1.3.2 Distribution of Forest Area

Range wise distributions of forest areas are given in the table below.

Distribution of Forest Area in Baripada Forest Division

Name of Range	RF (in ha.)	PRF (in ha.)	PF (in ha.)	VF (in ha.)	Total (in ha.)
Pithabata	3591.53	57.03	--	13.920	3662.480
Dukura	2514.89	1118.23	--	47.028	3680.148
Rasgovindpur	5275.16	--	--	40.784	5315.944
Udala	3381.27	--	--	105.368	3486.638
Betnoti	12035.37	439.16	--	174.060	12648.590
Deuli	10277.25	783.99	--	13.544	11074.784
Kaptipada	8198.64	--	92.32	3.832	8294.792
Bangiriposi	1099.63	86.04	896.91	189.778	2272.358
Total	***46373.74***	***2484.45***	***989.23***	***588.314***	***50435.734***

NB.: - After inclusion of Un-Classed Forest (53 ha.), total forest area is 50488.734

1.3.3 Area and Distribution of Working Circles:

The total area of forest blocks of Baripada Forest Division (excepting Un-classed Forests), included in preparation of working plan is 50435.734 ha. Out of this area 8.086 ha have been diverted under section 3(2) of The Scheduled Tribes and Other Traditional Forest Dweller‟s (Recognition of Forest Rights) Act, 2006 and 388.928 ha have been diverted under The Forest (Conservation) Act, 1980. The balance area available for working plan is 50038.720 ha, which have been distributed among 3

working circles and 3 overlapping working circles, details of which is enclosed in table as **Appendix – XXII.**

1.3.3.1 Improvement Working Circle

Notto RF of Kaptipada Range is the only forest of Baripada Forest Division where trees of exploitable diameter in required quantities are available. As the area has been included under Similipal Tiger Reserve, basing on guideline issued by MoEF & CC dt.19/08/2020, working permission like felling are not permitted within Similipal Tiger Reserve for which the area is included under Improvement Working Circle. In Notto RF, out of an area of 7707.08 ha as per notification, 7543.37 ha have good sal and miscellaneous forests in the hilly terrain having various age groups. The forest vegetation under this working circle consists of Sal, Sahaj, Dhaura, Kusum, Kumbhi, Piasal, Rai, Char, Sisoo, Kasi, Jamun, etc. as miscellaneous vegetation on a hilly tract, adjacent to Similipal Sanctuary. After enumeration of Notto RF, 9.1 ha in different 91 Sample Plots), trees with GBH 1′-2′ is 786 Nos., 2′-3′ GBH is 869 Nos. & more than 3′ GBH is 821 Nos. This shows that sufficient No. of exploitable trees are available for extraction under selection system of felling. Sal trees constitute 32% of the vegetation, Dhaura trees constitute 12% of the vegetation, Asan trees constitute 9% of the vegetation & Rai trees constitute 5% of the vegetation. This Notto RF also has been included under Buffer Area of Similipal Tiger Reserve because of presence of wild animals like, Elephant, Tiger, Boar etc. The detailed prescriptions are given in separate chapter i.e. Chapter-II.

In Notto RF, out of an area of 7707.08 ha as per notification, 7543.37 ha have good sal and miscellaneous forests in the hilly terrain having various age groups. Special attention was proposed to be given for Fire control measures and Soil Conservation measures. The Notto forest block was to be worked under improvement system. Dead, dying and uprooted trees is to be removed to improve the health of the forest. All dead and uprooted trees excluding the retention of those absolutely necessary for congenial habitat of Wild Life was to be marked for felling throughout the entire coupe area. After coupe working the left out dead, dying and silviculturally unsound trees needs to be felled, this will not disturb the wildlife habitat through subsidiary silvicultural operation. To re-stock the blank patches two year old Sal seedlings raised in

polythene bags should be planted. After coupe working soil and water conservation and improvement works are to be carried out. The regeneration status is adequate. This area was allotted to the Selection Working Circle in previous plan by Sri A.O.F. Bakhla.

1.3.3.2 Rehabilitation Working Circle

The forest blocks having natural vegetation with forest canopy density from 10% & above (except Notto RF) have been included under Rehabilitation Working Circle. Forest areas not included under IWC/ PWC have been kept under Rehabilitation Working Circle for their improvement. Majority of these forests are Sal dominated forest with Char, Asan, Kusum, Dhaura, Haldu, and Kasi etc. of 2′ - 3′ girth which needs improvement through subsidiary silvicultural operation. The detailed prescriptions are given in separate chapter i.e. Chapter-IV.

An area of 21302.621 ha has been allotted to this Working Circle. The area, which were allotted to Rehabilitation Working Circle in plan of Sri A.O.F. Bakhla are now allotted to this Working Circle with some modification. Trees of various age groups are available but the number of trees, which have attained exploitable girth, is very less. Most of the area is under heavy biotic pressure throughout the year. The local people are cutting poles illegally, which is locally called „Balha" for construction of their thatched house and firewood. Under Forest Rights Act, 2006, the local people use to collect sal leaves, NTFP and dry firewood from these forest blocks. The soil is slightly eroded and fertile. This Working Circle is constituted for increasing the number of growing stock by assisted natural regeneration.

An area of 20829.92 ha was allotted in this working circle in the outgoing plan out of which 13981.017 ha was treated through ANR with gap planting. In this revised plan, an area of 21302.621 ha is allotted to this working circle.

1.3.3.3 Plantation Working Circle

An area of 21029.019 ha has been allotted to this Working Circle to take up plantation related activities under different planting series. All blank patches and illegally encroached forest area coming under forest blocks and all notified village forests are included in this Working Circle. 1059.294 ha of over matured Eucalyptus and Acacia plantations could not be harvested during last working plan because of lack of provision in working plan. Hence these are included in Plantation Working Circle

with proposal for harvest and re-planting with indigenous species. 259.106 Ha. of teak plantations exist in Jamsole RF, Manchabandha RF, Badsahi RF and K.C. Pur RF which have not been attended for inter-cultural operation. These plantations have been included in Plantation Working Circle with recommendation for thinning and branch cutting, where ever necessary for improvement of the quality of plantation. All other block plantations have been included under Plantation Working Circle. The over mature SFP plantations managed by village forest committee will be allowed to be harvested in phases after resolution in village forest committee, who will undertake to replant the said area out of sale price of harvested produce. The forest block areas with 0-10% forest canopy density has been included in Plantation Working Circle, where the natural vegetation will be retained and gaps will be planted under ANR. In the blank areas, plantation of suitable native species is prescribed. In the forest blocks, used by elephants, the species suitable for elephants should be given priority. The commercial species of high demand can be planted. This Working Circle is constituted for increasing the number of growing stock by artificial regeneration and increasing forest cover. The detailed prescriptions are given in separate chapter.

In the proposed plan, 21029.019 ha allotted to this working circle have been distributed among eight functional Ranges. The old plantations already existing are included in this working circle.

1.3.3.4 Wildlife (Over Lapping) Working Circle

The wildlife rich pockets of natural forest have been included under Wildlife (O) Working Circle. It includes elephant corridor areas of Deuli, Rasgobindpur and Betnoti Range with recommendation of planting elephant food species of plants throughout elephant corridor. Further part of Notto RF and other areas visited by wild animals have been included under this working circle. A total area of 29108.96 ha has been ear-marked for this working circle. The detailed prescriptions are given in separate chapter.

An area of 29108.96 ha has been allotted to this Working Circle. Due to construction of New Roads and heavy traffic on National Highway No.18 and 5, Elephants face difficulties in crossing the busy National Highways and Railway line. Heavy traffic on National Highways obstructs Elephants in their movement from one side to another side of National Highway. Elephants from Dalma sanctuary of Jharkhand

state enter this Division through West Bengal and they move from Deuli and R.G.Pur Range to Betnoti Range on their journey to Nilgiri Range of Balasore Wildlife Division. Elephants prefer to make temporary halt around the forest area with availability of plenty of water. The population of other wildlife is decreasing due to habitat destruction, poaching and forest fire. Reproduction and multiplication of larger wild animals is not satisfactory due to unfavourable environmental condition and continuous interference of people in their habitat. It is now necessary to protect the existing wildlife and create favourable condition for their multiplication. This (over lapping) Working Circle has been constituted to prescribe management techniques for the improvement of the habitat of wildlife.

From wildlife management point of view, much emphasis has to be given for this over-lapping working circle. The management interventions are to be concentrated on improvement of habitat and conservation of bio-diversity. There are two nos. of established Elephant corridors, i.e. one in Deuli-Rasgovindpur and other in Kaptipada Range. Inter-State migration of Elephants is a regular problem of this Division. It needs a long term action plan to address the challenges faced by the Divisions. Baripada Forest Division is a major stakeholder of the Mayurbhanj Elephant reserve. Notto R.F. is a part of Buffer Area of Similipal Tiger Reserve and is home to native Elephants. Elephants come to this Division from Similipal Sanctuary and from West Bengal State for short periods and return back. Their conservation is the primary responsibility of the Division Administration.

The Elephant corridor Deuli-Suliapada is regularly used by the migratory wild Elephants coming from Dalma Wildlife sanctuary through West Bengal. This area is very sensitive as far as Elephant depredation is concerned. Since 2010, migration takes place through a new route i.e. West Bengal- Rasgovindpur-Betnoti-Kuldiha, establishing a new corridor. Human-Elephant conflict is very common in those areas, inspite of the best effort put by the department. Considering the gravity of the situation (Human-Wildlife conflict), special plan and programme should be formulated to address such type of issues. Thus, it needs to be included in this Wildlife (O) Working Circle.

Proposals need to be prescribed for food availability for the wild animals and habitat development. The following specific problem needs to be redressed by specific prescriptions.

i. Habitat improvement by planting fruit bearing trees, fodder and grasses.
ii. Mitigation of human and wildlife conflict.
iii. 25% of compassionate payment for damage of crops / injury and human kill by wildlife should be paid within 24 hour and balance after following due procedure.
iv. Creation of water bodies in areas of water scarcity during summer months and creation of artificial salt licks.
v. Control of forest fire.
vi. Involvement of community and awareness creation through VSS
vii. Deployment of Anti-poaching squad in the vulnerable areas by providing high power torch to drive Elephant from human habitation.
viii. Energize fencing around selected village to reduce house damage by migratory wild Elephant coming from Jharkhand / West Bengal.
ix. Strengthening of electric transmission lines to have a ground clearance of 20ft.
x. The electric poles need to be encircled with barbed wires so that elephants do not rub their body in the poles.

1.3.3.5 Non Timber Forest Produce (Over Lapping) Working Circle

Forest acts as financial backbone of forest fringe villagers of Mayurbhanj District by supplying much needed income and employment. Sal leaf collection and marketing is the bread earner for poorer section of the people which gives monthly income of Rs. 3000/- per family. The annual Sal leaf collection, processing and trade in Baripada Forest Division is projected as Rs. 20 crore per annum. The Char seed trade is equivalent to Rs.1.5 crore per annum. Mahua Flower, Sal seed, Kusum Seed, Karanja Seed and Palua also contribute to the income of the people living in forest fringe villages. So NTFP rich forests of 27193 ha has been included under NTFP (O) Working Circle for training the people on scientific collection of NTFP, improved method of processing, better quality storage and better marketing for increasing income of the local people. The detailed prescriptions are given in separate chapter.

An area of 27193ha has been allotted to this Working Circle. This Working Circle overlaps the entire forest area coming under the management of this Plan. The economies of the inhabitants depend on forest produce. Good quality and quantity of non-timber forest products are available to the villagers of forest fringe villages. The NTFP like Sal seed is produced in large scale within forest but less than 10% of the same is only collected due to low market price. The rural economy of this Division depends on collection and trading of sal leaves. Mostly the rural women collect and stitch sal leaves as their part time job. Sal leaf business has grown as a domestic industry in this Division. During collection of sal leaves appropriate harvesting procedure should be followed everywhere. Some people cut the main branch of sal tree to stop vertical growth of top shoot in height to obtain maximum sal leaves. This practice should be stopped. The collection of Sal leaves should not hamper the growth of Sal trees. Karanja, Kusum and Mahua seeds are produced in large quantity but are not collected fully due to want of market. People use to ignite forest fire during mahua flower collection season which destroy forest and should be prevented at all cost. Char tree branches/ Amla trees are sometimes cut down to collect char seed/ Amla fruit. This unscientific method of harvesting should stop. Some forest produces like Char seed is procured partly because of want of suitable market price. Forest based industries for processing of NTFP has been established. Sal leaf processing centers are mostly concentrated at Betnoti from where Sal leaf plates and cups are exported outside Odisha to North India including Delhi. The collection, storage and disposal method of other NTFPs need to be standardized for producing quality products. Minimum support price of NTFP are not fixed every year by the respective Panchayat Samities. Along with enforcement of minimum sale price, NTFP procurement centre needs to be opened at Panchayat Samiti Headquarters and local hat, so that the people can get higher price from the non-timber forest produces. Therefore, this Working Circle has been constituted for scientific collection, processing, value addition and marketing of the NTFP items.

The special objective of management of this Working Circle is aimed at scientific management and collection of NTFP and designed for improvement of Socio-economic condition of the rural people. The NTFP policy of the state Government has been implemented since 2002 that requires revision for greater interest of the forest and its dependents. The rural economy of Mayurbhanj mainly depends on Sal leaves

trading, which is mostly collected from the forest of this Division. Volume of collection is more or less equal among all Ranges. The other important NTFP product is Char seeds, which is widely collected throughout the Division area. Tassar is cultivated in forests of this Division by Govt. Agency. It is proposed to prescribe the following activities under this Working Circle.

1. Detailed NTFP survey was done in this Division during the year 2012-13. Presently after bio-diversity assessment a detailed report on NTFP resources of Baripada Forest Division is prepared. Such NTFP study should be done in 5year interval.
2. Formation of S.H.G.s for livelihood improvement.
3. VSS wise micro plan preparation by SHG.
4. Training for sustainable collection, value addition, proper storage and marketing.
5. Capacity building for VSS members.
6. Adequate infrastructure and funding for processing and marketing.
7. Creation of value addition and marketing centers at village, block and district level and their linkages with buyers.
8. Plantation of NTFP species at selected sites.
9. Lac cultivation training to selected SHG.

Potential N.T.F.P species of the Division :

Amla	- *Phyllanthus emblica*
Bahada	- *Terminalia bellirica*
Harida	- *Terminalia chebula*
Siali	- *Bauhinia vahlii*
Char	- *Buchanania lanzan*
Mahua	- *Madhuca indica*
Kusum	- *Schleichera oleosa*
Karanja	- *Pongamia pinnata*
Sal seed	- *Shorea robusta*
Neem	- *Azadirachta indica*
Dhataki	- *Woodfordia fruticosa*

Focus Species of Locality : Species requiring focused attention for processing, value addition and marketing during the plan period on priority basis locality wise are indicated below –

Name of the NTFP item	Locality	Name of the Range
Siali Leaves	Bangiriposi, Dukura, Udala, Kaptipada	Bangiriposi, Dukura, Udala, Kaptipada
Sal Leaves	Entire Division.	Entire Division.
Harida/ Bahada	Entire Division	Entire Division
Amla	Entire Division	Entire Division
Mahua Seed & flowers	Entire Division	Entire Division
Neem Seed	Entire Division	Entire Division
Char Seed	Entire Division	Entire Division
Karanja Seed	Entire Division	Entire Division
Kusum	Entire Division	Entire Division

1.3.3.6 Joint Forest Management (Over Lapping) Working Circle

Management of forests jointly through forest department and villagers is an effective tool for protection and conservation of forests. Equal sharing of responsibilities and rights is the key of Joint Forest Management. Baripada Forest Division is pioneer in the field of JFM. There are 402 VSS successfully joining hands with forest department for sustainable management of forests. Preparation of JFM micro plan and its field implementation should not contradict the prescription of working plan. The ST and OTFD (RoFR) Act, 2006 has prescribed for recognition of community forest rights. These CFM areas are also included under JFM (O) Working Circle. An area of 30368.424 ha has been allotted to this working circle. The detailed prescriptions are given in separate chapter.

An area of 30368.424 ha (as per JFM area of Baripada Forest Division) has been allotted to this Working Circle. The areas coming under newly constituted VSS and areas under Community Forest Rights under Forest Rights Act, 2006 will also be included in this Working Circle. The system of joint forest management by local people and Forest Department has been introduced to this Division through Social Forestry Project. It has been strengthened vide Govt. of Odisha resolutions on 1988, 1989 and 1990. During the year 1993 vide Govt. of Odisha resolution No.16700/10-F(Prone)-20/93-F and E dt.3.7.1993 402 VSSs have been constituted. The plantation and other activities under National Afforestation Programmes have been taken up in the forest areas protected by different Van Surakhya Samiti. Micro Plan for each Vana Surakhya Samiti has been prepared. Separate prescription for those areas is necessary for protection and interim yield. This Working Circle covers only the areas

assigned to Vana Surakhya Samiti for protection. After recognition of Community Forest Rights under Forest Rights Act, 2006, new areas will come under this circle. There should be preservation of fruit trees for food availability for wild animals in JFM Forests. JFM Micro Plan should not contradict Working Plan Prescription. Soil and Moisture Conservation should be taken up in JFM Forests.

All 127 plantations raised by the erstwhile Social Forestry Project of Baripada Forest Division declared as Village Forests are included in the purview of the management under this overlapping circle, where village forest committee have been constituted.

The forest blocks and the area have been assigned to the VSS is furnished in **Appendix – XVIII.** It is observed that the area was included in National Afforestation Programme which was discontinued and was included in other schemes. The 2011 new resolution for approval of Palli Sabha and exclusion of local forest officials have resulted communication gap and difficulties in implementation of schemes. Also the village forest developed by SFP was not monitored in absence of annual action plan and was managed by the Village Committee itself. It is required to form the Village Forest Committee for all such forests and to include under the ambit of the proposed plan with a year wise micro plan as per site specific activities.

1.4 Period of Working Plan and Necessity for Intermediate Revision

This Working Plan has been drawn up for a period of 10 years (2021-22 to 2030-31) as per Para 84 of National Working Plan Code - 2014, an intermediate revision of which is not prescribed. However intermediate revision may be taken up after the observation made in the triennial inspection report of the Regional Chief Conservator of Forest, Baripada within the Working Plan period. The revision if any shall be implemented for the balance coupes subject to approval of the Working Plan Consultative Committee under the chairmanship of Pr.CCF & HoFF, Odisha, Bhubaneswar with representation from DDG (C), Regional Office (MoEF & CC), Bhubaneswar.

2. CHAPTER – II

IMPROVEMENT WORKING CIRCLE

2.1 Introduction

The area allotted to this working circle is well stocked with Sal (29%), Dhaura (11%), Asan (8%), Rai (5%), Char (4%), Kusum (4%), Mahul (3%), Kasi (3%), Jamun (3%) etc. Miscellaneous forests in hilly tracts of Notto RF have a special status among all forests of Baripada Forest Division.

2.2 General Constitution of Working Circle:

One forest block coming in Similipal Tiger Reserve has been included under Improvement Working Circle.

Forest Block wise area under Improvement Working Circle in Ha.					
Name of Range	**Name of RF/ PRF /PF/ VF**		**Area in ha.**	**Plan Area after Forest Diversion**	**IWC in Ha**
KAPTIPADA	1	Notto R.F.	7707.080	7707.080	7707.080
G. Total		***1 Forest Block***	***7707.080***	***7707.080***	***7707.080***

Description of Working Circle:

Sl. No.	Items	Description
1	General Constitution	It includes part of Notto forest block.
2	General observation to vegetation	Average quality is III/IV. Canopy density 0.3 to 0.7 Miscellaneous forest with Sal, Sahaj, Dhaura, Kusum, Kumbhi, Piasal, Rai, Char, Sisoo etc.
3	Area of allotment	7707.08 ha.
4	Silvicultural system	Improvement felling i.e. dead, dying and uprooted trees is to be carried out to improve the health of the forest. Gap planting will be carried out.
5	Table of improvement felling	One felling series in Baripada Forest Division.
6	Subsidiary Silvicultural operation	Cleaning, climbers cutting and cutting of high stumps and badly damaged stems.
7	Artificial regeneration	Planting of indigenous, economically important timber, NTFP and seedlings of 2 year old favoured by wild animals.
8	Miscellaneous regulations	Fire Protection is necessary. Controlled grazing may be allowed with restrictions.
9	Environment of eco-system	Improving Eco-system and regeneration to increase percentage of species favourable to wildlife.

Regeneration cleaning along with climber cutting should be done at regular interval. Apart from the above prescriptions, special attention is to be given for Fire control measures and Soil & water Conservation measures.

Allotment of Forest Blocks and Compartments to IWC

Year	Coupe No.	Range	Forest Block	Status	Compt. No.	Area (in Ha.)		Map Reference
						Compt. Area	Coupe Area	
1	2	3	4	5	6	7	8	10
2021-22	I	Kaptipada	Notto	RF	1	611.47	611.47	73K/ 7/NW
2022-23	II	Kaptipada	Notto	RF	2	870.46	870.46	73K/ 7/NW
2023-24	III	Kaptipada	Notto	RF	3	982.15	982.15	73K/ 7/NW
2024-25	IV	Kaptipada	Notto	RF	4	792.36	792.36	73K/ 7/NW
2025-26	V	Kaptipada	Notto	RF	5	650.72	650.72	73K/ 7/NW & 73K/ 6/SW
2026-27	VI	Kaptipada	Notto	RF	6	950.99	950.99	73K/ 7/NE & 73K/ 6/SE, SW
2027-28	VII	Kaptipada	Notto	RF	7	720.73	720.73	73K/ 6/SE, SW & 73K/ 7/NE, NW
2028-29	VIII	Kaptipada	Notto	RF	8	873.30	873.30	73K/ 6/SE & 73K/ 7/NE
2029-30	IX	Kaptipada	Notto	RF	9	707.78	707.78	73K/ 6/SE
2030-31	X	Kaptipada	Notto	RF	10	547.12	547.12	73K/ 6/SE
					Total	**7707.08**	**7707.08**	

2.3 General Character of Vegetation

2.3.1 Composition

Sal constitutes the main species. On most of the hills, it ascends to the top, either predominantly or mixed with its other associates like Bija, Asan, Bandhan, Kuruma, Kasi, Dhaura, Sisoo, Kendu, Haldu, Gambhari etc. The regeneration is purely natural and distributed adequately all over the area. The forest types are mainly dry peninsular sal and Northern dry mixed deciduous. The growth and quality of the crop have been considerably reduced due to decreasing adjoining environmental condition. The composition of sal in different compartments included in IWC is as under.

Natural Species

The natural species available in this forest area have been classified basing on their timber, fire wood, fruit, oil and other yielding value. The classification of trees is given in the table below. Principal species can be planted in blank areas.

Classification of Trees

Principal Species	Secondary Species	Guest Species
Sal, Bija, Asan, Sisoo, Bandhan, Haldu, Gambhari, and Kasi	Dhaura, Kendu, Jamu, Semuli, Khair, Moi, Tentera, Siris and Mundi	Mango, Bela, Kusum, Karanja, Harida, Bahada, Tamarind, Mahula, Kochila, Sunari, Genduli and Neem.

Percentage of sal in different compartments of Notto RF allotted to IWC

Sl. No.	Name of the Compartment	No. of trees		% of sal
		Sal	Total	
1	1	123429	216941	56.90%
2	2	144776	292032	49.58%
3	3	131021	294007	44.56%
4	4	80551	168054	47.93%
5	5	53567	167851	31.91%
6	6	127956	336982	37.97%
7	7	44987	133158	33.78%
8	8	81015	212850	38.06%
9	9	47501	180156	26.37%
10	10	44878	128776	34.85%
Sources - As per NRSC report				

2.3.2 Age Class

The sal crop and its associates constitute of all age classes. The inventory carried out over 1% in the IWC area in 91 sample plots. The plot size is 0.10 ha (31.62 mt × 31.62 mt). 91 Sample points were selected in Notto Reserve Forest Block based on its area, forest type and density. Trees were grouped in to girth classes. Girth classes from 10 cm and above have been recorded. Regeneration survey in plot size 3.0 mt × 3.0 mt and sapling survey in the plot size 3.0 mt × 3.0 mt were carried out along with enumeration. The age class of sal in the girth class from 30 cm to 40 cm is from 10 years to 20 years. Similarly the age class of sal in the girth class of 150 cm and above is more than 100 years.

2.3.3 Distribution

The area allotted to IWC is distributed in Kaptipada Range and comprises 15% of the total managed area. Sal with associates is distributed in pure form in plain and valley area, where as it is sporadically distributed in mixed forest in the hill portion.

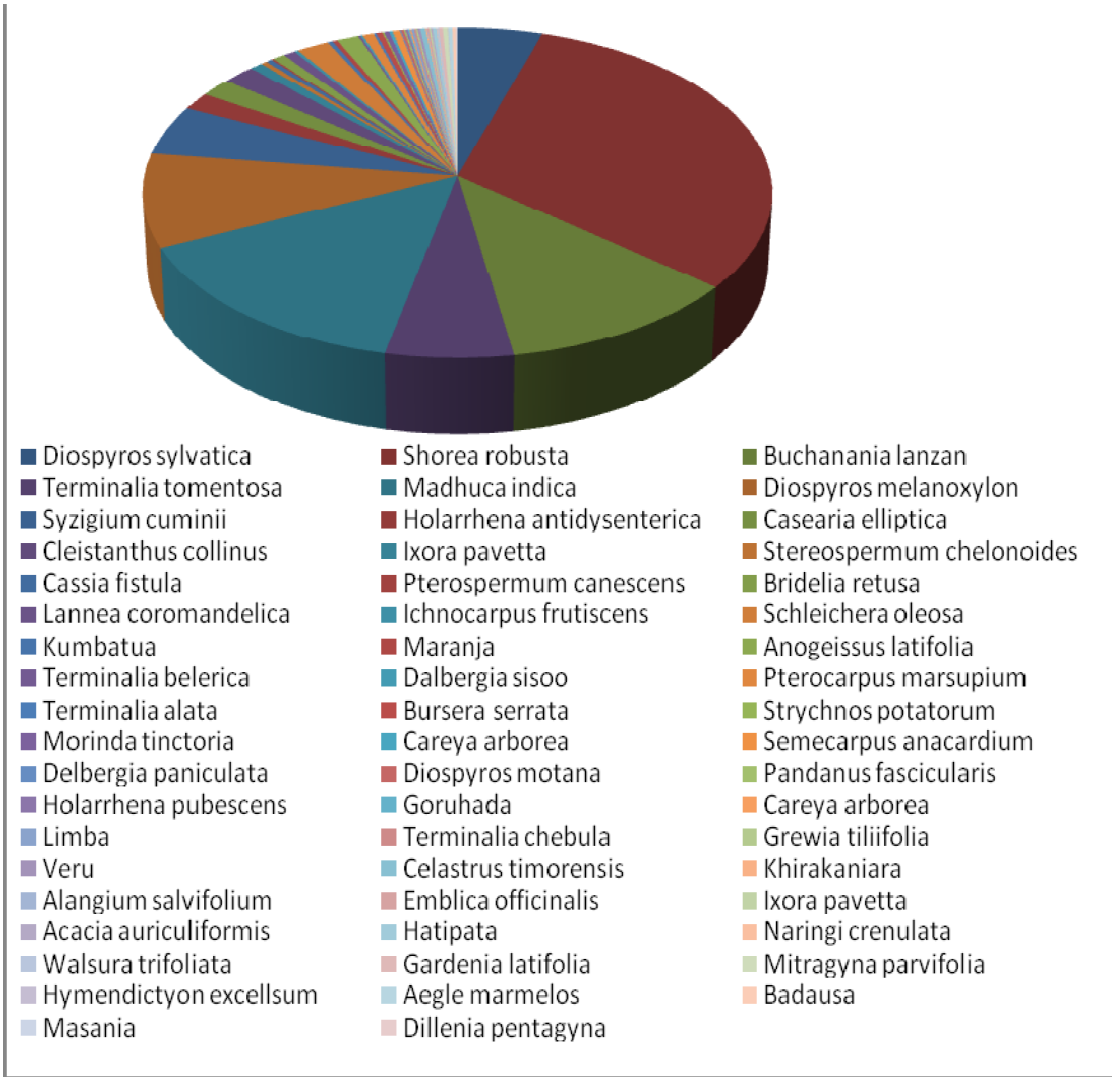
2.3.4 Density

The density of the crop included varies from 0.1 to 0.9. In plain and valley areas the density varies from 0.1 to 0.9, where as in hilly area the density varies from 0.1 to 0.4. The variation of density is due to the adjoining environmental influence and the fertility of the area.

2.3.5 Growing Stock

The total number of established trees in each forest block has been estimated in this revision through satellite imagery by NRSC. Based on the sample inventory data the total trees number in different girth classes has been shown in **Appendix –XXIII (a), (b), (c) & (d) .**

The scientific names of plants available in Notto RF with their percentage, in this forest are given in the diagram below.



The crop standing over the area consists mostly of Sal, Mahul, Asan, Dhaura, Char, Kendu, Kasi, Jamun, Rai and Kusum etc. The girth class wise analysis of trees in 9.1 ha with minimum and maximum DBH as per 91 sample plots enumerated in Notto RF is given below.

TREE ENMERATION IN NOTTO RF

SL No	Name of Forest Block	Min DBH	Max DBH	No. of trees 1' to 2' GBH	No. of trees 2' to 3' GBH	No. of trees more than 3' GBH	Total No. of trees.	Major Trees Available
1	Notto	11.78	52.54	5	8	2	15	Sal-746, Mahul-94, Asan-213, Dhaura-285, Char-104, Kendu-65, Kasi-77, Jamun-68, Rai-123, Kusum-107, Patuli-66 & others.
2	Notto	12.73	47.74	2	7	16	25	
3	Notto	11.14	52.22	12	1	2	15	
4	Notto	10	47.74	49	4	3	56	
5	Notto	12.73	47.74	5	8	4	17	
6	Notto	11.14	29.29	6	5	1	12	
7	Notto	12.73	100.63	13	3	10	26	
8	Notto	16.87	43.92	1	17	16	34	
9	Notto	15.28	49.36	3	11	22	36	
10	Notto	19.41	39.15	0	8	14	22	
11	Notto	20.7	62.1	0	9	14	23	
12	Notto	19.1	106.36	2	5	16	23	
13	Notto	12.73	71.65	4	7	18	29	
14	Notto	19.1	54.45	1	36	7	44	
15	Notto	15.28	51.59	4	16	4	24	
16	Notto	19.41	30.87	0	30	3	33	
17	Notto	24.19	34.37	0	14	6	20	
18	Notto	19.1	51.27	1	19	13	33	
19	Notto	17.19	41.4	2	27	9	38	
20	Notto	18.47	39.8	1	20	12	32	
21	Notto	10.18	21.33	19	1	0	20	
22	Notto	10.18	23.24	19	2	0	21	
23	Notto	21.64	41.69	0	11	10	21	
24	Notto	10.19	21.33	19	1	0	20	
25	Notto	17.19	29.6	3	30	1	34	
26	Notto	18.46	38.19	3	18	7	28	
27	Notto	16.23	29.6	3	7	2	12	
28	Notto	11.14	87.57	10	12	7	29	
29	Notto	12.73	28.33	7	27	0	34	
30	Notto	14.32	49.36	4	16	6	26	
31	Notto	12.1	60.5	7	7	4	18	
32	Notto	14.64	62.47	3	13	9	25	
33	Notto	14.33	63.05	4	8	14	26	
34	Notto	14	39.15	10	8	13	31	
35	Notto	12.1	38.21	3	5	11	19	
36	Notto	12.09	53.5	5	8	15	28	
37	Notto	17.93	62.73	1	5	23	29	
38	Notto	13.05	57.32	2	16	12	30	
39	Notto	11.14	41.4	9	10	5	24	
40	Notto	19.34	85.35	0	27	5	32	
41	Notto	12.73	48.56	11	13	32	56	
42	Notto	14.33	50.95	4	1	38	43	
43	Notto	22.29	92.99	0	9	32	41	
44	Notto	19.73	50	0	4	22	26	
45	Notto			2	27	9	38	
46	Notto	10.19	22.29	22	2	0	24	
47	Notto	22.92	42.97	0	12	21	34	
48	Notto	18.78	32.16	1	24	12	37	
49	Notto	20.69	32.46	0	24	10	34	
50	Notto	27.07	62.1	0	3	26	29	
51	Notto	19.74	73.24	0	15	19	34	

SL No	Name of Forest Block	Min DBH	Max DBH	No. of trees 1' to 2' GBH	No. of trees 2' to 3' GBH	No. of trees more than 3' GBH	Total No. of trees.	Major Trees Available
52	Notto	10.19	28.66	16	5	0	21	
53	Notto	10.82	26.11	33	8	0	41	
54	Notto	14.33	46.17	7	1	33	41	
55	Notto	10.19	42	11	0	0	11	
56	Notto	19.1	32.16	1	28	4	33	
57	Notto	18.46	58.28	3	19	4	26	
58	Notto	18.46	32.46	4	18	3	25	
59	Notto	13.69	46.79	2	16	21	39	
60	Notto	19.41	31.51	0	33	6	39	
61	Notto	23.88	46.17	0	16	38	54	
62	Notto	18.78	35.28	2	21	5	28	
63	Notto	10.5	25.79	15	2	0	17	
64	Notto	13.37	44.9	5	10	9	24	
65	Notto	14.64	28.33	2	29	0	31	
66	Notto	11.78	20.06	14	1	0	15	
67	Notto	10.19	16.24	14	0	0	14	
68	Notto	10.5	23.88	16	6	0	22	
69	Notto	10.19	16.56	14	0	0	14	
70	Notto	10.1	50	15	1	0	16	
71	Notto	10.19	22.29	15	1	0	16	
72	Notto	11.14	39	8	1	1	10	
73	Notto	10.19	19.42	17	1	0	18	
74	Notto	10.5	20.7	9	2	0	11	
75	Notto	10.5	27.07	16	2	0	18	
76	Notto	10.19	19.74	18	1	0	19	
77	Notto	10.82	19.42	10	1	0	11	
78	Notto	10.19	13.37	20	0	0	20	
79	Notto	20.7	47.77	0	10	28	38	
80	Notto	11.14	35	9	1	1	11	
81	Notto	10.5	21.97	14	1	0	15	
82	Notto	10.82	27.38	12	2	0	14	
83	Notto	10.18	14	21	0	0	21	
84	Notto	14.33	54.45	6	13	12	31	
85	Notto	14.33	89.17	3	8	18	29	
86	Notto	10.14	24.84	16	3	0	19	
87	Notto	11.78	23.24	11	1	0	12	
88	Notto	14.32	38.21	8	13	4	25	
89	Notto	13.37	61.14	7	9	25	41	
90	Notto	11.14	53.18	19	13	15	47	
91	Notto	10.18	46.17	51	21	15	87	
Grand Total				**746**	**939**	**799**	**2484**	

2.4 Felling Series, Cutting Sections and JFM areas:

2.4.1 Felling Series in IWC

This Working Circle constitutes with 01 number of improvement series named as Notto improvement series as per convenience of working, availability of labour, distribution of area etc.

2.4.2 Cutting Sections

For convenience of operation, each compartment has been assigned as one compartment under IWC.

2.5 Blocks, Compartments and JFM Areas

2.5.1 Blocks and compartments:

The Range wise forest block areas allotted to different Working Circles is given in **Appendix – XXII**.

The compartment wise allotment under Improvement Working Circle.

Year	Coupe No.	Range	Forest Block	Status	Compt. No.	Area (in Ha.)		Map Reference
						Compt. Area	Coupe Area	
2021-22	I	Kaptipada	Notto	RF	1	611.47	611.47	73K/ 7/NW
2022-23	II	Kaptipada	Notto	RF	2	870.46	870.46	73K/ 7/NW
2023-24	III	Kaptipada	Notto	RF	3	982.15	982.15	73K/ 7/NW
2024-25	IV	Kaptipada	Notto	RF	4	792.36	792.36	73K/ 7/NW
2025-26	V	Kaptipada	Notto	RF	5	650.72	650.72	73K/ 7/NW & 73K/ 6/SW
2026-27	VI	Kaptipada	Notto	RF	6	950.99	950.99	73K/ 7/NE & 73K/ 6/SE, SW
2027-28	VII	Kaptipada	Notto	RF	7	720.73	720.73	73K/ 6/SE, SW & 73K/ 7/NE, NW
2028-29	VIII	Kaptipada	Notto	RF	8	873.30	873.30	73K/ 6/SE & 73K/ 7/NE
2029-30	IX	Kaptipada	Notto	RF	9	707.78	707.78	73K/ 6/SE
2030-31	X	Kaptipada	Notto	RF	10	547.12	547.12	73K/ 6/SE
					Total	**7707.08**	**7707.08**	

2.5.2 JFM Areas

Usufructuary Benefits to Vana Surakhya Samiti

In Notto Forest block, where the Vana Surakhya Samiti / Community Forest Rights holder are protecting the forest, they will enjoy usufructuary benefits, as approved under Tiger Conservation Plan (TCP) of Similipal Tiger Reserve (STR), provided they discharge their duties and responsibilities as laid down in the Scheme. Following 12 VSS are protecting 1215 ha. of Notto RF.

Name of VSS	Name of Forest Block	Legal status of land	Area assigned in Ha
Aswakuti	Notto RF	Reserve Forest	150.00
Purunapani			150.00
Sandei			50.00
Notto			100.00
Silei pokhari			100.00
Khatuapada			100.00
Hudisahi-I			100.00
Hudisahi-II			65.00
Katuria			100.00
Asurkhal			100.00
Kusunapur			100.00
Gandidhar			100.00

The VSS members/ CFR holders will not get the benefits from forest unless they actively protect the forest and wildlife. Further duties and responsibilities in the task of regeneration and protection of the forests under Similipal Tiger Reserve should be intimated by DFO through Range Officer, Kaptipada to the executive body of VSS/ CFR groups from time to time. The executive committee of VSS/ CFR group will be responsible for distribution of the usufructs equally among the members, each household being treated as one member. If a particular household has not discharged the duties and responsibilities assigned to him, the executive committee may lessen or do away with its share through resolution.

During improvement felling the forest materials as may be obtained shall be shared between the Forest Department and the Vana Surakhya Samiti in equal shares within the territory protected by VSS. The executive committee on behalf of the Samiti will have the option either to distribute the said 50 % of the total produce among the members of the Samiti in equal shares or to request the Forest Department to dispose of the same and make the net sale-proceeds available for distribution among the members.

2.6 Special Objective of Management:

- Increase the proportion of species suitable for wild animals and other valuable species through encouraging regeneration, full stocking, to improve ecological condition.
- Consistent with environmental protection and ecological balance action will be taken for production of big sized timbers.
- To improve density and composition of forest cover with due emphasis on soil and water conservation.
- Tending of growing stock to obtain maximum possible increment.
- To re-stock and re-generate all blank patches with 2 year old seedlings of species suitable for wild animals.
- To protect hill slopes from erosion.
- To protect forest from fire, illicit felling, lopping and un-controlled grazing.
- To stabilize the environment and ecology with enrichment of the vegetation both in quality and quantity through proper silvicultural treatment.

- To Encourage and establish the natural regeneration of the crop with special emphasis on hill slopes and other eco-fragile areas.
- To limit the improvement of crop to silviculturally and environmentally permissible extent through improvement felling for better use of wildlife.
- To ensure the general hygiene of the forests through removal of dead and uprooted trees and strangulating climbers.
- To undertake appropriate Soil and Moisture Conservation measures for ensuring the streams, nalas and ultimately the rivers to become perennial and to increase the fertility of the soil.
- Effective control of biotic interference to protect and promote the forests and wild animals.
- Eradication of invasive weeds where ever necessary.
- Preserve and maintain the fruit trees used by wild animals as food and creating water holes for wild animals.

2.6.1 Analysis of the Crop

During the previous plan period, the numbers of Sal increased, but Bija decreased. Asan and other species are almost in balance stage. As observed in the field, local people are selecting and illegally felling Bija trees those are attending average of 2.5 ft girth at breast height for planks. This unique patch of forest in Notto RF has rich bio-diversity. During NTFP survey 87 tree species, 24 shrub species and 28 herb species were detected which belonged to 54 plant families. The richness of taxonomic and phylogenetic diversity makes this patch unique in this Division. The tree girth at breast height from 1′ to 2′ is 31% of total trees. The tree with GBH 2′ to 3′ constitutes 37% and tree above 3′ GBH constitute 32% of the tree growth. The area allotted to this working circle is well stocked with Sal and other species of exploitable girth in comparison to other areas.

2.6.2 Silvicultural System

The silvicultural system prescribed in Improvement Working Circle is **Stand Improvement through natural re-generation with intensive soil & moisture conervation** with emphasis on stability of the ecosystem. The diseased and uprooted trees, which have attained exploitable girth, can be selected for felling.

The aim of silvicultural practice is to obtain and encourage maximum natural regeneration and supplement it with artificial gap plantation to conserve the crop for creating a better habitat for wild animals.

The Improvement Working Circle prescribed specific provisions for silvicultural operations. Regeneration cleaning along with climber cutting is prescribed after completion of annual improvement felling operation. Apart from the above prescriptions, special attention will be given for fire control measures and Soil Conservation measures. 7707.08 ha. is included under Improvement Working Circle. Instead of species preference, growing vigour, dominance and healthy conditions shall be taken into considerations while choosing among the trees of exploitable girth for retention. Subsidiary silvicultural operations will be conducted after improvement felling to improve the quality of vegetation. Subsidiary silvicultural operation will include removal of left out uprooted trees, clearance of dry branches, Silvicultural cleaning, climbers cutting. Diseased stems should be cut and removed if it do not affect wildlife habitat. Soil & moisture conservation, climber cutting, singling of juvenile crop, high stump cutting and fire control measures will be taken up under subsidiary silvicultural operation. Sowing and planting of two year old seedlings of species favoured by wild animals, NTFP and fodder species will be taken up as gap planting. The improvement cycle is fixed for 10 years. The total area of 7707.08 ha. is divided into 10 compartments. Each compartment boundary coincides with coupe boundary.

2.6.3 Rotation Period

2.6.3.1 Rotation for IWC

The crop is mostly Sal. To reach an exploitable girth above 150 cm, considering the present soil productivity and soil moisture regime a rotation period of 60 years is predicted. As no harvest is expected from this working circle, no rotation period is prescribed in this plan.

Rotation of Principal Species

Sl. No.	Name of species	Rotation in years	Longevity in years
1	Sal	120	168
2	Bija	100	150
3	Sisoo	130	500
4	Teak	60	456
5	Eucalyptus	15	394
6	Asan	100	200

Sl. No.	Name of species	Rotation in years	Longevity in years
7	Mundi	60	110
8	Kendu	120	220
9	Bandhan	100	150
10	Kasi	80	120
11	Tentala	120	180

2.6.4 Harvestable Diameters:

The exploitable girth in IWC for Notto block of different species has been fixed basing on the size at which the tree develops un-soundness.

Sl. No.	Name of the Species	Harvestable Girth at Breast Height in cm.	GBH Class of Approach Class		Harvestable Diameter in cm.
			Lower limit	Upper Limit	
1	2	3	4	5	6
1	*Shorea robusta*	150	120	149	47.727
2	*Terminalia tomentosa*	150	120	149	47.727
3	*Pterocarpus marsupium*	180	150	179	57.272
4	*Gmelina arborea*	150	120	149	47.727
5	*Mangifera indica*	150	120	149	47.727
6	*Haldina cordifolia*	180	150	179	57.272
7	*Desmodium oojeinense*	150	120	149	47.727
8	*Dalbergia sissoo*	150	120	149	47.727
9	*Tectona grandis*	120	90	119	38.181
10	All other species	150	120	149	47.727

2.6.4.1 Exploitable Girth

Exploitable Girth for Sal and Other Species:

The exploitable girth in IWC for Notto block of different species has been fixed basing on the size at which the tree develops un-soundness. The other factors such as site quality, production capacity, growth, yield, market demand etc. have also been taken into account. The exploitable girth for Sal is fixed to 150 cm and above. The recommendation of 5 annual schemes has been accepted with minor changes.

Species	Exploitable Girth in c.m.
Sal (*Shorea robusta*)	150
Asan (*Terminalia tomentosa*), Mango (*Mangifera indica*), Gambhar (*Gmelina arborea*), Sisoo (*Dalbergia latifolia*), Bandhan (*Desmodium oojeinense*)	150
Piasal (*Pterocarpus marsupium*), Koim (*Haldina cordifolia*)	180
Teak (*Tectona grandis*)	120
All other species	120

2.6.5 Reducing Factors and Reduced Areas:

2.6.5.1 Reducing Factors:

Reducing factor is used to determine the quality of the trees. But in this revision the quality of sal is assessed based on its girth. Therefore reducing factor has not been used in this revision.

2.6.5.2 Reduced Area

Reduced area is used to determine the density of the crop with the help of basal area. The density of the forest managed in this revision has been assessed based on crown cover and ground area. Therefore reduced area has not been used in this revision to determine the density of the crop.

2.6.6 Felling Cycle:

It has been fixed basing on the period of the Working Plan or the number of coupes in each felling series. As per National Working Plan Code - 2014 and for complete execution of work in each felling series, a felling cycle of 10 year has been fixed.

2.6.6.1 Classification of Trees

The natural species available in this forest area have been classified basing on their timber, fire wood, fruit, oil and other yielding value. The classification of trees is given in the table below.

Classification of Trees

Principal species	Secondary species	Guest species	Inferior species
Sal, Bija, Asan, Sisoo, Bandhan, Haldu, Gambhari, and Kasi	Dhaura, Kendu, Jamu, Semuli, Khair, Moi, Tentera, Siris and Mundi	Mango, Bela, Kusum, Karanja, Harida, Bahada, Tamarind, Mahula, Kochila, Sunari, Genduli and Nimba	All other species

2.6.7 Division into Periods and allotment to Periodic Blocks (PB):

2.6.7.1 Execution of Felling and Disposal

Method of improvement felling of marked trees shall be in accordance with Forest Department Code 1979 as modified by the Government from time to time. Working period for coupe shall be from 1st October to 30th June following and never beyond. Improvement Felling, logging and dragging shall be completed in March and

transportation of timber and firewood shall be completed by May. In no case it shall be extended beyond 30th June. Trees shall be lopped before felling as it will damage the regeneration of other standing trees. Felling shall be done by saw and axe combined as close to the ground as possible to make least wastage of timber. Felling shall start from one end of the compartment and proceed systematically. All the trees shall be felled towards the upper hill side. Details of marking, felling, conversion, deviations, subsidiary operations shall be recorded in compartment history.

Since the intensity of work has been reduced, Divisional Forest Officer should regulate the period of working in the coupe as mentioned above.

2.6.7.2 Treatment of Old P.B. Areas

In maintaining species suitable for wild animals in the Improvement Working Circle for past PB areas, some addition to the special objects of management is given below.

i) To conserve and maintain the existing crop in the interest of soil, water and environment.
ii) To regenerate these forests by natural and artificial means by nursing up the existing regeneration and by inducing regeneration. Wherever, it is deficient by planting of two years old polythene bag raised seedlings.
iii) To improve the stocking of low density crops by planting species liked by wild animals and fodder species.
iv) To give rest to crop and remove only diseased and uprooted trees.
v) To protect the forests from fire and uncontrolled grazing.
vi) To protect the hill slopes from erosion and to regulate the local water supply by conserving and improving the forest stands.

2.6.7.3 Special Treatment for P.B.-I

Type – A

Though every year adequate recruitment of sal is noticed, it is very difficult to establish the same. After a good seed year and normal rainy season, plants of seedlings are seen, but most of these disappear in due course of time and some reach the sub-whippy to whippy stage and even to the woody stage then stagnate and their development to established stage remains uncertain. It is, therefore of primary importance to reduce the period of stagnation and with this objects in view, treatments are prescribed.

(i) Cultural operations:

After the removal of all diseased and uprooted trees, the following cultural operations will be done.

a) Cutting of diseased stems of sal and other principal species to give good coppice.
b) Singling of coppice shoots will be carried out.
c) The climbers that exist or left over will be cut.

(ii) Fencing:

After cultural operations are over the regeneration areas should be effectively closed. The fencing should be repaired properly as and when required. Fencing will be done by taking 10-15 ha. of an area as a unit.

(iii) Shrub cutting:

Shrub cutting must be done in the regeneration areas until the regeneration is fully established. It has been observed that shrub cutting done after the rainy season provides the best condition for growth. The sub-whippy and whippy stage regeneration will be freed by pulling out woods and shrubs within a radius of 60cm.

(iv) Control burning:

The object of control burning is to stimulate growth of stagnating whippy seedlings. For achieving this object, burning should be carried out in patches carrying largely whippy regeneration latest by middle of February every year. The patches of sub-whippy regeneration should be protected as burning proves inimical to their survival.

Patches of well grown woody regeneration should also be protected as it causes avoidable loss of growth. It is a delicate operation and it may cause more damage than good, if handled carelessly. It should therefore be carried out under the personal supervision of an officer not below the rank of Forest Ranger.

2.6.7.4 Special Treatment for PB I (B) Areas

Type - B

The areas allotted to this category mostly have mature trees. These areas are deficient in regeneration. The regeneration is either absent or present in sub-whippy or recruitment stage. Planting of species used by wild animals and fodder species will be done in areas having blanks or poor density. Only two years old big saplings will be planted.

2.6. 8 Calculation of the Yield

2.6.8.1 Yield

There will be no commercial felling. Improvement felling will be carried out with an object to remove diseased and uprooted trees to improve the crop.

2.6.9 Table of Felling

Table of felling in Improvement Felling Series: - Notto RF

Sl. No.	Coupe No.	Name of Forest Block	Compartment		Coupe Area (in Ha.)
			No.	Area in Ha.	
1	2	3	4	5	6
1	1	Notto RF	1	611.47	611.47
2	2	Notto RF	2	870.46	870.46
3	3	Notto RF	3	982.15	982.15
4	4	Notto RF	4	792.36	792.36
5	5	Notto RF	5	650.72	650.72
6	6	Notto RF	6	950.99	950.99
7	7	Notto RF	7	720.73	720.73
8	8	Notto RF	8	873.30	873.30
9	9	Notto RF	9	707.78	707.78
10	10	Notto RF	10	547.12	547.12
			Total	**7707.08**	**7707.08**

2.6.9.1 Sequence of Improvement Felling

Coupe: - Basing on the period of the Plan, Notto improvement felling series has been divided into 10 coupes in 10 compartments, shown on the topo sheet 1:50000 scale. The working year of each coupe in different felling series is given.

Sequence of Felling								
Year	Coupe No.	Range	Forest Block	Status	Compt. No.	Area (in Ha.)		Map Reference
						Compt. Area	Coupe Area	
2021-22	I	Kaptipada	Notto	RF	1	611.47	611.47	73K/ 7/NW
2022-23	II	Kaptipada	Notto	RF	2	870.46	870.46	73K/ 7/NW
2023-24	III	Kaptipada	Notto	RF	3	982.15	982.15	73K/ 7/NW
2024-25	IV	Kaptipada	Notto	RF	4	792.36	792.36	73K/ 7/NW
2025-26	V	Kaptipada	Notto	RF	5	650.72	650.72	73K/ 7/NW & 73K/ 6/SW
2026-27	VI	Kaptipada	Notto	RF	6	950.99	950.99	73K/ 7/NE & 73K/ 6/SE, SW
2027-28	VII	Kaptipada	Notto	RF	7	720.73	720.73	73K/ 6/SE, SW & 73K/ 7/NE, NW
2028-29	VIII	Kaptipada	Notto	RF	8	873.30	873.30	73K/ 6/SE & 73K/ 7/NE
2029-30	IX	Kaptipada	Notto	RF	9	707.78	707.78	73K/ 6/SE
2030-31	X	Kaptipada	Notto	RF	10	547.12	547.12	73K/ 6/SE
					Total	**7707.08**	**7707.08**	

Stand Table of Notto RF

Compartment Wise Estimated Number of Stems in Notto Felling Series (Notto RF)													
COMPT	COUPE	MAJOR SPECIES	30-60 cm	%	60-90 cm	%	90-120 cm	%	120-150 cm	%	> 150 cm	%	Total
		Ano lat	1,619	17	3,829	40	3,864	40	320	3	24	0	9,657
		Misc	33,941	45	31,906	42	7,995	10	1,863	2	567	1	76,272
		Sho rob	56,187	46	52,159	42	14,585	12	447	0	51	0	123,429
1	I	Ter tom	4,176	55	2,810	37	285	4	277	4	36	0	7,583
		Ano lat	1,203	16	2,508	33	1,650	22	2,025	27	205	3	7,590
		Misc	61,682	48	43,847	34	15,004	12	7,534	6	1,260	1	129,325
		Sho rob	77,711	54	46,709	32	19,458	13	534	0	365	0	144,776
2	II	Ter tom	2,426	23	6,578	64	869	8	262	3	205	2	10,341
		Ano lat	5,812	16	24,814	66	6,310	17	140	0	373	1	37,449
		Misc	34,509	30	61,382	54	12,887	11	2,900	3	1,744	2	113,422
		Sho rob	46,832	36	66,334	51	15,335	12	764	1	1,756	1	131,021
3	III	Ter tom	4,649	38	5,898	49	1,063	9	263	2	242	2	12,115
		Ano lat	5,980	62	1,942	20	1,432	15	78	1	214	2	9,646
		Misc	36,554	53	24,502	35	5,303	8	1,722	2	1,079	2	69,160
		Sho rob	51,207	64	23,170	29	5,401	7	498	1	275	0	80,551
4	IV	Ter tom	5,304	61	2,330	27	717	8	184	2	163	2	8,697
		Ano lat	3,977	20	10,016	51	4,366	22	769	4	324	2	19,452

2.6.10 Method of Executing the Felling:

2.6.10.1 Demarcation

Each compartment is shown on management map of 1:25000 scales in topographical sheet. Annual improvement felling coupe will be demarcated in the month of October and November of the preceding year, in which coupe is due for working. The coupe boundary has coincided with compartment boundary. Coupe shall be demarcated by an officer not below the rank of a trained Forester, which will be checked by Range

Officer before marking. It is required for carrying out subsidiary silvicultural operation to improve the crop. Marking hammer shall be issued after demarcation and its return will be ensured by Divisional Forest Officer after marking. At the time of demarcation, the white paint ring (double in case of compartment line and single in case of natural feature) shall be given on the trees standing at a visible distance along the line or renewed, which were earlier painted. The coupe shall be displayed prominently at prominent place. The signboard should contain the name of Notto improvement felling series, coupe number, its area, year of working, compartment number etc.

Special Provision for of Buffer Area of Similipal Tiger Reserve

This area comes under Buffer Area of Similipal Tiger Reserve. Adequate and specific recommendations have been made for wildlife conservation through Silvicultural operations in this working circle. This is to be noted here that, silviculturally available trees for wildlife point of view should be selected if not used by wild animals. Further, it should also be ecologically available. The following general regulations are prescribed for the Buffer Zone of Similipal Tiger Reserve.

1. The area will be protected against encroachments, since it has interface with habitations. This will be done by periodic boundary patrol as well as maintaining very conspicuous cairns.
2. The habitat of the area will be opened for restricted grazing and by different strategies and by providing alternative arrangements, through VSS and developing fodder bank etc.
3. The incidences of head loading will be minimized by focusing on the forest dependents through eco-development and providing free gas connection wherever feasible.
4. The resources of this zone will be protected from smuggling and poaching activities.
5. Habitat improvement works and maintenance of the existing facilities will be carried out.
6. Habitat restoration activities, like soil and moisture conservation works, planting, removal of lantana and other weeds etc. will be permitted.
7. Forest Fire prevention measures will be taken up, to control fire.
8. Habitat manipulation for improvement will be permitted in this zone.

9. NTFP used by wild animals will not be allowed to be collected in the Buffer zone subject to WLPA and FRA.
10. There will be imrovement felling to remove diseased and uprooted trees.
11. Shared use of Buffer Zone will be limited only to the non-consumptive use of the resources.
12. The biotic interference in the area will be minimized by the scheme of eco-development.
13. The scientific research will be encouraged in this zone. A separate guideline has already been given.
14. Regulation of traffic in the roads is very important, by speed regulation, parking regulation and also controlling the movement of vehicles during night time.
15. Awareness and nature camps will be encouraged to understand the importance of eco system.

Still there is lots of Scope for Managerial interventions that have been listed below.

(i) Providing ecologically sustainable livelihood options to local people in collaboration with various sectors/ organizations.
(ii) Incentivizing local people for protecting forests and wildlife (Ecotourism).
(iii) Ensuring retrofitting measures in sectors of development with reciprocal commitments.
(iv) Ensuring active management in areas where Elephant/ Tiger/ Co predators/ Wild ungulates co-occur with people to minimize human-wildlife interface conflicts.
(v) Ensuring monitoring of tiger/ wildlife on a periodic basis in standardized manner, amenable to scientific inference.
(vi) Ensuring surveillance and protection of tiger and wildlife.
(vii) Building up the capacity of field staff and local people as a part of an adaptive management to ensure effective implementation.
(viii) Sharing of usufructs not used by wild animals with the JFM/ CFM communities protecting the forest.

2.6.10.2 Marking Rules

Marking will be done soon after receipt of the inspection report for completion of demarcation from Range Officer. The marking in the improvement felling compartment is to be done under the following principle.

All diseased and uprooted trees having exploitable girth, which are silviculturally available in the coupe and not used by wild animals shall be numbered serially for felling followed by a definite principle depending on the ground position. All trees marked for felling shall be given two blazes one at the breast height and the other one as close to the ground as possible preferably on the root. The blazes shall be opposite to each other and of size 20 cm × 15 cm. On both the blazes, Departmental hammer shall be marked along with serial number of the trees by coal tar.

Superior Forest Officers shall check the marked trees. The percentage of marked trees to be checked by the Range Officer and above is given in the table below.

All diseased and uprooted trees shall be marked excluding the retention of those absolutely necessary for congenial habitat of Wild Life shall be marked for felling throughout the entire compartment area.

After completion of marking, marking officer not below the rank of Range Officer shall intimate the Divisional Forest Officer for inspection. Either Divisional Forest Officer or the Asst. Conservator of Forests deputed by him shall inspect the coupe marked within a week and get the mistakes rectified by the marking officer. Marking officer will submit marking list within a week of inspection.

Percentage of marked trees to be checked by Higher Officer

Sl. No.	Designation of Forest Officer	% of marking trees to be checked
1	Forest Range Officer	50
2	Assistant Conservator of Forest	25
3	Divisional Forest Officer	10
4	Conservator of Forests/ RCCF	01

The marking officer shall assess the illicit felling inside the annual coupe prior to marking.

All uprooted and diseased trees shall be marked for felling.

Trees of any girth class shall not be marked for felling in absence of one established crop within 5.00 mt radius around it.

- Marking is strictly prohibited in the areas where slope of the terrain is more than 30°.
- No live standing tree shall be marked within 50 meters of roadside and either side of the bank of nallas, streams, rivers and other water bodies.
- Marking shall not be done within 50 meters radius around the key habitats of wild animals such as den, saltlick, wallows, game tank and water holes.
- No fruit bearing trees namely Mahula, Mango, Tamarind, Kusuma, Karanja, Amla, Harida, Bahada, Chara, Bela, Ambada, Kendu, Jamu etc. having significant importance shall be marked.
- Trees above the prescribed exploitable / harvestable girth at breast height are eligible for marking for improvement felling.
- Notwithstanding the general principle and practice of silviculture, a tree is not considered as silviculturally permissible / available for marking on following criteria:-
    - That its removal shall create a permanent gap in the canopy.
    - That its removal will affect the regeneration and fauna particularly the habitat of wild animals.
    - That its removal will allow the invasion of weed growth.
- Climbers strangulating the growth of tree crop shall be cut to facilitate the development of the crop.
- Instead of species preference, growing vigour, dominance and healthy conditions shall be taken into considerations while choosing among the trees of exploitable girth for retention.
- Preference will be given for retention of species used by wild animals.

On the basis of imrovement thinning, a definite diseased/ uprooted tree in the approach class will be marked for felling by the Range Officer/ Assistant Conservator of Forests.

All edible fruit bearing and guest trees shall not be marked for felling.

Marking shall be done only for those trees whose removal will not create permanent gap in the canopy and will not affect regeneration and the fauna.

2.6.10.3 Method of Execution of Felling, Passing and Extraction

The execution of all improvement felling work shall be completed from 1st October to 30th June. All marked trees shall be cut very close to the ground so that the stump height should not be more than 20 cm. The tree shall be cut and converted to logs with the help of saw. Axe or any other instrument shall not be used for felling and logging. Felling shall start from one end and proceed in the systematic way as per the tract followed in marking. At the time of felling, remaining crops and established seedlings should not be damaged. The Forest Staff will take all precautionary measure against forest fire in and around the annual improvement felling operation. All converted timber and firewood in the compartment shall be lifted within the time limit. Felling, conversion, passing and lifting will be carried out simultaneously. Lifting of timber by leaving firewood of the felled tree is not allowed. Extension of time against different works shall not be allowed. However under unavoidable circumstances Conservator of Forests may extend the time to minimum days.

Preparation of treatment map

The stock map of the block/ compartment included in current year operation will be prepared in scale 1:25,000 topographical maps. A trace map shall be obtained for preparation of treatment map. Treatment map shall be prepared in winter season of previous year during survey and demarcation works by an officer not below the rank of Forest Ranger. In this map details of operations to be taken up in different parts of the blocks/ compartment should be mentioned.

2.6.10.4 Execution of Felling and Disposal

Improvement felling will be carried out by Forest Department. Method of felling of mark trees shall be in accordance with Chapter-XIV of Forest Department Code, 1979 as modified by the Govt. from time to time. The working period for the coupe shall be from 1st October to 30th June. Felling, logging, passing and dragging shall be completed in March and transportation of timber & fire wood shall be completed by May. In no case it shall be extended beyond 30th June. Trees shall be lopped before felling, so that it will not damage standing trees or regeneration. Felling should be

close to the ground to avoid wastage of timbers. Felling shall start from one end of the coupe and proceed systematically. All the trees shall be felled towards the upper hill side. Details of marking, felling, conversion, deviations, subsidiary operations shall be recorded in compartment history.

The felling shall be phased and sequential to maintain the order of rotation for the next plan period. The sequences of felling in different years indicating the coupe, forest block area have to be furnished in a tabular statement.

2.6.11 Subsidiary Silvicultural Operation Cleaning and Thinning:

2.6.11.1 Subsidiary Silvicultural Operations

Range Officer will submit final inspection report in the last week of July. Subsidiary silvicultural operations will start from 1st October in the year following. The following operations will be taken up.

i) Cutting back of high stumps and damaged stems of valuable species, to give good coppice growth. Singling out of coppice shoots will be carried out.

ii) (a) Regeneration cleaning i.e. cutting all malformed and defective saplings in multiple shoots of established regeneration of principal and other species for facilitating healthy growth.

(b) The shrubs cutting must be done in regeneration areas until regeneration is fully established. It has been observed that shrub cutting done after rainy season provides better growth. The sub-whippy and whippy stage regeneration will be freed annually by removing weeds and shrubs within a radius of 60cm. All good saplings poles up to 20cm. dia are retained as a part of future crop.

(c) Control burning: The object of control burning is to stimulate growth of whippy seedlings. Control burning shall be carried out in whippy regeneration areas latest by mid-February. The patches of sub-whippy regeneration and well grown woody regeneration patches should be protected from burning. It is delicate operation, which may cause more damage than good if handled carelessly. It should be carried out under the personal supervision of an officer not below the rank of Forest Ranger.

iii) Climber cutting: All climbers except endangered and medicinal species shall be cut down. The climbers that exist or left over will be cut.

iv) Shrubs and herbs shall be retained in order to create moist condition.

v) Subsidiary silvicultural operation shall not be taken up in 50m. radius around any precipitous area or any key habitat of wild animal such as drains, nalas, saltlicks, wallows, water-holes, game tanks etc.

vi) The left over lops and tops after felling and subsidiary operation shall be collected and heaped at places on the compartment line boundary in 2m (Bottom width) × 1m. (Top width) 1.1m (Height) which may provide shelter to small wild animals, such as Civet, Cat, Porcupine, Hares, etc.

vii) Blank areas, low density forest areas deficient in regeneration shall be identified and their extent to be determined for filling of the gaps. Such blanks will be planted with two years old saplings of suitable species.

Subsidiary silvicultural operations conducted after improvement felling improves the quality & quantity of vegetation. Subsidiary silvicultural operation will include removal of left out marked trees, clearance of dry debrish, cleaning, climbers cutting. Soil & moisture conservation, climber cutting, singling of juvenile crop, high stump cutting and fire control measures will be taken up. Sowing and planting of two year old seedlings of species used by wild animals, NTFP species and fodder species will be taken up as gap planting. The improvement felling cycle is fixed for 10 years. The total area of 7707.08 ha. is divided into 10 compartments. Each compartment boundary coincides with coupe boundary.

2.6.11.2 Cleaning

Recruit, whippy and woody seedling need special care for its establishment in the improvement felling area. It has been prescribed to take up cleaning in the year following the main felling to help recruitment and establishment of regeneration of principal and secondary species. It also creates favourable condition for optimum growth of the promising stems. Cleaning shall be done departmentally.

2.6.11.3 Items of Operation in Cleaning

(i) Felling and extraction of the marked trees if left. (ii) Extraction of balance felled materials if any and (iii) Cutting of climbers.

2.6.12 Regeneration

2.6.12.1 Artificial Regeneration

The renewal of a forest crop by sowing, planting or any other artificial methods will be decided by the Divisional Forest Officer in the area included in this Working Circle. There are small gaps noticed in some areas. It is advised to adopt artificial regeneration in the permanent gaps of each coupe or part of the coupe, just after annual improvement felling.

2.6.12.2 Plantation

All the gaps in the compartment of Notto improvement felling series are to be surveyed and reflected in the map at the time of marking. Mounds of size 1 ft × 1 ft × 6 inches will be formed in the gap with a spacing of 5 mt ×5 mt. The seeds of the natural species exist in the area will be dibbled in the mounds during the first week of June. The Divisional Forest Officer will intimate the amount required for dibbling of the seed during the month of March. The pre-planting operation through seedling for gap plantation shall be completed by the end of March of the preceding financial year.

Status of Regeneration

The area included has sufficient regeneration except the areas devoid of forest vegetation. The renewal of forest crop purely depends on nature.

The regeneration is adequate throughout the area and is profuse in valleys. In spite of good regeneration the advance growth is poor due to suppression of regeneration by wild growth of evergreen climbers and shrubs. The regeneration survey is carried out in a plot of size 3.0 mt × 3.0 mt in the four corners of each sample unit. The data of regeneration status from all 4 quadrats of 3 × 3m lay out at a distance of 30 meters from the centre of the main plot of 0.1 ha. is recorded. All tree-plants having DBH equal or more than 5cm and less than 10cm are called established while other young tree plants with 2 to 5 cm collar diameter at the base are called saplings for assessment of regeneration status. The seedling having collar diameter of 2 to 9.9cm is considered as established and is recorded. The forest areas have good and sufficient regeneration. The renewal of forest crop purely depends on nature. The young shoots are affected due to frequent grazing and forest fire. The ever green shrubs and climbers suppress the regeneration.

Category	Criteria	Observation
Good regeneration	Seedlings are more in numbers than the saplings and likewise saplings is more than that of adults. Number of Seedlings > Saplings > Adult	60% of IWC Area
Fair regeneration	Seedlings are more in numbers than the saplings but the saplings are equal or less than that of adults. Number of Seedlings > Saplings= or < Adults	40% of IWC area.

2.6.13 Associated Regulations and Measures:

2.6.13.1 Grazing

The compartment shall be closed to grazing for a period of 05 years after the main improvement felling. Practically it is not easy to maintain this restriction inside the forest over a period of 05 years. It is prescribed to issue notice to all the fringe villages nearer to the working compartment about such restriction. The concerned Range Officer will issue the notice with a direction not to enter the herd into the working compartment. The remaining area is open to grazing subject to the provision of the Orissa Forest (Grazing of Cattle) Rules, 1980 and Tiger Conservation Plan of Similipal Tiger Reserve.

2.6.13.2 Works of Improvement

The area constituted in this working circle is mostly hilly slope. The flow of rain water increase suddenly and there by causes heavy soil erosion. The area becomes dry just after the rainy season. Conservation of soil and water in this terrain is very difficult. Construction of check dams in steep slopes, digging of trench is totally discouraged. Plantation across the smaller Nala and along the bank of the bigger Nala by branch cutting or direct sowing is prescribed. Depending on the site quality, suitable fodder species for the wild animals shall be chosen.

2.6.13.3 Management of Research Plots

09 sample plots of 0.1 ha each and 01 preservation plot of 20 ha has been created in Notto RF of Baripada Forest Division. Initial readings have been recorded in individual registers. Preservation plot is meant for preserving the area for conservation of 10 species of forest trees available there. These registers are handed over to Baripada Forest Division for subsequent annual experimentations.

A. 09 Sample Plots in Notto RF

B. 01 Preservation Plot in Notto RF

2.6.13.4 Tribal Welfare Activities

The tribal cultural activities like songs, dances and development of vegetation in Jahira shall be encouraged in order to develop the feeling of their involvement in protection and conservation of forests.

2.6.13.5 Maintenance of Compartment History, Control Forms, Maps and Other Records

Divisional Forest Officer, Baripada Forest Division shall ensure the maintenance of records and maps. Each column of compartment history and control forms should be filled in Range and Divisional level.

The maps shall be kept in safe custody of an Officer not below the rank of a Range Officer. The maps shall be verified with the authorities of Survey of India or Forest Survey of India. Any alternation shall be entered in the maps. The maps should be updated at the time of visit by a team of Survey of India or Forest Survey of India. The Officer not below the rank of Range Officer shall be asked to consult the team for any verification of maps.

2.6.13.6 Consolidation Survey and Mapping

(a) General Constitution

The forest blocks of Baripada Forest Division require special attention. Because the boundary lines and boundary pillars are main demarcation and reference marks for preservation from encroachment, conservation of eco-system, preservation of bio-diversity and protection from various forest offences.

(b) General Observation

During the working plan exercise of Notto Reserve Forest block of Baripada Forest Division it was observed that boundary line and boundary pillars are not maintained as per working plan map. The boundary clearance and repair of pillars has not been taken up. In most of the cases records like field books etc. are not available in order to identify the exact location of boundary pillars. The boundary pillars should be shown in the topo maps published by the Survey of India.

In order to maintain boundary lines and boundary pillars of reserve forest blocks and to distinguish reserve forest blocks from other forest block, it is necessary to have an

annual time bound programme for the boundary maintenance. This will help in prevention of encroachment of forest lands, shifting of pillars and to check forest offence. Through regular inspection by each category of Forest officer of the boundary line will provide effective protection of forest blocks.

2.6.13.7 Climber Menace

At present approximately 10% of existing trees are affected by climber. Climber is affecting the growth of trees and quality of vegetation. Sometimes trees die due to climber attack. The growth of the climber is very fast and within one to two years it covers whole crown of the tree. The climbers are to be cut to avoid damage to tree crop.

2.6.13.8 Weed Growth

Unwanted plants are common in the forest floor. During rainy season vast numbers of weeds grow in the forest floor of this tract. Weeds tend to interfere with the growth of trees of favoured species. Annual weeds die during the month of February. Dry weeds invite forest fire, which partly burns regenerations and saplings.

2.6.13.9 Grass Invasion

Different grasses are seen in patches on the forest floor. Grasses grow faster in small gap or in open space, which causes heavy grazing. Recruits are either suppressed by grasses or damaged by grazing.

2.6.13.10 Deviation

All prescriptions given in this working circle shall be followed, so that any deviation with reference to harvesting of the forest produce will not arise. Due to unavoidable circumstances if it is necessary to carryout activities out of the prescriptions then the Head of the Forest Division shall order for such activities based on sufficient reasons before end of the year.

2.6.13.11 Fuel Wood

Fuel wood collected from compartment areas out of improvement felling will be distributed among VSS members, through executive committee.

3. CHAPTER – III

REHABILITATION WORKING CIRCLE

3.1 Introduction:

Forest blocks having natural vegetation with partly degraded forests due to heavy biotic pressure, grazing pressure and illicit felling are included in Rehabilitation Working Circle. There are scattered mother trees which serve as mother tree and help in natural regeneration of forests. Sal is the dominant species in this forest with good regeneration from seeds. Ground flora is covered with herbs, shrubs, grasses and thorny species. Forests protected by JFM/ CFM committees have largely even-aged vegetation, predominantly Sal.

3.2 General Constitution of Working Circle

This working circle includes all the compartments and forest blocks of Coppice and Rehabilitation working circle of previous working plan with forest canopy density from 11% & above. These blocks and compartments were degraded and reduced to scrub type but the crop improved due to protection by local people. The crop included here cannot be worked for commercial exploitation of timber under selection system. The future management practice aims at these rooted waste forests, scrub forests to rehabilitate by integrated rehabilitation technique. So also these forests need protection and intensive nursing in order to regenerate and to revive their productivity during this working plan period. The areas included in this working circle consist of areas having plain, valley and hilly terrain. It includes the degraded quarry areas in forest, which are situated on rugged erodible slopes. Disturbance to soil, Geology and vegetation by the way of quarrying without giving proper attention to regenerate the area and refilling the gaps created at the time of mining has degraded the vegetation. Such quarry activities have damaged the eco-system by polluting air, water and soil. 20829.92 ha was allotted in this working circle in the outgoing plan out of which 13981.017 ha was treated through ANR with gap planting. In this revised plan, an area of 21302.621 ha is allotted to this working circle. The constitution and prescription of this working circle is given in a tabular statement below.

Sl. No.	Items	Description
1	General Constitution	It includes compartments and blocks of Rehabilitation Working Circle of last working plan with forest canopy density of 11% & above. Some additional JFM areas which accumulated growth having trees up to 3′ girth at breast height have also been included under RWC.
2	General observation to vegetation	Areas located in plain forests. It contains Sal crops from rooted waste. Percentage of Sal is more than 50 with Asan, Char, and Mahul etc. as associates.
3	General objectives of management	To get maximum protection, adopt water and soil conservation, provide natural regeneration of Sal to develop the density of deleted and degraded forest. Restock of Barren and Blank patches by planting.
4	Area of allotment	21302.621 ha.
5	Analysis of valuation of crops	Sal in pole stage along with drought hardy species.
6	Silvicultural system	Rehabilitation measures under Aided Natural Regeneration (ANR) are recommended with gap planting.
7	Rotation of conversion period	Improvement of forests through ANR is recommended every five years. No rotation period is fixed.
8	Exploitable girth/ diameter	No exploitable girth is required since no felling is proposed.
9	Rehabilitation cycle	10 years.
10	Rehabilitation Series	16 Rehabilitation Series in Baripada Forest Division.
11	Method of executing Rehabilitation	Demarcation, preparation and treatment map and area orientation approach to previously worked area.
12	Execution	Sal rooted waste eroded areas, Hilly slopes and old degraded areas under rehabilitation execution.
13	Subsidiary Silvicultural operation	Cleaning of irregular crop should be taken up at 5th and10th years of the working (in five years interval) with gap planting.
14	Artificial regeneration	Dead and wind fallen trees may be salvaged following due procedure during cleaning operation with climber cutting and vegetative fencing followed by gap planting.
15	Miscellaneous regulations	Suitable changes may be made, if necessary.
16	Effect of Prescription	To make the area fully stocked and check soil erosion and conservation of water.
17	Environment of eco-system	Reduce erosion and improve site quality.

Range wise distribution of forest area under RWC

Range	No. of Forest Block	Total area of the Block in Ha.	Total Plan area in Ha.	Area allotted to RWC in Ha
Pithabata	6	3580.580	3552.220	2227.077
Dukura	19	3048.910	3047.980	1545.344
R.G. Pur	11	4790.360	4758.532	3278.140
Udala	10	2446.510	2441.120	1079.723
Betnoti	32	9504.580	9442.562	5320.533
Deuli	8	11061.240	11023.280	6518.596
Kaptipada	2	354.880	354.550	134.085
Bangiriposi	8	1566.640	1566.640	1199.123
Division Total	**96**	**36353.700**	**36186.884**	**21302.621**

3.3 General Characteristics of Vegetation

The vegetation of these forests is in degraded stage / young stage. General condition of vegetation is very open and consists mostly of Sal in scrub stage along with inferior drought hardy species or coppice growth of sal. The crop occurs in shallow soils derived usually from crystalline and metamorphic rocks where soil moisture conditions are unfavorable for the development of moist sal even in areas with much higher rainfall. These soils are highly erodible and susceptible to severe soil erosion such as gully and sheet erosion leaving behind exposed hard Murom and rocky surface or calcareous clayey soil. There are, however, small scattered patches of deep and better soil containing poor and degraded coppice growth of sal and its associates.

The vegetation of this working circle are the sal rooted waste in degraded and eroded lands, open area due to poor regeneration or over grazing or lopping and degraded coppice forest. The species which occur in the area of this working circle are Sal, Karada, Amla, Jamun, Sunari, Dhatki, Palas, Gohira, Dhaura, Kendu, Ban-khajuri, Asan, Bela and Gambhar. At places Duba grass occurs in moist patches but generally floors remain exposed. These exposed patches look green with grasses and weeds during rainy season but look barren and dry during winter and summer. A sample vegetation under rehabilitation working circle is presented below, showing girth class, minimum DBH and maximum DBH.

The crop is mostly of young poles. No harvest is expected from this Working Circle. It is to recover the forest from effects of over exploitation during past era.

The Silvicultural System "Improvement through Silvicultural Cleaning, Natural regeneration, Gap Filling with intensive Soil & Moisture Conservation" will be adopted.

TREE ENUMERATION IN DEULI FOREST RANGE

SL No	Name of Forest Block	Min DBH (in cm)	Max DBH (in cm)	No. of trees 1' to 2' GBH	No. of trees 2' to 3' GBH	No. of trees more than 3' GBH	Total No. of trees.	Major Trees Available
1	Chandua	11.46	37.87	7	0	4	11	Sal-232, Mahul-22, Asan-86, Char-102 and others.
2	Chandua	10.18	31.51	22	11	1	34	
3	Chandua	12.73	33.1	7	18	4	29	
4	Chandua	9.55	9.55	0	0	0	0	
5	Chandua	10.18	24.19	49	8	0	57	
6	Chandua	10.18	28.69	31	5	0	36	
7	Chandua	7.64	24.19	15	2	0	17	
8	Chandua	5.09	24.19	6	1	0	7	
9	Chandua	10.18	23.87	30	2	0	32	
10	Chandua	10.18	19.41	11	1	0	12	
11	Chandua	10.5	17.19	14	0	0	14	
12	Chandua	10.18	18.46	47	0	0	47	
13	Chandua	10.18	21.01	26	3	0	29	
14	Chandua	5.41	24.19	17	2	0	19	
15	Chandua	10.5	27.69	10	8	0	18	
16	Chandua	6.37	30.87	23	10	1	34	
17	Chandua	11.46	37.24	16	8	1	25	
18	Chandua	11.14	32.46	18	13	5	36	
19	Chandua	3.18	25.78	34	2	0	36	
20	Suliapada	10.5	42.01	24	10	1	35	Sal-276, Mahul-11, Asan-22, Char-48, Mai-20, Teak-15 and others.
21	Suliapada	11.14	47.74	15	0	2	17	
22	Suliapada	11.14	31.52	1	0	1	2	
23	Suliapada	11.14	32.96	25	10	2	37	
24	Suliapada	10.18	19.1	33	0	0	33	
25	Suliapada	10.18	21.32	3	1	0	4	
26	Suliapada	10.18	40.74	24	7	2	33	
27	Suliapada	11.46	29.92	4	4	1	9	
28	Suliapada	10.18	47.74	5	4	5	14	
29	Suliapada	10.18	40.42	17	10	8	35	
30	Suliapada	10.18	33.12	16	14	1	31	
31	Suliapada	10.18	47.74	21	12	2	35	
32	Suliapada	10.5	28.33	23	9	0	32	
33	Suliapada	10.5	31.19	15	5	1	21	
34	Suliapada	10.82	30.55	29	0	1	30	
35	Suliapada	17.5	28.01	3	17	0	20	
36	Suliapada	10.5	31.19	10	6	1	17	

SL No	Name of Forest Block	Min DBH (in cm)	Max DBH (in cm)	No. of trees 1' to 2' GBH	No. of trees 2' to 3' GBH	No. of trees more than 3' GBH	Total No. of trees.	Major Trees Available
37	Suliapada	10.82	26.1	5	3	0	8	
38	Tangasole	10.18	11.42	6	0	0	6	Sal-261, Mahul-01, Asan-03, Char-79, Mai-10 and others.
39	Tangasole	10.82	22.6	20	3	0	23	
40	Tangasole	10.18	17.82	33	0	0	33	
41	Tangasole	10.18	24.82	23	8	0	31	
42	Tangasole	10.18	42.28	32	7	1	40	
43	Tangasole	10.18	19.1	36	0	0	36	
44	Tangasole	10.18	20.05	32	3	0	35	
45	Tangasole	10.18	22.28	34	5	0	39	
46	Tangasole	10.18	24.51	34	6	0	40	
47	Tangasole	10.18	19.1	25	0	0	25	
48	Tangasole	10.5	31.19	19	6	2	27	
49	Tangasole	10.5	27.69	26	4	0	30	
50	Kuliana	58	107	1	14	4	19	Sal-111, Mahul-04, Asan-02, Char-28 and others.
51	Kuliana	10.18	25.78	34	1	0	35	
52	Kuliana	10.18	18.78	37	0	0	37	
53	Kuliana	15.87	23.55	6	6	0	12	
54	Kuliana	10.18	15.28	5	0	0	15	
55	Kuliana	9.55	9.55	0	0	0	0	
56	Kuliana	10.5	14.96	4	0	0	4	
57	Kuliana	10.18	25.14	6	2	0	8	
58	Kuliana	10.18	21.32	19	4	0	23	
59	Kaliasole PRF	10.82	15.91	25	0	0	25	Sal-107, Mahul-07, Asan-01, Char-04 and others.
60	Kaliasole PRF	10.82	32.15	7	2	11	20	
61	Kaliasole PRF	10.82	38.19	29	4	1	34	
62	Kaliasole PRF	10.18	47.74	5	7	3	15	
63	Kaliasole PRF	12.73	46.79	17	11	2	30	
64	Andhari	10.18	34.05	21	5	2	28	
65	Deuli	10.18	16.55	23	0	0	23	Sal-51, Mahul-01, Char-01 and others.
66	Deuli	10.18	13.37	31	0	0	31	
67	Deuli							
68	Deuli RF 1	11.14	23.87	27	3	0	30	Sal-58, Mahul-07, Asan-14, Char-08 and others.
69	Deuli RF 1	10.82	17.19	34	0	0	34	
70	Deuli RF 1	13.05	17.5	4	0	0	4	
71	Deuli RF 1	10.82	43.6	15	2	2	19	
72	Deuli RF 2	10.18	35.65	9	7	1	17	Sal-19, Mahul-09, Asan-02,
73	Deuli RF 2	11.14	26.42	8	8	0	16	
74	Deuli RF 2	10.18	25.78	10	4	0	14	

SL No	Name of Forest Block	Min DBH (in cm)	Max DBH (in cm)	No. of trees 1' to 2' GBH	No. of trees 2' to 3' GBH	No. of trees more than 3' GBH	Total No. of trees.	Major Trees Available
75	Deuli RF 2							Char-10 and others.
76	Deuli RF 3	12.73	22.28	14	3	0	17	Sal-176, Mahul-10, Mai-15, Asan-05, Char-18 and others.
77	Deuli RF 3	10.82	22.6	16	4	0	20	
78	Deuli RF 3	10.18	19.41	22	1	0	23	
79	Deuli RF 3	10.18	16.55	20	0	0	20	
80	Deuli RF 3	10.18	28.33	14	6	0	20	
81	Deuli RF 3	10.18	46.15	12	4	4	20	
82	Deuli RF 3	12.41	30.24	6	16	1	23	
83	Deuli RF 3	10.18	12.73	12	0	0	12	
84	Deuli RF 3	10.5	33.74	10	4	2	16	
85	Deuli RF 3	11.46	47.74	5	6	6	17	
86	Deuli RF 3	20.37	34.37	0	4	1	5	
87	Deuli RF 3	10.5	27.69	9	7	0	16	
88	Deuli RF 3	12.09	35.01	4	11	3	18	
89	Deuli RF 3	12.09	37.37	9	6	2	17	
Grand Total				**1506**	**400**	**92**	**2008**	

Above table shows that majority of trees are below 3′ GBH for which they are kept under rehabilitation working circle for improvement of vegetation and checking forest degradation. The various reasons for degradation of these forest blocks/ compartments are as follows.

1. These forest blocks were situated in patches near the thickly populated villages or surrounded by it.
2. Increased and recurring demand of firewood, brushwood, small timber, fodder, NTFP, due to increase in cattle and human population and agrarian economy.
3. Illicit felling and removal of important species.
4. Successive annual coupe working with no post subsidiary silvicultural coupe operations, resulting in degraded vegetation.
5. Natural regeneration is good in spite of over grazing and biotic interference.
6. Recurring mortality due to repeated annual forest fire.
7. Soil erosion.

These adverse factors are still continuing and further degradation and depletion is occurring. The prescriptions of previous plan have not been implemented. Hence it is necessary that different schemes and plans on rehabilitation in the district entrusted to D.F.O. or other agency of the district may be taken up in the areas allotted to this

working circle. The Divisional Forest Officer should coordinate and integrate the different rehabilitation and soil conservation activities with other wings of the district administration.

3.4 Felling Series, Cutting Sections and JFM Areas

Rehabilitation Series:

Series No.	Name of Range	Name of Rehabilitation Series		Area in Ha.
1	PITHABATA	Forest Canopy Density	(11-40%)	1147.402
2	PITHABATA	Forest Canopy Density	(> 40%)	1079.675
3	DUKURA	Forest Canopy Density	(11-40%)	950.457
4	DUKURA	Forest Canopy Density	(> 40%)	594.887
5	RASGOVINDPUR	Forest Canopy Density	(11-40%)	1715.31
6	RASGOVINDPUR	Forest Canopy Density	(> 40%)	1562.83
7	UDALA	Forest Canopy Density	(11-40%)	568.547
8	UDALA	Forest Canopy Density	(> 40%)	511.176
9	BETNOTI	Forest Canopy Density	(11-40%)	2963.941
10	BETNOTI	Forest Canopy Density	(> 40%)	2356.592
11	DEULI	Forest Canopy Density	(11-40%)	3260.912
12	DEULI	Forest Canopy Density	(> 40%)	3257.684
13	KAPTIPADA	Forest Canopy Density	(11-40%)	134.085
14	BANGRIPOSI	Forest Canopy Density	(11-40%)	736.477
15	BANGRIPOSI	Forest Canopy Density	(> 40%)	462.646

Area Statement

96 Forest blocks are allotted to this working circle as given below.

ALLOTMENT OF FOREST BLOCKS AND COMPARTMENTS TO REHABILITATION WORKING CIRCLE

Forest Block wise Area under Rehabilitation Working Circle in Ha.

Name of Range	Sl. No.	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
PITHABATA	1	Baldiha R.F.	72.408	72.408	
	2	B.C. Pur R.F.	334.955	167.000	167.955
	3	Budhikhamari R.F.	529.988	264.994	264.994
	4	Hatikote R.F.	378.932	189.000	189.932
	5	Lulung-Purunapani R.F.	139.269	69.000	70.269
	6	Manchabandha R.F.	771.525	385.000	386.525
		Sub-total	**2227.077**	**1147.402**	**1079.675**
DUKURA	7	Aghasole RF	4.563	4.563	
	8	Badsahi R.F.	136.832	68.416	68.416
	9	Bidhyadharpur R.F.	124.918	62.459	62.459
	10	Chakradharpur R.F.	53.599	53.599	
	11	Deulia R.F.	105.089	52.000	53.089
	12	Gojodi-Damodarpur R.F.	13.971	13.971	
	13	Haldia R.F.	5.091	5.091	
	14	Itamundia R.F.	36.416	36.416	
	15	Jarkani R.F.	9.116	9.116	
	16	Kanpura R.F.	177.456	88.728	88.728
	17	Purunapani R.F.	25.516	25.516	
	18	Dukura R.F.	126.085	63.000	63.085
	19	Nigirdha (B) P.R.F.	30.311	30.311	
	20	Kukurbhuka (1)P.R.F.	101.764	50.882	50.882
	21	Kukurbhuka (2)P.R.F.	70.272	70.272	
	22	Sanamakabadi P.R.F.	109.296	54.648	54.648
	23	Budhabalang (A) P.R.F.	40.440	40.440	
	24	Budhabalang (B) P.R.F.	69.029	69.029	
	25	Gopinathpur P.R.F.	305.580	152.000	153.580
		Sub-total	**1545.344**	**950.457**	**594.887**
RASGOVINDPUR	26	Amarda R.F.	1122.819	561.000	561.819
	27	Betnasia R.F.	61.945	61.945	
	28	Baghajharan R.F.	34.144	34.144	
	29	Baladia R.F.	43.450	43.450	
	30	Chitrada R.F.	269.856	134.000	135.856
	31	Moroda R.F.	1144.054	572.000	572.054
	32	Nalagaja R.F.	126.045	63.000	63.045

Name of Range	Sl. No.	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
RASGOVINDPUR	33	Nichuapada R.F.	17.771	17.771	
	34	Nunchatia R.F.	103.377	51.000	52.377
	35	Sarumula R.F.	200.350	100.000	100.350
	36	Sukhilakhali R.F.	154.329	77.000	77.329
		Sub-total	**3278.140**	**1715.310**	**1562.830**
UDALA	37	Dhaundia R.F.	206.722	103.000	103.722
	38	Dugdha R.F.	17.530	17.530	
	39	Khunta R.F.	133.988	66.000	67.988
	40	Nuapada R.F.	167.230	83.000	84.230
	41	Phuljhari R.F.	250.117	125.000	125.117
	42	Kuriakhunta R.F.	2.777	2.777	
	43	Puruna Baripada R.F.	1.441	1.441	
	44	Jaypur R.F.	9.977	9.977	
	45	Belakuti R.F.	30.822	30.822	
	46	Udala R.F.	259.119	129.000	130.119
		Sub-total	**1079.723**	**568.547**	**511.176**
BETNOTI	47	Badampur R.F.	515.102	257.000	258.102
	48	Asankhali R.F.	2.874	2.874	
	49	Badguma R.F.	7.661	7.661	
	50	Bartana R.F.	67.935	67.935	
	51	Basantapur R.F.	74.416	74.416	
	52	Beldiha R.F.	22.096	22.096	
	53	Bishrampur R.F.	6.571	6.571	
	54	Chhatnna R.F.	267.369	133.000	134.369
	55	Dalki R.F.	440.893	220.000	220.893
	56	Dumapada R.F.	158.018	79.000	79.018
	57	Durgapur R.F.	516.280	258.000	258.280
	58	Gandigadha R.F.	625.290	312.000	313.290
	59	Garudabasa R.F.	49.910	49.910	
	60	Hatijhuri R.F.	28.637	28.637	
	61	Jagannathpur R.F.	191.561	95.000	96.561
	62	Jugal R.F.	218.460	109.000	109.460
	63	Kapoi R.F.	98.250	98.250	
	64	Ketakisole R.F.	11.640	11.640	
	65	Khadikapada R.F.	18.180	18.180	
	66	K.C. Pur R.F.	771.710	385.000	386.710
	67	Kochilakhunta R.F.	229.320	114.000	115.320
	68	Merda R.F.	324.725	162.000	162.725
	69	Mohanpur R.F.	13.511	13.511	
	70	Phuljhari R.F.	167.420	80.000	87.420
	71	Raikama R.F.	103.041	51.000	52.041

Name of Range	Sl. No.	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
BETNOTI	72	Rautra R.F.	66.085	66.085	
	73	Sarbana R.F.	4.062	4.062	
	74	Bharadasole R.F.	32.893	32.893	
	75	Bhalukchua R.F.	164.403	82.000	82.403
	76	Patpur RF	49.023	49.023	
	77	Kochilakhunta P.R.F.	72.199	72.199	
	78	Bhalia P.R.F.	0.998	0.998	
		Sub-total	**5320.533**	**2963.941**	**2356.592**
DEULI	79	Andhari R.F.	8.912	8.912	
	80	Chandua R.F.	1818.245	909.000	909.245
	81	Deuli R.F.	1822.907	911.000	911.907
	82	Kuliana R.F.	465.843	232.000	233.843
	83	Suliapada R.F.	1854.461	927.000	927.461
	84	Badsole P.R.F.	156.103	78.000	78.103
	85	Tangasole P.R.F.	206.694	103.000	103.694
	86	Kaliasole P.R.F.	185.431	92.000	93.431
		Sub-total	**6518.596**	**3260.912**	**3257.684**
KAPTIPADA	87	Asanabani R.F.	87.095	87.095	
	88	Sukhuapata Hill P.F.	46.990	46.990	
		Sub-total	**134.085**	**134.085**	**0.000**
BANGRIPOSI	89	Rangahudi R.F.	33.083	33.083	
	90	Thakurani R.F.	209.896	104.000	105.896
	91	Juha P.R.F.	59.234	59.234	
	92	Pimpudijharan P.F.	60.970	60.970	
	93	Kapadiha P.F.	10.730	10.730	
	94	Ambadiha P.F.	14.030	14.030	
	95	Hill Block-1 P.F.	712.750	356.000	356.750
	96	Maheshpur P.F.	98.430	98.430	
		Sub-total	**1199.123**	**736.477**	**462.646**
Division Total		***96 Forest Blocks***	***21302.621***	***11477.131***	***9825.490***

3.5 Blocks, Compartments and JFM Areas

ALLOTMENT OF FOREST BLOCKS AND COMPARTMENTS TO REHABILITATION WORKING CIRCLE

ANNUAL WORKING SCHEDULE IN REHABILITATION WORKING CIRCLE

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
PITHABATA	2021-22	Baldiha R.F.	30.000	30.000	
		B.C. Pur R.F.	30.000	30.000	
		Budhikhamari R.F.	50.000	50.000	
		Hatikote R.F.	40.000	40.000	
		Lulung-Purunapani R.F.	30.000	30.000	
		Manchabandha R.F.	80.000	80.000	
		Sub-total	**260.000**	**260.000**	**0.000**
	2022-23	Baldiha R.F.	42.408	42.408	
		B.C. Pur R.F.	30.000	30.000	
		Budhikhamari R.F.	50.000	50.000	
		Hatikote R.F.	40.000	40.000	
		Lulung-Purunapani R.F.	39.000	39.000	
		Manchabandha R.F.	80.000	80.000	
		Sub-total	**281.408**	**281.408**	**0.000**
	2023-24	B.C. Pur R.F.	30.000	30.000	
		Budhikhamari R.F.	50.000	50.000	
		Hatikote R.F.	40.000	40.000	
		Manchabandha R.F.	80.000	80.000	
		Sub-total	**200.000**	**200.000**	**0.000**
	2024-25	B.C. Pur R.F.	30.000	30.000	
		Budhikhamari R.F.	50.000	50.000	
		Hatikote R.F.	40.000	40.000	
		Manchabandha R.F.	80.000	80.000	
		Sub-total	**200.000**	**200.000**	**0.000**
	2025-26	B.C. Pur R.F.	47.000	47.000	
		Budhikhamari R.F.	64.994	64.994	
		Hatikote R.F.	29.000	29.000	
		Manchabandha R.F.	65.000	65.000	
		Sub-total	**205.994**	**205.994**	**0.000**
	2026-27	B.C. Pur R.F.	30.000		30.000
		Budhikhamari R.F.	50.000		50.000
		Hatikote R.F.	40.000		40.000
		Lulung-Purunapani R.F.	30.000		30.000
		Manchabandha R.F.	80.000		80.000
		Sub-total	**230.000**	**0.000**	**230.000**

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
PITHABATA	2027-28	B.C. Pur R.F.	30.000		30.000
		Budhikhamari R.F.	50.000		50.000
		Hatikote R.F.	40.000		40.000
		Lulung-Purunapani R.F.	40.269		40.269
		Manchabandha R.F.	80.000		80.000
		Sub-total	**240.269**	**0.000**	**240.269**
	2028-29	B.C. Pur R.F.	30.000		30.000
		Budhikhamari R.F.	50.000		50.000
		Hatikote R.F.	40.000		40.000
		Manchabandha R.F.	80.000		80.000
		Sub-total	**200.000**	**0.000**	**200.000**
	2029-30	B.C. Pur R.F.	30.000		30.000
		Budhikhamari R.F.	50.000		50.000
		Hatikote R.F.	40.000		40.000
		Manchabandha R.F.	80.000		80.000
		Sub-total	**200.000**	**0.000**	**200.000**
	2030-31	B.C. Pur R.F.	47.955		47.955
		Budhikhamari R.F.	64.994		64.994
		Hatikote R.F.	29.932		29.932
		Manchabandha R.F.	66.525		66.525
		Sub-total	**209.406**	**0.000**	**209.406**
		Range Total	**2227.077**	**1147.402**	**1079.675**
DUKURA	2021-22	Aghasole RF	4.563	4.563	
		Badsahi R.F.	30.000	30.000	
		Bidhyadharpur R.F.	30.000	30.000	
		Chakradharpur R.F.	30.000	30.000	
		Deulia R.F.	25.000	25.000	
		Gopinathpur P.R.F.	30.000	30.000	
		Sub-total	**149.563**	**149.563**	**0.000**
	2022-23	Badsahi R.F.	38.416	38.416	
		Bidhyadharpur R.F.	32.459	32.459	
		Chakradharpur R.F.	23.599	23.599	
		Deulia R.F.	27.000	27.000	
		Gopinathpur P.R.F.	30.000	30.000	
		Sub-total	**151.474**	**151.474**	**0.000**
	2023-24	Badsahi R.F.	30.000		30.000
		Bidhyadharpur R.F.	30.000		30.000
		Deulia R.F.	25.000		25.000
		Sanamakabadi P.R.F.	54.648	54.648	
		Gopinathpur P.R.F.	30.000	30.000	
		Sub-total	**169.648**	**84.648**	**85**

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
DUKURA	2024-25	Badsahi R.F.	38.416		38.416
		Bidhyadharpur R.F.	32.459		32.459
		Deulia R.F.	28.089		28.089
		Sanamakabadi P.R.F.	54.648		54.648
		Gopinathpur P.R.F.	30.000	30.000	
		Sub-total	**183.612**	**30**	**153.612**
	2025-26	Itamundia R.F.	36.416	36.416	
		Jarkani R.F.	9.116	9.116	
		Kanpura R.F.	30.000	30.000	
		Kukurbhuka (1)P.R.F.	30.000	30.000	
		Gopinathpur P.R.F.	32.000	32.000	
		Sub-total	**137.532**	**137.532**	
	2026-27	Kanpura R.F.	30.000	30.000	
		Purunapani R.F.	25.516	25.516	
		Nigirdha (B) P.R.F.	30.311	30.311	
		Kukurbhuka (1)P.R.F.	20.882	20.882	
		Gopinathpur P.R.F.	30.000		30.000
		Sub-total	**136.709**	**106.709**	**30**
	2027-28	Kanpura R.F.	28.728	28.728	
		Dukura R.F.	30.000	30.000	
		Kukurbhuka (1)P.R.F.	30.000		30.000
		Budhabalang (A) P.R.F.	40.440	40.440	
		Gopinathpur P.R.F.	30.000		30.000
		Sub-total	**159.168**	**99.168**	**60**
	2028-29	Kanpura R.F.	30.000		30.000
		Dukura R.F.	33.000	33.000	
		Kukurbhuka (1)P.R.F.	20.882		20.882
		Budhabalang (B) P.R.F.	30.000	30.000	
		Gopinathpur P.R.F.	30.000		30.000
		Sub-total	**143.882**	**63.000**	**80.882**
	2029-30	Kanpura R.F.	30.000		30.000
		Dukura R.F.	30.000		30.000
		Kukurbhuka (2)P.R.F.	40.000	40.000	
		Budhabalang (B) P.R.F.	39.029	39.029	
		Gopinathpur P.R.F.	30.000		30.000
		Sub-total	**169.029**	**79.029**	**90.000**
	2030-31	Gojodi-Damodarpur R.F.	13.971	13.971	
		Haldia R.F.	5.091	5.091	
		Kanpura R.F.	28.728		28.728
		Dukura R.F.	33.085		33.085
		Kukurbhuka (2)P.R.F.	30.272	30.272	

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
DUKURA	2030-31	Gopinathpur P.R.F.	33.580		33.580
		Sub-total	**144.727**	**49.334**	**95.393**
		Range Total	**1545.344**	**950.457**	**594.887**
RASGOVINDPUR	2021-22	Amarda R.F.	110.000	110.000	
		Betnasia R.F.	30.000	30.000	
		Moroda R.F.	115.000	115.000	
		Nalagaja R.F.	30.000	30.000	
		Nunchatia R.F.	30.000	30.000	
		Sub-total	**315.000**	**315.000**	
	2022-23	Amarda R.F.	110.000	110.000	
		Betnasia R.F.	31.945	31.945	
		Moroda R.F.	115.000	115.000	
		Nalagaja R.F.	33.000	33.000	
		Nunchatia R.F.	21.000	21.000	
		Sub-total	**310.945**	**310.945**	
	2023-24	Amarda R.F.	110.000	110.000	
		Baghajharan R.F.	34.144	34.144	
		Chitrada R.F.	30.000	30.000	
		Moroda R.F.	115.000	115.000	
		Nalagaja R.F.	30.000		30.000
		Nunchatia R.F.	30.000		30.000
		Sub-total	**349.144**	**289.144**	**60**
	2024-25	Amarda R.F.	110.000	110.000	
		Baladia R.F.	43.450	43.450	
		Chitrada R.F.	30.000	30.000	
		Moroda R.F.	115.000	115.000	
		Nalagaja R.F.	33.045		33.045
		Nunchatia R.F.	22.377		22.377
		Sub-total	**353.872**	**298.45**	**55.422**
	2025-26	Amarda R.F.	121.000	121.000	
		Chitrada R.F.	30.000	30.000	
		Moroda R.F.	112.000	112.000	
		Sarumula R.F.	30.000	30.000	
		Sub-total	**293.000**	**293.000**	
	2026-27	Amarda R.F.	110.000		110.000
		Chitrada R.F.	44.000	44.000	
		Moroda R.F.	115.000		115.000
		Sarumula R.F.	30.000	30.000	
		Sukhilakhali R.F.	40.000	40.000	
		Sub-total	**339.000**	**114**	**225**

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
RASGOVINDPUR	2027-28	Amarda R.F.	110.000		110.000
		Chitrada R.F.	30.000		30.000
		Moroda R.F.	115.000		115.000
		Nichuapada R.F.	17.771	17.771	
	2027-28	Sarumula R.F.	40.000	40.000	
		Sukhilakhali R.F.	37.000	37.000	
		Sub-total	**349.771**	**94.771**	**255**
	2028-29	Amarda R.F.	110.000		110.000
		Chitrada R.F.	30.000		30.000
		Moroda R.F.	115.000		115.000
		Sarumula R.F.	30.000		30.000
		Sukhilakhali R.F.	40.000		40.000
		Sub-total	**325.000**	**0.000**	**325.000**
	2029-30	Amarda R.F.	110.000		110.000
		Chitrada R.F.	30.000		30.000
		Moroda R.F.	115.000		115.000
		Sarumula R.F.	30.000		30.000
		Sukhilakhali R.F.	37.329		37.329
		Sub-total	**322.329**	**0.000**	**322.329**
	2030-31	Amarda R.F.	121.819		121.819
		Chitrada R.F.	45.856		45.856
		Moroda R.F.	112.054		112.054
		Sarumula R.F.	40.350		40.350
		Sub-total	**320.079**	**0.000**	**320.079**
		Range Total	**3278.140**	**1715.310**	**1562.830**
UDALA	2021-22	Dhaundia R.F.	30.000	30.000	
		Nuapada R.F.	40.000	40.000	
		Udala R.F.	30.000	30.000	
		Sub-total	**100.000**	**100.000**	**0.000**
	2022-23	Dhaundia R.F.	30.000	30.000	
		Nuapada R.F.	43.000	43.000	
		Udala R.F.	30.000	30.000	
		Sub-total	**103.000**	**103.000**	**0.000**
	2023-24	Dhaundia R.F.	43.000	43.000	
		Nuapada R.F.	40.000		40.000
		Udala R.F.	30.000	30.000	
		Sub-total	**113.000**	**73.000**	**40.000**
	2024-25	Dhaundia R.F.	30.000		30.000
		Nuapada R.F.	44.230		44.230
		Udala R.F.	39.000	39.000	
		Sub-total	**113.230**	**39**	**74.23**

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
UDALA	2025-26	Dhaundia R.F.	30.000		30.000
		Phuljhari R.F.	40.000	40.000	
		Udala R.F.	30.000		30.000
		Sub-total	**100.000**	**40.000**	**60.000**
	2026-27	Dhaundia R.F.	43.722		43.722
	2026-27	Phuljhari R.F.	40.000	40.000	
		Udala R.F.	30.000		30.000
		Sub-total	**113.722**	**40.000**	**73.722**
	2027-28	Dugdha R.F.	17.530	17.530	
		Khunta R.F.	30.000	30.000	
		Phuljhari R.F.	45.000	45.000	
		Udala R.F.	30.000		30.000
		Sub-total	**122.530**	**92.53**	**30**
	2028-29	Khunta R.F.	36.000	36.000	
		Phuljhari R.F.	40.000		40.000
		Udala R.F.	40.119		40.119
		Sub-total	**116.119**	**36**	**80.119**
	2029-30	Khunta R.F.	30.000		30.000
		Phuljhari R.F.	40.000		40.000
		Belakuti R.F.	30.822	30.822	
		Sub-total	**100.822**	**30.822**	**70.000**
	2030-31	Khunta R.F.	37.988		37.988
		Phuljhari R.F.	45.117		45.117
		Kuriakhunta R.F.	2.777	2.777	
		Puruna Baripada R.F.	1.441	1.441	
		Jaypur R.F.	9.977	9.977	
		Sub-total	**97.300**	**14.195**	**83.105**
		Range Total	**1079.723**	**568.547**	**511.176**
BETNOTI	2021-22	Badampur R.F.	50.000	50.000	
		Asankhali R.F.	2.874	2.874	
		Badguma R.F.	7.661	7.661	
		Dalki R.F.	45.000	45.000	
		Durgapur R.F.	50.000	50.000	
		Gandigadha R.F.	60.000	60.000	
		Garudabasa R.F.	49.910	49.910	
		Jugal R.F.	35.000	35.000	
		K.C. Pur R.F.	75.000	75.000	
		Kochilakhunta R.F.	40.000	40.000	
		Merda R.F.	40.000	40.000	
		Raikama R.F.	51.000	51.000	
		Kochilakhunta P.R.F.	40.000	40.000	
		Sub-total	**546.445**	**546.445**	**0.000**

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
BETNOTI	2022-23	Badampur R.F.	50.000	50.000	
		Bartana R.F.	30.000	30.000	
		Dalki R.F.	45.000	45.000	
		Durgapur R.F.	50.000	50.000	
		Gandigadha R.F.	60.000	60.000	
	2022-23	Hatijhuri R.F.	28.637	28.637	
		Jagannathpur R.F.	30.000	30.000	
		Jugal R.F.	35.000	35.000	
		K.C. Pur R.F.	75.000	75.000	
		Kochilakhunta R.F.	40.000	40.000	
		Merda R.F.	40.000	40.000	
		Raikama R.F.	52.041		52.041
		Kochilakhunta P.R.F.	32.199	32.199	
		Sub-total	**567.877**	**515.836**	**52.041**
	2023-24	Badampur R.F.	50.000	50.000	
		Bartana R.F.	37.935	37.935	
		Chhatnna R.F.	30.000	30.000	
		Dalki R.F.	45.000	45.000	
		Durgapur R.F.	50.000	50.000	
		Gandigadha R.F.	60.000	60.000	
		Jagannathpur R.F.	30.000	30.000	
		Jugal R.F.	39.000	39.000	
		K.C. Pur R.F.	75.000	75.000	
		Kochilakhunta R.F.	34.000	34.000	
		Merda R.F.	40.000	40.000	
		Rautra R.F.	30.000	30.000	
		Bhalia P.R.F.	0.998	0.998	
		Sub-total	**521.933**	**521.933**	**0.000**
	2024-25	Badampur R.F.	50.000	50.000	
		Basantapur R.F.	40.000	40.000	
		Chhatnna R.F.	30.000	30.000	
		Dalki R.F.	45.000	45.000	
		Durgapur R.F.	50.000	50.000	
		Gandigadha R.F.	60.000	60.000	
		Jagannathpur R.F.	35.000	35.000	
		Jugal R.F.	35.000		35.000
		K.C. Pur R.F.	75.000	75.000	
		Kochilakhunta R.F.	40.000		40.000
		Merda R.F.	42.000	42.000	
		Rautra R.F.	36.085	36.085	
		Sub-total	**538.085**	**463.085**	**75.000**

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
BETNOTI	2025-26	Badampur R.F.	57.000	57.000	
		Basantapur R.F.	34.416	34.416	
		Chhatnna R.F.	30.000	30.000	
		Dalki R.F.	40.000	40.000	
		Durgapur R.F.	58.000	58.000	
		Gandigadha R.F.	72.000	72.000	
	2025-26	Jagannathpur R.F.	30.000		30.000
		Jugal R.F.	35.000		35.000
		K.C. Pur R.F.	85.000	85.000	
		Kochilakhunta R.F.	40.000		40.000
		Merda R.F.	40.000		40.000
		Sub-total	**521.416**	**376.416**	**145**
	2026-27	Badampur R.F.	50.000		50.000
		Beldiha R.F.	22.096	22.096	
		Bishrampur R.F.	6.571	6.571	
		Chhatnna R.F.	43.000	43.000	
		Dalki R.F.	45.000		45.000
		Durgapur R.F.	50.000		50.000
		Gandigadha R.F.	60.000		60.000
		Jagannathpur R.F.	30.000		30.000
		Jugal R.F.	39.460		39.460
		K.C. Pur R.F.	75.000		75.000
		Kochilakhunta R.F.	35.320		35.320
		Merda R.F.	40.000		40.000
		Bhalukchua R.F.	40.000	40.000	
		Sub-total	**536.447**	**111.667**	**424.78**
	2027-28	Badampur R.F.	50.000		50.000
		Chhatnna R.F.	30.000		30.000
		Dalki R.F.	45.000		45.000
		Dumapada R.F.	40.000	40.000	
		Durgapur R.F.	50.000		50.000
		Gandigadha R.F.	60.000		60.000
		Jagannathpur R.F.	36.561		36.561
		Kapoi R.F.	30.000	30.000	
		Ketakisole R.F.	11.640	11.640	
		K.C. Pur R.F.	75.000		75.000
		Merda R.F.	40.000		40.000
		Phuljhari R.F.	40.000	40.000	
		Bhalukchua R.F.	42.000	42.000	
		Sub-total	**550.201**	**163.64**	**386.561**

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
BETNOTI	2028-29	Badampur R.F.	50.000		50.000
		Chhatnna R.F.	30.000		30.000
		Dalki R.F.	45.000		45.000
		Dumapada R.F.	39.000	39.000	
		Durgapur R.F.	50.000		50.000
		Gandigadha R.F.	60.000		60.000
		Kapoi R.F.	30.000	30.000	
		Khadikapada R.F.	18.180	18.180	
	2028-29	K.C. Pur R.F.	75.000		75.000
		Merda R.F.	42.725		42.725
		Phuljhari R.F.	40.000	40.000	
		Bhalukchua R.F.	40.000		40.000
		Sub-total	**519.905**	**127.180**	**392.725**
	2029-30	Badampur R.F.	50.000		50.000
		Chhatnna R.F.	30.000		30.000
		Dalki R.F.	45.000		45.000
		Dumapada R.F.	40.000		40.000
		Durgapur R.F.	50.000		50.000
		Gandigadha R.F.	60.000		60.000
		Kapoi R.F.	38.250	38.250	
		K.C. Pur R.F.	75.000		75.000
		Phuljhari R.F.	47.420		47.420
		Bharadasole R.F.	32.893	32.893	
		Bhalukchua R.F.	42.403		42.403
		Sub-total	**510.966**	**71.143**	**439.823**
	2030-31	Badampur R.F.	58.102		58.102
		Chhatnna R.F.	44.369		44.369
		Dalki R.F.	40.893		40.893
		Dumapada R.F.	39.018		39.018
		Durgapur R.F.	58.280		58.280
		Gandigadha R.F.	73.290		73.290
		K.C. Pur R.F.	86.710		86.710
		Mohanpur R.F.	13.511	13.511	
		Phuljhari R.F.	40.000		40.000
		Sarbana R.F.	4.062	4.062	
		Patpur RF	49.023	49.023	
		Sub-total	**507.258**	**66.596**	**440.662**
		Range Total	**5320.533**	**2963.941**	**2356.592**
DEULI	2021-22	Andhari R.F.	8.912	8.912	
		Chandua R.F.	180.000	180.000	
		Deuli R.F.	180.000	180.000	
		Kuliana R.F.	45.000	45.000	

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
DEULI	2021-22	Suliapada R.F.	180.000	180.000	
		Badsole P.R.F.	40.000	40.000	
		Kaliasole P.R.F.	30.000	30.000	
		Sub-total	**663.912**	**663.912**	**0.000**
	2022-23	Chandua R.F.	180.000	180.000	
		Deuli R.F.	180.000	180.000	
		Kuliana R.F.	45.000	45.000	
		Suliapada R.F.	180.000	180.000	
	2022-23	Badsole P.R.F.	38.000	38.000	
		Kaliasole P.R.F.	30.000	30.000	
		Sub-total	**653.000**	**653.000**	**0.000**
	2023-24	Chandua R.F.	180.000	180.000	
		Deuli R.F.	180.000	180.000	
		Kuliana R.F.	45.000	45.000	
		Suliapada R.F.	180.000	180.000	
		Badsole P.R.F.	40.000		40.000
		Kaliasole P.R.F.	32.000	32.000	
		Sub-total	**657.000**	**617.000**	**40.000**
	2024-25	Chandua R.F.	180.000	180.000	
		Deuli R.F.	180.000	180.000	
		Kuliana R.F.	45.000	45.000	
		Suliapada R.F.	180.000	180.000	
		Badsole P.R.F.	38.103		38.103
		Kaliasole P.R.F.	30.000		30.000
		Sub-total	**653.103**	**585**	**68.103**
	2025-26	Chandua R.F.	189.000	189.000	
		Deuli R.F.	191.000	191.000	
		Kuliana R.F.	52.000	52.000	
		Suliapada R.F.	207.000	207.000	
		Tangasole P.R.F.	35.000	35.000	
		Kaliasole P.R.F.	30.000		30.000
		Sub-total	**704.000**	**674**	**30**
	2026-27	Chandua R.F.	180.000		180.000
		Deuli R.F.	180.000		180.000
		Kuliana R.F.	45.000		45.000
		Suliapada R.F.	180.000		180.000
		Tangasole P.R.F.	35.000	35.000	
		Kaliasole P.R.F.	33.431		33.431
		Sub-total	**653.431**	**35.000**	**618.431**
	2027-28	Chandua R.F.	180.000		180.000
		Deuli R.F.	180.000		180.000
		Kuliana R.F.	45.000		45.000

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
DEULI	2027-28	Suliapada R.F.	180.000		180.000
		Tangasole P.R.F.	33.000	33.000	
		Sub-total	**618.000**	**33**	**585**
	2028-29	Chandua R.F.	180.000		180.000
		Deuli R.F.	180.000		180.000
		Kuliana R.F.	45.000		45.000
		Suliapada R.F.	180.000		180.000
		Tangasole P.R.F.	35.000		35.000
	2028-29	**Sub-total**	**620.000**	**0.000**	**620.000**
	2029-30	Chandua R.F.	180.000		180.000
		Deuli R.F.	180.000		180.000
		Kuliana R.F.	45.000		45.000
		Suliapada R.F.	180.000		180.000
		Tangasole P.R.F.	35.000		35.000
		Sub-total	**620.000**	**0.000**	**620.000**
	2030-31	Chandua R.F.	189.245		189.245
		Deuli R.F.	191.907		191.907
		Kuliana R.F.	53.843		53.843
		Suliapada R.F.	207.461		207.461
		Tangasole P.R.F.	33.694		33.694
		Sub-total	**676.150**	**0.000**	**676.150**
		Range Total	**6518.596**	**3260.912**	**3257.684**
KAPTIPADA	2021-22	Asanabani R.F.	40.000	40.000	
		Sub-total	**40.000**	**40.000**	**0.000**
	2022-23	Asanabani R.F.	47.095	47.095	
		Sub-total	**47.095**	**47.095**	**0.000**
	2023-24	Sukhuapata Hill P.F.	46.990	46.990	
		Sub-total	**46.990**	**46.990**	**0.000**
		Range Total	**134.085**	**134.085**	**0.000**
BANGRIPOSI	2021-22	Rangahudi R.F.	33.083	33.083	
		Pimpudijharan P.F.	30.000	30.000	
		Hill Block-1 P.F.	70.000	70.000	
		Sub-total	**133.083**	**133.083**	**0.000**
	2022-23	Thakurani R.F.	35.000	35.000	
		Pimpudijharan P.F.	30.970	30.970	
		Hill Block-1 P.F.	70.000	70.000	
		Sub-total	**135.970**	**135.970**	**0.000**
	2023-24	Thakurani R.F.	35.000	35.000	
		Hill Block-1 P.F.	70.000	70.000	
		Maheshpur P.F.	30.000	30.000	
		Sub-total	**135.000**	**135.000**	**0.000**

Name of Range	Year	Name of RF/ PRF/ PF/ VF	RWC	Forest Canopy Density (11-40%)	Forest Canopy Density (> 40%)
BANGRIPOSI	2024-25	Thakurani R.F.	34.000	34.000	
		Hill Block-1 P.F.	70.000	70.000	
		Maheshpur P.F.	30.000	30.000	
		Sub-total	**134.000**	**134.000**	**0.000**
	2025-26	Thakurani R.F.	35.000		35.000
		Hill Block-1 P.F.	76.000	76.000	
		Maheshpur P.F.	38.430	38.430	
		Sub-total	**149.430**	**114.430**	**35.000**
	2026-27	Thakurani R.F.	35.000		35.000
	2026-27	Hill Block-1 P.F.	70.000		70.000
		Sub-total	**105.000**	**0**	**105**
	2027-28	Thakurani R.F.	35.896		35.896
		Hill Block-1 P.F.	70.000		70.000
		Sub-total	**105.896**	**0**	**105.896**
	2028-29	Juha P.R.F.	30.000	30.000	
		Hill Block-1 P.F.	70.000		70.000
		Sub-total	**100.000**	**30**	**70**
	2029-30	Juha P.R.F.	29.234	29.234	
		Hill Block-1 P.F.	70.000		70.000
		Sub-total	**99.234**	**29.234**	**70**
	2030-31	Kapadiha P.F.	10.730	10.730	
		Ambadiha P.F.	14.030	14.030	
		Hill Block-1 P.F.	76.750		76.750
		Sub-total	**101.510**	**24.76**	**76.75**
		Range Total	**1199.123**	**736.477**	**462.646**
Division Total			***21302.621***	***11477.131***	***9825.490***

3.6 Special Objectives of Management

The objectives and treatment of Rehabilitation Working Circle are as follows.

The special objects of management in the working circle are:-

i) To achieve best growth by tending of existing crop.

ii) To provide effective protection measures against all biotic interferences, repeated fire and illicit removal of commercially important species as well as grasses.

iii) To re-stock the barren and blank patches by planting indigenous and fast growing and quick maturing exotic species.

iv) To provide adequate rehabilitation measure in order to protect hill slopes to improve soil and moisture content.

v) To reclaim the abandoned mines and stone quarrying sites.

vi) To conserve and improve the forest cover site quality by adopting biological and mechanical measures for soil and moisture conservation, thereby achieve environmental soundness, social acceptable and optimal total productions.

3.6.1 Analysis of the crop

The forest blocks having natural vegetation at younger age of pole crops or partly degraded due to heavy biotic pressure have been included under Rehabilitation Working Circle. Forest areas not included under IWC / PWC have been kept under this Working Circle for their improvement. Majority of these forests are Sal dominated with Char, Asan, Kusum, Dhaura, Haldu, and Kasi etc. of 2′ - 3′ girth which needs improvement through subsidiary silvicultural operation. After enumeration of Deuli Range over 8.7 ha in different 87 Sample Plots trees with GBH 1′-2′ is 1506 Nos. (75%), 2′-3′ GBH is 400 Nos (20%) & more than 3′ GBH is 92 Nos. (5%). This shows that sufficient No. of younger trees are available for improvement through silvicultural cleaning. Sal trees constitute 55% of the vegetation, Char trees constitute 14% of the vegetation, Asan trees constitute 6% of the vegetation & Mahul trees constitute 3% of the vegetation.

3.6.2 Silvicultural system

- The Silvicultural System to be adopted for this working Circle is *"Silvicultural Cleaning, Tending followed by Aided Natural Regeneration supplemented with enrichment Plantation"*
- **Low density forest (11-40% Forest Canopy Density).**
- Restricted decongestion of clumps, high stump cutting and climber cutting during silvicultural cleaning.
- In Sal forest areas without regeneration, natural regeneration will be induced by creating fence around the area followed by ploughing the land before Sal seeding. It can be supplemented by planting Sal seedlings.
- Soil & Moisture Conservation through treatment of dry seasonal nalla.
- Covering of large blank areas in extent through artificial regeneration.
- Closing the area to Grazing,
- Fire Protection measures.

- **High density forest (>40% Forest Canopy Density).**
- Removal of Dead trees those are having utility and operation is economically viable.
- Decongestion of clumps, high stump cutting and climber cutting during silvicultural cleaning.
- Soil & Moisture Conservation through treatment of dry seasonal nalla.
- Covering of large blank areas in extent through artificial regeneration.
- Closing the area to Grazing,
- Fire Protection measures.

As the forests included in this working circle are in different stages of degradation and that the prime objective is to re-stock such areas by tending operations supplemented by gap-planting and protection measures (including JFM), no formal silvicultural system is prescribed. However, to achieve the major objectives, the broad operations are regeneration cleaning (inclusive of even thinning where ever necessary), soil and moisture conservation measures, gap-plantation of desired species and protection from biotic interference.

The main object of this working circle is to adopt suitable water and soil conservation measures so as to protect existing crop and to re-stock barren and blank patches with artificial regeneration. There shall be no exploitation except removal of dead trees and singling out of rooted waste shoots/bushes. Thus different silvicultural operations suitable to the areas to be carried out would be protection, tending, afforestation, soil and water conservation measures and other rehabilitation techniques. Rehabilitation measures and artificial regeneration may be taken up as silvicultural system.

3.6.3 Rotation Period:

- The present crop is not to be harvested during this plan period. No rotation period is prescribed at present. The entire area will be treated in a **Ten Year Cycle**.
- 16 Treatment series constituted.

- The crop is mostly Sal. To reach an exploitable Girth above 150 cm or so, considering the present Soil Productivity and soil moisture regime a Rotation period of 60 years is predicted. As no harvest is expected from this working circle, no rotation period is prescribed in this plan.

- 16 Rehabilitation Series constituted for effective treatment of Range wise area under 11-40% Forest Canopy Density & more than 40% Forest Canopy Density.

As timber production is not the objective here, no rotation period is prescribed and hence not even any yield regulation is required. However, removal of dead, fallen trees besides thinning in congested crop is prescribed here.

3.6.4 Harvestable Diameters

As the Timber operation is not the objective in Rehabilitation Working Circle, no calculation of harvestable diameter is required.

3.6.5 Reducing Factors And Reduced Areas

In comparison with the outgoing plan to the present plan, the area in this working circle has increased. A good number of forest blocks regained their potentiality with active participation of local people and dedicated forest personnel.

3.6.6 Felling Cycle

As the Timber operation is not the objective in Rehabilitation Working Circle, no Felling Cycle has been prescribed.

3.6.7 Division into Periods and Allotment to Periodic Blocks (PB)

In order to execute the rehabilitation measures, the total area under Working Circle has been divided into 16 Rehabilitation series and each rehabilitation series has been divided into annual coupes to facilitate systematic operations. Care has been taken to delineate the annual coupes in such a manner that continuity of the rehabilitation measures is ensured to have sustained efforts.

3.6.8 Calculation of the Yield

As the Timber operation is not the objective in Rehabilitation Working Circle, no calculation of Yield is required.

3.6.9 Table of Felling

As the Timber operation is not the objective in Rehabilitation Working Circle, no Table of felling is required.

3.6.10 Method of Execution

Since eco-restoration of the area is the main objective, there is a need to go for first preparation of the site specific treatment plan which in the instant case is an area oriented, site-specific watershed based eco-system approach for restoration of forest cover with local community at the center of consideration. Accordingly following steps will be taken.

3.6.10.1 Demarcation of Annual Coupes

- The annual coupes shall be demarcated in the preceding season of treatment on the ground with small stone cairns erected at visible distances preferably at the corners and bend points so as to facilitate easy identification of the coupes.
- If any portion of the coupe line coincides with compartment line, the said compartment line shall be maintained by putting double white paint rings on the trees standing on the said line at visible distance and/or clearance of the line over a width of 1(one) meter; during such clearance, no established seedlings shall be felled nor damaged.
- In case a coupe overlaps two or more compartments, each compartment shall be treated as a separate treatment area; this will even ensure proper maintenance of compartment histories.
- Coupes shall be indicated by small signboards at corners or at points of intersection with roads, inspection paths or boundary lines of forest blocks. The signboard should contain the name of the rehabilitation series, the number of the coupe, its area, year of treatment and number of the compartment.

3.6.10.2 Preparation of Treatment Plan

- ❖ After demarcation of annual rehabilitation coupe, the Range Officer shall examine the area carefully, prepare the trace map of the area in 1:25,000 scale showing details of area, direction of slope, nature of erosion, biotic interference and other relevant factors and prepare a treatment map. In case, the annual area of treatment is part of the already approved micro-plan, the corresponding operations shall accordingly be executed in those coupes.
- ❖ Depending on the treatment type (annual rehabilitation coupe may have either one or both the categories), the annual rehabilitation coupe treatment plan shall be prepared by the Range officer and shall include, amongst other things, site details (Forest block/ Compartment/ Rehabilitation Series/ Rehabilitation Coupe/Area); site category (Category-one or Category-two or both); site characteristics (terrain, slope, drainage, soil type & depth, vegetation and extent of regeneration, degradation etc); year-wise activities (including maintenance); major operations to be undertaken; cost norms and a calendar of operations. The plan shall also include provisions for monitoring & evaluation.
- ❖ The annual action plan shall be for 4 (four) years period of treatment that is Advance Work (0^{th} year); Creation (1^{st} year) and Maintenance (2^{nd} & 3^{rd} years).
- ❖ It shall be checked by the ACF / the DFO who shall be responsible for the implementation of the approved Plan. The plan shall also be supported by a treatment map on a scale of 1:25,000.

3.6.11 Subsidiary Silvicultural Operations Cleaning and Thinning:

3.6.11.1 Rehabilitation Operations for Execution

- o Once the treatment plan has been prepared and finalized, the works shall be carried out as per the requirements vis-à-vis time schedule without any major deviation. All the operations shall be undertaken through JFM mode only.
- o The mechanical measures of soil & conservation shall also be carried out in the 0^{th} year itself besides raising of nursery & site preparation for gap plantation.

- The cultural operations shall be carried out in the year of creation and preferably before the onset of monsoon. These operations will include singling out of the coppice shoots retaining only the most promising ones; climber cutting and rectification of high stumps to encourage better coppice shoots. Wherever congestion occurs, cleaning operations shall be carried and in case of established regeneration, some light thinning may also be done on the lines of „C" grade thinning subject to the restrictions imposed. Besides, dead, dry and fallen trees shall also be removed from the annual coupes if such trees are not required for wildlife purpose.
- The gap plantation shall be done with quality seedlings followed by other operations in accordance with the prescription of the Orissa Plantation Manual and additional stipulations.
- Remaining rehabilitation operations shall also be carried out as prescribed in the treatment plan and above paragraph.

3.6.11.2 Treatments Prescribed

Keeping the major objectives of management of this Working Circle in view, appropriate soil and moisture conservation measures shall form an integral part of all annual site-specific treatment plans. In addition, the following prescriptions shall be, *mutatis mutandis*, applied

- High stumps shall be rectified to encourage young coppice shoots.
- Singling out of the multiple coppice shoots shall be taken up to retain only the most promising ones.
- Wherever there is congestion in the crop, cleaning operation shall be undertaken to encourage regeneration and growth of locally desirable species.
- These forests shall be strictly protected against uncontrolled grazing, forest fires and unauthorized removals. Only dead, dry and fallen trees shall be removed.

Wherever gaps are available, planting of locally desirable species be encouraged. The local indigenous species shall be preferred for plantation. At the same time due consideration shall be given for plantation of bamboo, NTFP species including fruit bearing species. Some indigenous species, which have faster rate of growth and may be suitable for these sites, are *Cedrela toona, Ailanthus excelsa, Gmelina arborea,*

Terminalia tomentosa, Trewia nudiflora, Michelia champaca, Emblica offcinalis. Other species include *Kydia calycina, Albizzia lebbek, Pterocarpus marsupium, Dendrocalamus strictus, Xylia xylocarpa, Cassia fistula* and other species. Important species like glyricidia, agasti, mahaneem, Ficus species and fruit bearing species like mango, jack fruit, tamarind, mahua, karanja, neem, kusum and others shall be tried in the areas close to villages. On much eroded sites and degraded gullies & along bunds, species like khair, *Acacia leucophloea, Zizyphus spp., Aegle marmelos*, Neem, Babul, Agave etc will be planted.

Wherever there is congestion in the crop with regeneration fully established and growth encouraging, thinning operations shall be undertaken to encourage further growth.

In fact, these operations are necessary to afford better opportunity of growth to the crop so retained after thinning. It shall be executed only if the conditions warrant. However, the thinning in general would include the following conditional operations:-

- It should be restricted to the congested pole crop only that is younger age classes and limited to the species with girth at breast height less than or equal to 75 cms.
- Marking shall be done on the lines of "C" grade thinning which is restricted to removal of only „dominated" & „suppressed" stems besides removal of some „co-dominant" stems as well on thinning.
- No thinning shall be carried out in open areas nor any fruit bearing species such as Mahula, Mango, Tamarind, Amla, Chara, Harida, Bahada, Bela, Kusum etc. shall be thinned out whatever be the extent of congestion.
- Limit on removal of stems vis-à-vis retention per hectare shall be governed by the formula D=0.5[(G/10)+1] where „D" is the distance between two stems in meters after thinning and „G" is the average girth of stems in cms.
- As thinning markings are to be done very sparingly with meticulous reflection of mind and extreme silvicultural restraints, this will therefore need prior approval of the DFO.

Suitable soil and moisture conservation measures shall be taken up such as gully plugging, staggered trenching, contour bunding and check dams including drainage

line treatments depending upon the terrain. Some such activities are briefly explained below:-

- Check dams are required to be erected across gullies. These may be either of brush-wood or of dry rubble or stones depending on the availability of material, requirements of sites and cost norms. The run-off in the gully shall be obstructed and diverted. A series of check-dams are required at intervals to be decided by the gradient factor. Steeper the slopes, more check dams are required and such activities shall be started from the uphill side only. The gully beds should be planted with soil- binders like sabai grass, *Vetivera* grass, *Agave*, *Dodonea* and others.
- Staggered or continuous contour trenches and contour bunds shall be prepared along contour in order to arrest water speed, to divert direction of flow and to harvest water.
- Vegetative Barriers on contour based structures shall be created. A number of species, which act as soil binders have been suggested above. Cenchrus species; Dicanthium species; babul; ber; Agave and similar such species are very promising for this purpose. These may be planted on the ridges of contour bunds, contour trenches, and other such structures. Seeds may also be sown on the ridges.

However, a general check list with suggestive measures proposed and species suitable for plantations vis-à-vis treatments on different sites in this Working Circle is provided. This is in addition to the above prescriptions and only indicative. Hence, many more rehabilitation activities and species can also be added by the DFO depending on the field requirements.

Measures Vis-à-vis Species suitable for different sites

Site	Measures to be taken	Species to be planted
Ravine	Soil & water conservation measures	*Dalbergia sissoo, Albizzia lebbek, Acacia catechu, Acacia nilotica, Azadirachta indica, Agave sisalana and Eulaliopsis binata besides soil binding grasses.*
	Full protection from grazing and fire	
	Safe disposal of run-off	
	Grassland development	
	Afforestation	
	Soil & water conservation measures	*Dendrocalamus strictus, Madhuca indica, Bombax ceiba, Soymida*

Site	Measures to be taken	Species to be planted
Laterite soil	Full protection from grazing and fire	*febrifuga, Cleistanthus collinus, Albizzia lebbek, Anacardium occidentale, Agave species and soil binding grasses.*
	Application of fertilizer	
	Afforestation	
Skeletal soil	Contour bunding, trenching	*Albizzia lebbek, Cassia siamea, Hardwickia binata, Azadirachta indica, Dalbergia sissoo, Teak, Tamarindus indica, Agave species, Eulaliopsis binata, Ailanthus excelsa, Acacia catechu.*
	Afforestation	
	Other Soil & water conservation measures	
	Protection from grazing and fire	
	Sowing grasses	
	Seed dibbling	
Water logged areas	Preparation of mounds	*Anthocephalus chinensis, Syzygium cumini, Terminalia arjuna, Bombax ceiba, Lagerstroemia speciosa, Sisoo, Derris indica, Acacia nilotica.*
	Planting of tall plants	
	Application of anti termite chemicals	
	Early planting	
	Drainage system treatment & other such measures	
(Source: Hand book of Afforestation techniques by Sri R.F. Ghosh)		

3.6.12 Regeneration

This Working Circle consists of forest areas, degraded and eroded in varying degrees needing site specific treatments only. The areas included in this Working Circle are therefore required to be classified into different types depending on the treatment to be given. The said classification and corresponding requirement of forest management shall be kept in view while preparing sites for prescribed rehabilitation measures. According to the treatment to be given, the area of this Working Circle has been divided into the following two broad categories.

Category-One includes those forest areas with canopy density >40%, in which good regeneration (including advanced regeneration) or good root stock are already present. Lack of required silvicultural interventions coupled with ever increasing biotic interference has led to rather degradation in the crop & site quality with passage of time. Thus, the management practices for these areas shall be with the objectives to encourage establishment of regeneration; promotion of forest growth and closure of canopies. These areas will generally require some soil and moisture conservation measures as well besides strict protection against illicit felling and forest fires. Controlled grazing may be allowed in some areas. It shall, however, be preferred if

fodder development operations are also taken up and local people are encouraged to cut/ collect fodder from the assigned areas rather than allowing cattle to directly graze. Malformed plants and damaged/decayed stumps shall be cut back/ dressed with a view to promote accelerated growth of the main stems and to avoid unwanted growth of the shoots/stems. In some areas, singling of coppice shoots may be required to select and prefer most promising ones at the cost of weak shoots/ stems. In other areas, cleaning operations may be necessary to free regeneration from undesired growth. In many other areas, where dense pole crops have matured, light thinning may be necessary.

Category-Two shall include those areas where forest growth exists, but crown density is 40% or less and regeneration are poor. These areas often have gaps. Site degradation is more than that in Category-one. These areas shall require elaborate soil and moisture conservation measures. Malformed plants/damaged stumps may require cut back operations. Some cleaning operations may also be necessary. Light thinning may be undertaken wherever situation warrants. Some gap planting may be necessary.

3.6.13 Associated Regulations and Measures

Protection Measures: In order to check degradation of rehabilitation areas due to biotic interference, it is highly necessary to protect the area effectively from fire, grazing and illicit felling. The annual treatment areas shall be rigidly protected and closed to grazing up to 5 years. They shall also be protected from fires. The provisions of Rule 283 of the Orissa Forest Department Code and the Orissa Forest Fire (Protection) Rules will be implemented. The following further measures are suggested:

- **Joint Forest Management:** JFM is an accepted way to involve people in protection and regeneration of forests. Constitution of Forest Development Agency (FDA) in the Division is a great leap in this direction. Hence, each such annual rehabilitation coupe shall have registered JFM committee (VSS) for the purpose of implementation of the treatment plan. However if necessary from protection point of view, more than one such annual coupes may be

assigned to an individual VSS. However, while constituting such committees, the Govt. guidelines shall also be kept in mind.

- **Vegetative Measures:** It is the cheapest and most useful fencing. Sisal shall be planted in four rows in staggered manner at spacing of 1m × 1m along the annual coupe boundary line. Palm, Bamboo seeds may also be sown on the inner side in one or two rows.
- **Stone Walling:** On rocky patches, stonewall fencing may be adopted if sufficient boulders are available in situ.
- **Trench Fencing:** Trench fencing is costly & requires periodic repairs. If the additional objective is to even create labour intensive works and funds are not a constraint, this protection measure shall be undertaken. However, no trenching shall be done across the contours i.e. it shall be invariably along the contours only in order to rule out subsequent erosion. Moreover, the dugout soil shall be kept on uphill side only and stabilized with vegetative means.

Soil and Moisture Conservation measures:

The main activity to be taken up in Rehabilitation WC area is the Soil and Moisture Conservation works (SMC works). During implementation RDF and ANR works in this area a special care may be given in choosing the method of SMC works. Mechanical method/Engineering measures/Structural measures may be broadly classified as below:

1. Erosion control measures

i. Bunding
   a. Loose Boulder Contour Bunding
   b. Graded Bunding
   c. Loose Boulder Check Dam

ii. Bench terracing
   a. Level terrace
   b. Inward sloping terrace
   c. Out ward slopping terrace

iii. Trenching
   a. Contour trenching
   b. Continuous contour trench
   c. Staggered trench
   d. Graded trenching

2. Drainage Line treatment measures

a. Brush wood check dam with pebble fills.

b. Provision of small percolation pits.

3. Water harvesting measures

While selecting the method of SMC works the following point may be kept in mind;

4. GENERAL AREAS.

i. Protective Afforestation
ii. Gully control works
iii. Protection of land along stream bank control
iv. Land Development (Contour bonding, gravity channel, water harvesting etc.)

5. HILL AREAS.

i. Protective Afforestation
ii. Gully control works (From ridge to Bottom)
iii. Protection of land along stream bank control
iv. Land Development (Continuous Contour Trench, Staggered Trench, Contour bonding, bonding and water harvesting etc.)
v. Land reclamation
vi. Terracing

4. CHAPTER – IV
PLANTATION WORKING CIRCLE

4.1 Introduction

This working circle includes all the barren, depleted, encroached and previously planted areas of Baripada Forest Division. In this plan, 21029.019 ha is allotted to this working circle distributed among eight functional Ranges. The old Eucalyptus, Acacia & Social Forestry Plantations (1612.968 ha), Other Plantations (1799.008 ha.), Blank Areas (11451.232 ha.), Teak Plantations for Intercultural operation (259.106 ha.), areas practically devoid of substantial tree growth but with some sparse scrubby vegetation forest areas with less than 10% canopy density (1663.676 ha.) and area under encroachment (4243.029 ha.) are included in Plantation Working Circle.

1059.294 ha of over matured Eucalyptus and Acacia plantations could not be harvested during last working plan because of lack of provision in working plan. Hence these are included in Plantation Working Circle with proposal for harvest and re-planting with indigenous species favoured by elephant. 259.106 Ha Teak plantations exist in Jamsole RF (114.106 Ha), Manchabandha RF (40 Ha), Badsahi RF (5 Ha) and K.C. Pur RF (100 Ha) which have not been attended for inter-cultural operation like branch cutting and thinning. These plantations have been included in Plantation Working Circle with recommendation for thinning and branch cutting, where ever necessary for improvement of the quality of plantation. All other block plantations have been included under Plantation Working Circle. DGPS survey of 2010-11 indicated encroachment of 4243.029 ha of forest land since last 40 years. NRSC maps indicated NO FOREST areas/ blank areas within forest blocks, which has been included under Plantation Working Circle. In previous working plan a lot of forest areas with natural forest growth above 10% Forest Canopy Density was included under PWC, which have been corrected during current plan.

The old plantation areas were planted with Eucalyptus, *Acacia auriculiformis* and other miscellaneous species. At places the plantation was successful particularly on areas with good soil and drainage. The plantation area had produced the small timber, firewood and dry leaves required by local villagers. At present the plantation sites are deteriorating due to lack of necessary silvicultural treatment which should have been

taken on regular basis and also due to biotic interferences. The profuse natural regeneration of *Acacia auriculiformis* is observed wherever it is planted, and ground floor was covered with grasses. In *Eucalyptus hybrid* plantation areas, there is no regeneration. These areas have to be reforested in order to prevent further devastation by soil erosion. All the existing plantations are required to be surveyed.

4.2 General Constitution of Working Circle

This Working Circle includes all those blocks which have permanent blanks and barren lands subjected to continuous biotic interference. Such areas are devoid of any root-stock worth establishing natural regeneration within a reasonable time frame. This circle also, include the old existing plantations raised during and/ or prior to the outgoing plan period.

Broadly five categories of lands are included here. The first category is that of blank areas which need complete artificial regeneration/plantation, 2nd category is Forest Block areas with less than 10% forest canopy density which needs aided natural regeneration. 3rd category being that of areas with old plantations of teak & other miscellaneous species which needs only protection and tending operations whereas the 4th category is that of old and over-matured Eucalyptus & Acacia plantations requiring harvest and re-planting with natural forest species. The 5th category include lands of Forest blocks under encroachment.

General Prescriptions:

Sl. No.	Items	Description
1	General Constitution	It includes the blank areas available in different forest blocks which are suitable for plantation, plantation areas and encroachment areas. Natural forests with < 10% forest canopy density were included.
2	General observation to vegetation	In blank areas site is blank practically devoid of substantial tree growth but with some sparse scrubby vegetation. In plantation areas old existing plantations are there. Encroached areas are converted to agricultural field.
3	General objectives of management	To increase the forest cover and protect the barren land from further degradation and prevention of soil erosion and conservation and improvement of moisture regime.
4	Area of allotment	21029.019 ha.

Sl. No.	Items	Description
5	Analysis of valuation of crops	The yield formula for Eucalyptus and Acacia is furnished.
6	Silvicultural system	Vegetative fencing to be provided for species prone to grazing. Fire line is to be created before fire season in and around plantation area.
7	Rotation of conversion period	Eucalyptus and Acacia – 20 years, Teak – 50 years, Misc. species – 40 years.
8	Exploitable girth/ diameter	Not necessary.
9	Plantation cycle	10 years
10	Plantation Series	44
11	Method of executing Plantation	A generalized method cannot be prescribed due to variable nature of plantation sites. Site specific scheme will be prepared by the Range Officer and method of plantation prescribed in that scheme will be adopted. Vegetative fencing may be included in case of grazable species.
12	Execution	Plantation will be executed as per the above scheme and in accordance with the provision of plantation manual as well as guideline issued by the higher authority from time to time.
13	Tending operation	It will be carried out depending on the condition of the plantation both growing stock and density. Thinning of congested plantations may be taken up where ever necessary for healthy growth of plantation.

Non-implementation of the prescriptions properly in the scheduled areas has affected the forest growth adversely. Due to non-implementation of provisions of plantation working circle, quality of plantation crop has deteriorated. In most of the areas, it has endorsed weeds growth like Eupatorium, Lantana etc. Encroachment of forest land is another cause, which has reduced the forest coverage causing ecological imbalance. In brief, improper implementation of prescriptions in working plan has badly affected the forest coverage, both qualitatively and quantitatively.

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC
				Under FRA	Under FC Act.		
PITHABATA	1	Baldiha R.F.	110.130	0.000	1.000	109.130	36.722
	2	Bhagabat Chandrapur R.F.	806.280	0.000	10.800	795.480	460.525
	3	Budhikhamari R.F.	863.100	0.480	6.000	856.620	326.632
	4	Dungurusahi R.F.	10.950	0.000	0.000	10.950	10.950
	5	Hatikote R.F.	556.840	0.000	3.120	553.720	174.788
	6	Lulung-Purunapani R.F.	223.310	0.000	0.000	223.310	84.041
	7	Manchabandha R.F.	1020.920	0.000	6.960	1013.960	242.435
	8	Asanabani P.R..F	57.030	0.000	0.000	57.030	57.030
	9	Goplapur V.F.	4.000	0.000	0.000	4.000	4.000
	10	Srirampur V.F.	3.140	0.000	0.000	3.140	3.140
	11	Gadadharapur V.F.	0.840	0.000	0.000	0.840	0.840
	12	Baunsda V.F.	0.940	0.000	0.000	0.940	0.940
	13	Dumuria V.F.	5.000	0.000	0.000	5.000	5.000
	Sub-total		**3662.480**	**0.480**	**27.880**	**3634.120**	**1407.043**
DUKURA	14	Aghasole R.F.	37.550	0.000	0.000	37.550	32.987
	15	Badsahi R.F.	340.740	0.040	0.000	340.700	203.868
	16	Bidhyadharpur R.F.	238.760	0.000	0.000	238.760	113.842
	17	Chakradharpur R.F.	141.310	0.000	0.000	141.310	87.711
	18	Chengua-Mangalpur R.F.	79.640	0.000	0.000	79.640	79.640
	19	Deulia R.F.	241.670	0.000	0.000	241.670	136.581
	20	Gojodi-Damodarpur R.F.	33.020	0.000	0.000	33.020	19.049
	21	Haldia R.F.	52.000	0.000	0.000	52.000	46.909
	22	Itamundia R.F.	111.370	0.000	0.000	111.370	74.954
	23	Jarkani R.F.	10.680	0.000	0.000	10.680	1.564
	24	Kanpura R.F.	533.850	0.890	0.000	532.960	355.504
	25	Kuldiha R.F.	25.250	0.000	0.000	25.250	25.250
	26	Pundala R.F.	17.970	0.000	0.000	17.970	17.970
	27	Purunapani R.F.	42.730	0.000	0.000	42.730	17.214
	28	Belpal R.F.	110.600	0.000	0.000	110.600	110.600
	29	Dukura R.F.	162.750	0.000	0.000	162.750	36.665
	30	Itamundia-Jamuna R.F.	111.250	0.000	0.000	111.250	111.250
	31	Khanua R.F.	113.680	0.000	0.000	113.680	113.680
	32	Kerko R.F.	110.070	0.000	0.000	110.070	110.070
	33	Nigirdha (A) P.R.F.	15.750	0.000	0.000	15.750	15.750
	34	Nigirdha (B) P.R.F.	37.120	0.000	0.000	37.120	6.809
	35	Kukurbhuka (1)P.R.F.	122.820	0.000	0.000	122.820	21.056
	36	Kukurbhuka (2)P.R.F.	124.580	0.000	0.000	124.580	54.308
	37	Sanamakabadi P.R.F.	129.000	0.000	0.000	129.000	19.704

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC
				Under FRA	Under FC Act.		
DUKURA	38	Budhabalang (A) P.R.F.	46.560	0.000	0.000	46.560	6.120
	39	Budhabalang (B) P.R.F.	76.000	0.000	0.000	76.000	6.971
	40	Gopinathpur P.R.F.	566.400	0.000	0.000	566.400	260.820
	41	Manatri V.F.	6.400	0.000	0.000	6.400	6.400
	42	Bhupad V.F.	5.000	0.000	0.000	5.000	5.000
	43	Manatri V.F.	3.480	0.000	0.000	3.480	3.480
	44	Rangahidi V.F.	4.588	0.000	0.000	4.588	4.588
	45	Ranibandha V.F.	3.440	0.000	0.000	3.440	3.440
	46	Khanua V.F.	6.000	0.000	0.000	6.000	6.000
	47	Basipitha V.F.	10.000	0.000	0.000	10.000	10.000
	48	Basipitha V.F.	8.120	0.000	0.000	8.120	8.120
	Sub-total		**3680.148**	**0.930**	**0.000**	**3679.218**	**2133.874**
R.G.PUR	49	Amarda R.F.	1512.200	0.000	0.648	1511.552	388.733
	50	Betnasia R.F.	110.230	0.000	0.000	110.230	48.285
	51	Baghajharan R.F.	147.950	0.000	2.400	145.550	111.406
	52	Baladia R.F.	95.830	0.000	0.000	95.830	52.380
	53	Chitrada R.F.	422.640	0.000	12.800	409.840	139.984
	54	Jamsole R.F.	434.300	0.000	215.250	219.050	219.050
	55	Moroda R.F.	1479.140	0.000	14.850	1464.290	320.236
	56	Nalagaja R.F.	260.290	0.000	0.000	260.290	134.245
	57	Nichuapada R.F.	52.280	0.000	0.000	52.280	34.509
	58	Nuhajhalia R.F.	50.500	0.000	0.000	50.500	50.500
	59	Nunchatia R.F.	148.270	0.000	0.000	148.270	44.893
	60	Sarumula R.F.	330.220	0.380	0.000	329.840	129.490
	61	Sukhilakhali R.F.	231.310	0.000	0.750	230.560	76.231
	62	Chikitamatia V.F.	10.000	0.000	0.000	10.000	10.000
	63	Sarajharan V.F.	7.344	0.000	0.000	7.344	7.344
	64	Pharajpur V.F.	5.000	0.000	0.000	5.000	5.000
	65	Duarsuni V.F.	5.000	0.000	0.000	5.000	5.000
	66	Nahiasoli V.F.	2.940	0.000	0.000	2.940	2.940
	67	Jhatiada V.F.	5.000	0.000	0.000	5.000	5.000
	68	Nalagaja V.F.	2.000	0.000	0.000	2.000	2.000
	69	Chandanpur V.F.	3.500	0.000	0.000	3.500	3.500
	Sub-total		**5315.944**	**0.380**	**246.698**	**5068.866**	**1790.726**
UDALA	70	Anantasahi R.F.	7.120	0.000	0.000	7.120	7.120
	71	Belakuti R.F.	223.380	0.000	0.000	223.380	192.558
	72	Bhandagaon R.F.	122.210	0.000	0.000	122.210	122.210
	73	Charada R.F.	7.120	0.000	0.000	7.120	7.120
	74	Dhaundia R.F.	524.790	0.800	0.000	523.990	317.268
	75	Dimgadia R.F.	6.960	0.000	0.000	6.960	6.960
	76	Dugdha R.F.	35.290	0.000	0.000	35.290	17.760
	77	Ghantasila R.F.	5.340	0.000	0.000	5.340	5.340
	78	Jaypur R.F.	27.800	0.000	0.000	27.800	17.823
	79	Khunta R.F.	427.990	0.000	4.590	423.400	289.412
	80	Kuamara R.F.	229.530	0.000	0.000	229.530	229.530

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC
				Under FRA	Under FC Act.		
UDALA	81	Kuriakhunta R.F.	7.450	0.000	0.000	7.450	4.673
	82	Marsigaon R.F.	263.320	0.000	0.000	263.320	263.320
	83	Nahara R.F.	161.870	0.000	0.000	161.870	161.870
	84	Nuapada R.F.	324.380	0.000	0.000	324.380	157.150
	85	Mundhakata R.F.	20.400	0.060	0.000	20.340	20.340
	86	Phuljhari R.F.	315.650	0.000	0.000	315.650	65.533
	87	Purunabaripada R.F.	25.850	0.000	0.000	25.850	24.409
	88	Sialia R.F.	34.320	0.000	0.000	34.320	34.320
	89	Sunduria R.F.	2.430	0.000	0.000	2.430	2.430
	90	Sirathali R.F.	74.140	0.000	0.000	74.140	74.140
	91	Udala R.F.	533.930	0.000	0.000	533.930	274.811
	92	Purunabaripada mankadakenda V.F.	0.648	0.000	0.000	0.648	0.648
	93	Kusunia Patpur V.F.	0.320	0.000	0.000	0.320	0.320
	94	Bhalimunduli V.F.	3.900	0.000	0.000	3.900	3.900
	95	Salabani V.F.	2.960	0.000	0.000	2.960	2.960
	96	Sialia V.F.	2.880	0.000	0.000	2.880	2.880
	97	Raghunathpur V.F.	4.660	0.000	0.000	4.660	4.660
	98	Jamudiha V.F.	2.000	0.000	0.000	2.000	2.000
	99	Nuagaon V.F.	13.324	0.000	0.000	13.324	13.324
	100	Bahanada V.F.	1.300	0.000	0.000	1.300	1.300
	101	Jalda V.F.	1.124	0.000	0.000	1.124	1.124
	102	Murari V.F.	0.992	0.000	0.000	0.992	0.992
	103	Gohira V.F.	5.000	0.000	0.000	5.000	5.000
	104	Jogibandha V.F.	2.000	0.000	0.000	2.000	2.000
	105	Jajpur`V.F.	14.884	0.000	0.000	14.884	14.884
	106	Kochiladiha V.F.	15.000	0.000	0.000	15.000	15.000
	107	Khunta V.F.	10.000	0.000	0.000	10.000	10.000
	108	Khunta V.F.	3.756	0.000	0.000	3.756	3.756
	109	Khunta V.F.	0.096	0.000	0.000	0.096	0.096
	110	Khunta V.F.	6.148	0.000	0.000	6.148	6.148
	111	Khunta V.F.	0.400	0.000	0.000	0.400	0.400
	112	Khunta V.F.	12.600	0.000	0.000	12.600	12.600
	113	Sridamchandrapur V.F.	1.376	0.000	0.000	1.376	1.376
	Sub-total		**3486.638**	**0.860**	**4.590**	**3481.188**	**2401.465**
BETNOTI	114	Asanbani R.F.	810.170	0.400	5.100	804.670	804.670
	115	Asankhali R.F.	12.950	0.120	0.000	12.830	9.956
	116	Badampur R.F.	952.290	0.039	0.000	952.251	437.149
	117	Badguma R.F.	28.970	0.000	0.000	28.970	21.309
	118	Baisinga R.F.	108.440	0.128	0.000	108.312	108.312
	119	Balka R.F.	23.960	0.000	0.000	23.960	23.960
	120	Bartana R.F.	194.890	0.000	0.000	194.890	126.955
	121	Basantapur R.F.	113.800	0.000	0.000	113.800	39.384
	122	Beldiha R.F.	41.600	0.000	0.000	41.600	19.504

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC
				Under FRA	Under FC Act.		
BETNOTI	123	Bhimpur R.F.	18.290	0.000	0.000	18.290	18.290
	124	Bishrampur R.F.	42.250	0.000	0.000	42.250	35.679
	125	Chhatnna R.F.	393.510	0.000	2.050	391.460	124.091
	126	Daldali R.F.	71.220	0.000	6.000	65.220	65.220
	127	Dalki R.F.	827.970	0.000	0.000	827.970	387.077
	128	Dumapada R.F.	224.350	0.000	4.800	219.550	61.532
	129	Durgapur R.F.	961.840	0.000	4.300	957.540	441.260
	130	Gad-deulia R.F.	58.730	0.000	0.000	58.730	58.730
	131	Gandigadha R.F.	1085.180	0.999	17.800	1066.381	441.091
	132	Garudabasa R.F.	71.870	0.000	0.000	71.870	21.960
	133	Gopalpur R.F.	10.880	0.000	0.000	10.880	10.880
	134	Gobindapur R.F.	11.820	0.000	0.000	11.820	11.820
	135	Haripur R.F.	41.280	0.040	0.300	40.940	40.940
	136	Hatijhuri R.F.	109.110	0.000	0.000	109.110	80.473
	137	Hempur R.F.	290.790	0.000	0.000	290.790	290.790
	138	Ajadiha R.F.	2.100	0.000	0.000	2.100	2.100
	139	Jagannathpur R.F.	452.590	0.000	1.350	451.240	259.679
	140	Jarka R.F.	6.630	0.000	0.000	6.630	6.630
	141	Jugal R.F.	305.290	0.500	0.000	304.790	86.330
	142	Kalma R.F.	24.360	0.120	0.000	24.240	24.240
	143	Kapoi R.F.	109.260	0.000	0.000	109.260	11.010
	144	Ketakisole R.F.	39.330	0.000	0.000	39.330	27.690
	145	Khadikapada R.F.	75.110	0.000	0.000	75.110	56.930
	146	Khetrapatana R.F.	4.210	0.000	0.000	4.210	4.210
	147	Khiripada R.F.	420.540	0.580	0.000	419.960	419.960
	148	Krushnachandrapur R.F.	1272.070	1.160	18.000	1252.910	481.200
	149	Kochilakhunta R.F.	259.320	0.000	0.000	259.320	30.000
	150	Machhapada R.F.	62.810	0.000	0.000	62.810	62.810
	151	Mamtapal R.F.	222.730	0.000	0.000	222.730	222.730
	152	Merda R.F.	495.820	0.000	0.000	495.820	171.095
	153	Mohanpur R.F.	35.130	0.000	0.000	35.130	21.619
	154	Nuagaon R.F.`	39.330	0.000	0.000	39.330	39.330
	155	Phuljhari R.F.	217.420	0.000	0.000	217.420	50.000
	156	Purunia R.F.	442.300	1.350	0.000	440.950	440.950
	157	Raikama R.F.	191.340	0.000	10.000	181.340	78.299
	158	Rautra R.F.	119.460	0.000	0.300	119.160	53.075
	159	Sarbana R.F.	41.120	0.000	0.000	41.120	37.058
	160	Thakurtota R.F.	73.330	0.000	0.000	73.330	73.330
	161	Bharadasole R.F.	50.670	0.000	0.000	50.670	17.777
	162	Bhalukchua R.F.	199.430	0.000	0.000	199.430	35.027
	163	Totapada R.F.	65.070	0.000	0.000	65.070	65.070
	164	Tikayatpur R.F.	160.960	0.000	0.870	160.090	160.090
	165	Patpur RF	141.480	0.000	0.600	140.880	91.857
	166	Kochilakhunta P.R.F.	99.000	0.000	0.000	99.000	26.801
	167	Bhalia P.R.F.	340.160	0.000	0.000	340.160	339.162

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC
				Under FRA	Under FC Act.		
BETNOTI	168	Kathapal V.F.	0.240	0.000	0.000	0.240	0.240
	169	Chakulia V.F.	3.000	0.000	0.000	3.000	3.000
	170	Karatpata V.F.	0.780	0.000	0.000	0.780	0.780
	171	Chakulia V.F.	4.000	0.000	0.000	4.000	4.000
	172	Analagadia (Matidahi) V.F.	3.060	0.000	0.000	3.060	3.060
	173	Jhinkiria V.F.	1.600	0.000	0.000	1.600	1.600
	174	Singida Munduli V.F.	3.320	0.000	0.000	3.320	3.320
	175	Athabahia V.F.	1.700	0.000	0.000	1.700	1.700
	176	Mendhamundia V.F.	2.100	0.000	0.000	2.100	2.100
	177	Anbagadia V.F.	12.664	0.000	0.000	12.664	12.664
	178	Kalana V.F.	5.000	0.000	0.000	5.000	5.000
	179	Rautrapur V.F.	5.000	0.000	0.000	5.000	5.000
	180	Kalana V.F.	10.000	0.000	0.000	10.000	10.000
	181	Tulajhuri V.F.	8.000	0.000	0.000	8.000	8.000
	182	Asukanda V.F.	3.300	0.000	0.000	3.300	3.300
	183	Angaria V.F.	0.560	0.000	0.000	0.560	0.560
	184	Tikayatpur V.F.	0.800	0.000	0.000	0.800	0.800
	185	Purunia V.F.	10.000	0.000	0.000	10.000	10.000
	186	Purunia V.F.	10.000	0.000	0.000	10.000	10.000
	187	Purunia V.F.	3.880	0.000	0.000	3.880	3.880
	188	Purunia V.F.	6.560	0.000	0.000	6.560	6.560
	189	Balaka V.F.	2.000	0.000	0.000	2.000	2.000
	190	Raghupur V.F.	10.000	0.000	0.000	10.000	10.000
	191	Raghupur V.F.	7.000	0.000	0.000	7.000	7.000
	192	Raghupur V.F.	9.600	0.000	0.000	9.600	9.600
	193	Raghupur V.F.	3.000	0.000	0.000	3.000	3.000
	194	Raghupur V.F.	5.684	0.000	0.000	5.684	5.684
	195	Raghupur V.F.	11.232	0.000	0.000	11.232	11.232
	196	Raghupur V.F.	7.000	0.000	0.000	7.000	7.000
	197	Gadigaon V.F.	9.644	0.000	0.000	9.644	9.644
	198	Gadadeuli V.F.	0.840	0.000	0.000	0.840	0.840
	199	Gadadeuli V.F.	7.296	0.000	0.000	7.296	7.296
	200	Nuagaon V.F.	3.200	0.000	0.000	3.200	3.200
	201	Buguhuda V.F.	2.000	0.000	0.000	2.000	2.000
	Sub-total		**12648.590**	**5.436**	**71.470**	**12571.684**	**7251.151**
DEULI	202	Andhari R.F.	731.630	0.000	0.000	731.630	722.718
	203	Chandua R.F.	3073.120	0.000	8.840	3064.280	1246.035
	204	Deuli R.F.	2379.260	0.000	1.200	2378.060	555.153
	205	Kuliana R.F.	1203.680	0.000	4.800	1198.880	733.037
	206	Suliapada R.F.	2889.560	0.000	8.000	2881.560	1027.099
	207	Badsole P.R.F.	227.030	0.000	10.000	217.030	60.927
	208	Tangasole P.R.F.	236.800	0.000	5.120	231.680	24.986
	209	Kaliasole P.R.F.	320.160	0.000	0.000	320.160	134.729
	210	Dhalu Suliapada V.F.	1.060	0.000	0.000	1.060	1.060

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC
				Under FRA	Under FC Act.		
DEULI	211	Kasia V.F.	1.740	0.000	0.000	1.740	1.740
	212	Handibhanga V.F.	2.468	0.000	0.000	2.468	2.468
	213	Anlakuda V.F.	6.000	0.000	0.000	6.000	6.000
	214	Sankhunta V.F.	2.000	0.000	0.000	2.000	2.000
	215	Jalda V.F.	0.276	0.000	0.000	0.276	0.276
	Sub-total		**11074.784**	**0.000**	**37.960**	**11036.824**	**4518.228**
KAPTIPADA	216	Asanabani R.F.	262.560	0.000	0.000	262.560	175.465
	217	Nachhipur R.F.	229.000	0.000	0.000	229.000	229.000
	218	Sukhuapata Hill P.F.	92.320	0.000	0.330	91.990	45.000
	219	Kaladahi V.F.	1.500	0.000	0.000	1.500	1.500
	220	Pedagadia V.F.	0.220	0.000	0.000	0.220	0.220
	221	Khaladi V.F.	2.112	0.000	0.000	2.112	2.112
	Sub-total		**587.712**	**0.000**	**0.330**	**587.382**	**453.297**
BANGRIPOSI	222	Dighi R.F.	515.940	0.000	0.000	515.940	515.940
	223	Rangahudi R.F.	86.670	0.000	0.000	86.670	53.587
	224	Thakurani R.F.	497.020	0.000	0.000	497.020	287.124
	225	Juha P.R.F.	86.040	0.000	0.000	86.040	26.806
	226	Manbhanj V.F.	3.940	0.000	0.000	3.940	3.940
	227	Baghajhampa V.F.	8.000	0.000	0.000	8.000	8.000
	228	Jarkani V.F.	7.000	0.000	0.000	7.000	7.000
	229	Nata V.F.	7.000	0.000	0.000	7.000	7.000
	230	Birsingh V.F.	0.600	0.000	0.000	0.600	0.600
	231	Nohanatia V.F.	4.000	0.000	0.000	4.000	4.000
	232	Pahadpur V.F.	9.000	0.000	0.000	9.000	9.000
	233	Heenachandrapur V.F.	9.000	0.000	0.000	9.000	9.000
	234	Heenachandrapur V.F.	5.000	0.000	0.000	5.000	5.000
	235	Jaivilla V.F.	0.532	0.000	0.000	0.532	0.532
	236	Sindurgoura V.F.	0.260	0.000	0.000	0.260	0.260
	237	Handibhanga V.F.	2.468	0.000	0.000	2.468	2.468
	238	Bagbuda V.F.	4.000	0.000	0.000	4.000	4.000
	239	Pokhariadiha V.F.	8.000	0.000	0.000	8.000	8.000
	240	Govindpur V.F.	8.000	0.000	0.000	8.000	8.000
	241	Bedhakudar V.F.	10.000	0.000	0.000	10.000	10.000
	242	Gopinathpur V.F.	1.424	0.000	0.000	1.424	1.424
	243	Pahadpur V.F.	1.500	0.000	0.000	1.500	1.500
	244	Brundabanchandrapur V.F.	1.846	0.000	0.000	1.846	1.846
	245	Brundabanchandrapur V.F.	4.500	0.000	0.000	4.500	4.500
	246	Brundabanchandrapur V.F.	0.720	0.000	0.000	0.720	0.720
	247	Kuabuda V.F.	12.000	0.000	0.000	12.000	12.000
	248	Kuabuda V.F.	5.000	0.000	0.000	5.000	5.000
	249	Kuabuda V.F.	8.000	0.000	0.000	8.000	8.000
	250	Kuabuda V.F.	10.608	0.000	0.000	10.608	10.608
	251	Kuabuda V.F.	5.000	0.000	0.000	5.000	5.000

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC
				Under FRA	Under FC Act.		
BANGRIPOSI	252	Pokharia V.F.	6.208	0.000	0.000	6.208	6.208
	253	Pokharia V.F.	4.000	0.000	0.000	4.000	4.000
	254	Pokharia V.F.	10.000	0.000	0.000	10.000	10.000
	255	Pokharia V.F.	4.000	0.000	0.000	4.000	4.000
	256	Pokharia V.F.	1.608	0.000	0.000	1.608	1.608
	257	Pokharia V.F.	0.788	0.000	0.000	0.788	0.788
	258	Pokharia V.F.	6.000	0.000	0.000	6.000	6.000
	259	Pokharia V.F.	3.000	0.000	0.000	3.000	3.000
	260	Pokharia V.F.	2.108	0.000	0.000	2.108	2.108
	261	Joka V.F.	8.000	0.000	0.000	8.000	8.000
	262	Jharpokharia V.F.	0.540	0.000	0.000	0.540	0.540
	263	Jharpokharia V.F.	2.000	0.000	0.000	2.000	2.000
	264	Bagbuda V.F.	0.400	0.000	0.000	0.400	0.400
	265	Bagbuda V.F.	0.640	0.000	0.000	0.640	0.640
	266	Banakati V.F.	3.088	0.000	0.000	3.088	3.088
	Sub-total		**1375.448**	**0.000**	**0.000**	**1375.448**	**1073.235**
Division Total	**266 Forest Blocks**		***41831.744***	***8.086***	***388.928***	***41434.730***	***21029.019***

Range wise forest area allotted to PWC

Range	No. of Forest Block	Total area of the Block in Ha.	Total Plan area in Ha.	Area allotted to PWC in Ha
Pithabata	13	3662.480	3634.120	1407.043
Dukura	35	3680.148	3679.218	2133.874
R.G. Pur	21	5315.944	5068.866	1790.726
Udala	44	3486.638	3481.188	2401.465
Betnoti	88	12648.590	12571.684	7251.151
Deuli	14	11074.784	11036.824	4518.228
Kaptipada	6	587.712	587.382	453.297
Bangiriposi	45	1375.448	1375.448	1073.235
Division Total	**266**	**41831.744**	**41434.730**	**21029.019**

4.3 General Characterstics of Vegetation

Management of plantations has become increasingly more intensive with the introduction of fast growing species including genetically improved planting stock. The plantation programs, as of now not only aim at improving the forest cover but also to extend such resource base for even meeting the requirement of the people as well as the forest based industries. Thus, the areas included here are all the blocks of Teak, Acacia, Eucalyptus and other species Plantation containing still sizeable barren

areas besides all such blank/barren patches. All the compensatory Block Plantation areas have also been incorporated here.

General composition of species of major trees with minimum & maximum DBH, girth class of Betnoti Range with Acacia patches in plantation areas is given below.

TREE ENUMERATION OF SAMPLE PLOTS IN BETNOTI FOREST RANGE WITH PLANTATIONS

SL No	Name of Forest Block	Min DBH (in cm)	Max DBH (in cm)	Total Trees	No. of trees 1' to 2' GBH	No. of trees 2' to 3' GBH	No. of trees more than 3' GBH	Total No. of trees	Major Trees Available
1	Sarbana	10.18	25.14	22	51	9	0	60	Acacia-60
2	Dalki	10.5	10.5	22	1	0	0	1	Sal-544, Mahul-44, Asan-02, Char-78, Acacia-24 and others.
3	Dalki	10.18	16.23	44	44	0	0	44	
4	Dalki	11.78	20.37	13	11	2	0	13	
5	Dalki	10.18	19.41	91	90	1	0	91	
6	Dalki	10.18	28.01	95	81	14	0	95	
7	Dalki	10.18	44	57	55	0	2	57	
8	Dalki	10.18	26.73	83	67	16	0	83	
9	Dalki	10.18	24.82	71	59	12	0	71	
10	Dalki	10.18	26.73	95	69	26	0	95	
11	Dalki	10.18	27.69	106	89	17	0	106	
12	Dalki	10.18	28.64	42	37	5	0	42	
13	Khirpada	13.05	56	27	11	15	1	27	Sal-230, Mahul-12, Char-21, Acacia-55 and others.
14	Khirpada	10.18	29.28	31	14	16	1	31	
15	Khirpada	10.18	31.51	37	32	4	1	37	
16	Khirpada	10.18	27.05	85	72	13	0	85	
17	Khirpada	10.5	26.42	85	73	12	0	85	
18	Khirpada	10.5	33.42	25	21	3	1	25	
19	Khirpada	10.5	34.05	31	27	3	1	31	
20	Purunia	10.18	21.64	22	70	2	0	72	Sal-67, Mahul-02, Acacia-16 and others.
21	Purunia	10.18	16.87	22	15	0	0	15	
22	Patpur	10	24.82	22	24	3	0	27	Sal-50, Mahul-05, Asan-02, Acacia-04 and others.
23	Patpur	10.18	29.92	22	22	11	1	34	
24	Bartana	10.5	24.84	22	74	7	0	81	Sal-78, Mahul-02, Char-58, Acacia-03 and others.
25	Bartana	10.19	36.62	22	45	12	5	62	
26	Kalama	10.05	16.55	66	66	0	0	66	Acacia-66
27	Hempur	10.18	47.1	21	20	0	1	21	Acacia-20
28	Gaddeulia	10.18	29.19	73	53	19	1	73	Acacia-73
29	Basantapur	11.14	36.05	22	55	30	1	86	Acacia-86

4.4 Felling Series. Cutting Sections and JFM Areas

Constitution of Plantation Series

The forest blocks under Plantation Working Circle comes under 44 planting series. These include Teak Plantation inter cultural operation series, Eucalyptus, Acacia & SFP over matured plantation series, Other Plantation inter cultural operation series, Blank Area for block plantation series, Encroachment Area plantation series & Forest Cover 1-10% gap plantation series in each Range, where area has been allotted to these activities.

PLANTATION SERIES

P.S. No.	Name of Range	Name of Plantation Series	Area in Ha.
1	PITHABATA	**Forest Cover 1-10%**	***87.307***
2	PITHABATA	**Eucalyptus, Acacia & SFP**	***13.920***
3	PITHABATA	**Other Plantation**	***73.000***
4	PITHABATA	**Teak**	***40.000***
5	PITHABATA	**Blank Area**	***781.188***
6	PITHABATA	**Encroachment**	***411.628***
7	DUKURA	**Forest Cover 1-10%**	***123.603***
8	DUKURA	**Eucalyptus, Acacia & SFP**	***235.628***
9	DUKURA	**Other Plantation**	***315.000***
10	DUKURA	**Teak**	***5.000***
11	DUKURA	**Blank Area**	***986.489***
12	DUKURA	**Encroachment**	***468.154***
13	RASGOVINDPUR	**Forest Cover 1-10%**	***79.348***
14	RASGOVINDPUR	**Eucalyptus, Acacia & SFP**	***94.268***
15	RASGOVINDPUR	**Other Plantation**	***84.000***
16	RASGOVINDPUR	**Teak**	***114.106***
17	RASGOVINDPUR	**Blank Area**	***1263.404***
18	RASGOVINDPUR	**Encroachment**	***155.600***
19	UDALA	**Forest Cover 1-10%**	***100.361***
20	UDALA	**Eucalyptus, Acacia & SFP**	***239.128***
21	UDALA	**Other Plantation**	***437.083***
22	UDALA	**Blank Area**	***933.505***
23	UDALA	**Encroachment**	***691.388***
24	BETNOTI	**Forest Cover 1-10%**	***314.305***
25	BETNOTI	**Eucalyptus, Acacia & SFP**	***614.870***
26	BETNOTI	**Other Plantation**	***538.890***
27	BETNOTI	**Teak**	***100.000***
28	BETNOTI	**Blank Area**	***3800.699***
29	BETNOTI	**Encroachment**	***1882.387***

P.S. No.	Name of Range	Name of Plantation Series	Area in Ha.
30	DEULI	**Forest Cover 1-10%**	***875.708***
31	DEULI	**Eucalyptus, Acacia & SFP**	***163.544***
32	DEULI	**Other Plantation**	***149.450***
33	DEULI	**Blank Area**	***2868.436***
34	DEULI	**Encroachment**	***461.090***
35	KAPTIPADA	**Forest Cover 1-10%**	***3.988***
36	KAPTIPADA	**Eucalyptus, Acacia & SFP**	***3.832***
37	KAPTIPADA	**Other Plantation**	***105.000***
38	KAPTIPADA	**Blank Area**	***335.577***
39	KAPTIPADA	**Encroachment**	***4.900***
40	BANGRIPOSI	**Forest Cover 1-10%**	***79.056***
41	BANGRIPOSI	**Eucalyptus, Acacia & SFP**	***247.778***
42	BANGRIPOSI	**Other Plantation**	***96.585***
43	BANGRIPOSI	**Blank Area**	***481.934***
44	BANGRIPOSI	**Encroachment**	***167.882***

4.5 Blocks, Compartments and JFM Areas

Allotment of Area

Forest blocks allotted to this working circle comprises of 266 forest blocks.

Forest Block Area allotted under Various Plantation Series in Ha is given below.

ALLOTMENT OF AREA OF BLOCK/ COMPARTMENT UNDER PLANTATION WORKING CIRCLE

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
PITHABATA	2021-22	Baldiha R.F.	3.327	3.327					
		Bhagabat Chandrapur R.F.	27.584	7.584				20.000	
		Budhikhamari R.F.	40.000			10.000		20.000	10.000
		Dungurusahi R.F.	2.776					2.776	
		Manchabandha R.F.	10.000	10.000					
		Asanabani P.R..F	10.000					10.000	
		Srirampur V.F.	3.140		3.140				
		Sub-total	***96.827***	***20.911***	***3.140***	***10.000***	***0.000***	***52.776***	***10.000***
	2022-23	Baldiha R.F.	10.000					10.000	
		Bhagabat Chandrapur R.F.	30.000			10.000		20.000	
		Budhikhamari R.F.	40.000			10.000		20.000	10.000
		Hatikote R.F.	30.000					30.000	
		Lulung-Purunapani R.F.	10.000					10.000	
		Manchabandha R.F.	10.000	10.000					
		Asanabani P.R..F	10.000					10.000	
		Sub-total	***140.000***	***10.000***	***0.000***	***20.000***	***0.000***	***100.000***	***10.000***
	2023-2024	Baldiha R.F.	10.000					10.000	
		Bhagabat Chandrapur R.F.	30.000			10.000		20.000	
		Budhikhamari R.F.	45.000			15.000		20.000	10.000
		Hatikote R.F.	30.000					30.000	
		Lulung-Purunapani R.F.	10.000					10.000	
		Manchabandha R.F.	10.000	10.000					
		Asanabani P.R..F	10.000					10.000	
		Sub-total	***145.000***	***10.000***	***0.000***	***25.000***	***0.000***	***100.000***	***10.000***
	2024-2025	Baldiha R.F.	13.395					13.395	
		Bhagabat Chandrapur R.F.	30.000			10.000		20.000	
		Budhikhamari R.F.	30.000					20.000	10.000
		Dungurusahi R.F.	8.174	8.174					
		Hatikote R.F.	30.000					30.000	
		Lulung-Purunapani R.F.	10.000					10.000	
		Manchabandha R.F.	30.000	10.000				20.000	
		Asanabani P.R..F	19.030					19.030	
		Sub-total	***170.599***	***18.174***	***0.000***	***10.000***	***0.000***	***132.425***	***10.000***
	2025-2026	Bhagabat Chandrapur R.F.	50.000						50.000
			20.000					20.000	
		Budhikhamari R.F.	30.000					20.000	10.000
		Hatikote R.F.	30.000					30.000	
		Lulung-Purunapani R.F.	10.000					10.000	
		Manchabandha R.F.	30.000	10.000				20.000	
		Sub-total	***170.000***	***10.000***	***0.000***	***0.000***	***0.000***	***100.000***	***60.000***
	2026-2027	Bhagabat Chandrapur R.F.	62.443					12.443	50.000
		Budhikhamari R.F.	30.000					20.000	10.000
		Hatikote R.F.	30.000					30.000	
		Lulung-Purunapani R.F.	10.000					10.000	
		Manchabandha R.F.	38.222	18.222				20.000	
		Sub-total	***170.665***	***18.222***	***0.000***	***0.000***	***0.000***	***92.443***	***60.000***

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
DUKURA	2022-23	Aghasole R.F.	6.152					6.152	
		Badsahi R.F.	40.000					40.000	
		Bidhyadharpur R.F.	10.000					10.000	
		Deulia R.F.	10.000		10.000				
		Gojodi-Damodarpur R.F.	7.648	7.648					
		Haldia R.F.	10.000						10.000
		Itamundia R.F.	10.000					10.000	
		Kanpura R.F.	30.000					20.000	10.000
		Kuldiha R.F.	10.000			10.000			
		Belpal R.F.	10.000			10.000			
		Khanua R.F.	10.000		10.000				
		Kerko R.F.	10.000			10.000			
		Nigirdha (B) P.R.F.	4.645	4.645					
		Kukurbhuka (2)P.R.F.	10.000					10.000	
		Budhabalang (B) P.R.F.	6.971					6.971	
		Gopinathpur P.R.F.	25.000						25.000
		Sub-total	***210.416***	***12.293***	***20.000***	***30.000***	***0.000***	***103.123***	***45.000***
	2023-24	Aghasole R.F.	10.000						10.000
		Badsahi R.F.	40.000					40.000	
		Bidhyadharpur R.F.	10.000					10.000	
		Haldia R.F.	10.000						10.000
		Itamundia R.F.	10.000					10.000	
		Kanpura R.F.	40.000		20.000			20.000	
		Kuldiha R.F.	5.250					5.250	
		Belpal R.F.	10.000			10.000			
		Khanua R.F.	5.000		5.000				
		Kerko R.F.	10.000			10.000			
		Nigirdha (A) P.R.F.	3.108					3.108	
		Nigirdha (B) P.R.F.	2.164					2.164	
		Kukurbhuka (1)P.R.F.	4.515	4.515					
		Kukurbhuka (2)P.R.F.	10.000					10.000	
		Sanamakabadi P.R.F.	3.714	3.714					
		Gopinathpur P.R.F.	25.000						25.000
		Rangahidi V.F.	4.588		4.588				
		Sub-total	***203.339***	***8.229***	***29.588***	***20.000***	***0.000***	***100.522***	***45.000***
	2024-25	Aghasole R.F.	13.720						13.720
		Badsahi R.F.	40.758					40.758	
		Bidhyadharpur R.F.	10.000					10.000	
		Deulia R.F.	15.000					15.000	
		Haldia R.F.	10.000						10.000
		Itamundia R.F.	10.000					10.000	
		Kanpura R.F.	40.000		20.000			20.000	
		Pundala R.F.	5.000			5.000			
		Belpal R.F.	10.000			10.000			
		Itamundia-Jamuna R.F.	10.000			10.000			
		Khanua R.F.	11.317	11.317					
		Kerko R.F.	10.000			10.000			
		Kukurbhuka (2)P.R.F.	10.000					10.000	
		Gopinathpur P.R.F.	25.000						25.000
		Sub-total	***220.795***	***11.317***	***20.000***	***35.000***	***0.000***	***105.758***	***48.720***
	2025-26	Badsahi R.F.	20.000		20.000				
		Bidhyadharpur R.F.	10.000					10.000	
		Chakradharpur R.F.	10.000			10.000			
		Chengua-Mangalpur R.F.	25.000			25.000			

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
DUKURA	2025-26	Deulia R.F.	15.000					15.000	
		Itamundia R.F.	10.000					10.000	
		Kanpura R.F.	28.204	8.204				20.000	
		Pundala R.F.	12.587					12.587	
		Belpal R.F.	9.764					9.764	
		Itamundia-Jamuna R.F.	10.000			10.000			
		Khanua R.F.	25.000			25.000			
		Kerko R.F.	15.000					15.000	
		Kukurbhuka (2)P.R.F.	14.308					14.308	
		Gopinathpur P.R.F.	25.000						25.000
		Sub-total	***229.863***	***8.204***	***20.000***	***70.000***	***0.000***	***106.659***	***25.000***
	2026-27	Badsahi R.F.	5.000				5.000		
		Bidhyadharpur R.F.	10.000					10.000	
		Chakradharpur R.F.	10.000			10.000			
		Chengua-Mangalpur R.F.	20.000		20.000				
		Deulia R.F.	22.994					22.994	
		Itamundia R.F.	10.000					10.000	
		Jarkani R.F.	1.564						1.564
		Kanpura R.F.	50.000			25.000		25.000	
		Pundala R.F.	0.383						0.383
		Belpal R.F.	15.000						15.000
		Dukura R.F.	1.731						1.731
		Itamundia-Jamuna R.F.	10.000			10.000			
		Khanua R.F.	25.000			25.000			
		Kerko R.F.	11.538					11.538	
		Gopinathpur P.R.F.	25.000						25.000
		Sub-total	***218.210***	***0.000***	***20.000***	***70.000***	***5.000***	***79.532***	***43.678***
	2027-28	Badsahi R.F.	10.000			10.000			
		Bidhyadharpur R.F.	10.000					10.000	
		Chakradharpur R.F.	15.000			15.000			
		Chengua-Mangalpur R.F.	10.000						10.000
		Deulia R.F.	15.000					15.000	
		Itamundia R.F.	14.954					14.954	
		Kanpura R.F.	40.000		15.000			25.000	
		Purunapani R.F.	6.274	6.274					
		Belpal R.F.	15.000						15.000
		Itamundia-Jamuna R.F.	10.000			10.000			
		Khanua R.F.	4.587					4.587	
		Kerko R.F.	15.000		15.000				
		Sanamakabadi P.R.F.	15.990					15.990	
		Gopinathpur P.R.F.	25.000						25.000
		Basipitha V.F.	10.000		10.000				
		Sub-total	***216.805***	***6.274***	***40.000***	***35.000***	***0.000***	***85.531***	***50.000***
	2028-29	Badsahi R.F.	10.000			10.000			
		Bidhyadharpur R.F.	15.000					15.000	
		Chakradharpur R.F.	15.000					15.000	
		Chengua-Mangalpur R.F.	13.716						13.716
		Deulia R.F.	15.000					15.000	
		Kanpura R.F.	40.000		15.000			25.000	
		Purunapani R.F.	4.427					4.427	
		Belpal R.F.	15.000						15.000
		Dukura R.F.	12.402	12.402					
		Itamundia-Jamuna R.F.	20.000						20.000

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
DUKURA	2028-29	Khanua R.F.	10.000						10.000
		Kerko R.F.	0.505						0.505
		Gopinathpur P.R.F.	21.700						21.700
		Bhupad V.F.	4.375					4.375	
		Manatri V.F.	3.480		3.480				
		Sub-total	***200.605***	***12.402***	***18.480***	***10.000***	***0.000***	***78.802***	***80.921***
	2029-30	Badsahi R.F.	10.000			10.000			
		Bidhyadharpur R.F.	15.000					15.000	
		Chakradharpur R.F.	15.000					15.000	
		Chengua-Mangalpur R.F.	0.624					0.624	
		Deulia R.F.	15.000					15.000	
		Haldia R.F.	6.552					6.552	
		Kanpura R.F.	25.000					25.000	
		Purunapani R.F.	6.513						6.513
		Belpal R.F.	20.836						20.836
		Dukura R.F.	10.000					10.000	
		Itamundia-Jamuna R.F.	20.000						20.000
		Khanua R.F.	12.776						12.776
		Kerko R.F.	20.000		20.000				
		Gopinathpur P.R.F.	30.000					30.000	
		Bhupad V.F.	0.625						0.625
		Basipitha V.F.	8.120		8.120				
		Sub-total	***216.046***	***0.000***	***28.120***	***10.000***	***0.000***	***117.176***	***60.750***
	2030-31	Badsahi R.F.	15.000			15.000			
		Bidhyadharpur R.F.	13.842					13.842	
		Chakradharpur R.F.	18.608					18.608	
		Deulia R.F.	18.587	18.587					
		Kanpura R.F.	29.841					29.841	
		Dukura R.F.	12.532					12.532	
		Itamundia-Jamuna R.F.	21.269						21.269
		Kerko R.F.	15.000		15.000				
		Kukurbhuka (1)P.R.F.	16.541					16.541	
		Gopinathpur P.R.F.	34.120					34.120	
		Manatri V.F.	6.400					6.400	
		Ranibandha V.F.	3.440		3.440				
		Sub-total	***205.180***	***18.587***	***18.440***	***15.000***	***0.000***	***131.884***	***21.269***
		Range Total	***2133.874***	***123.603***	***235.628***	***315.000***	***5.000***	***986.489***	***468.154***
RASGOVINDPUR	2021-22	Amarda R.F.	10.000		10.000				
		Betnasia R.F.	11.000			11.000			
		Baghajharan R.F.	27.032	27.032					
		Baladia R.F.	10.000					10.000	
		Chitrada R.F.	15.000					15.000	
		Jamsole R.F.	25.000					25.000	
		Moroda R.F.	18.917	18.917					
		Nichuapada R.F.	7.882	7.882					
		Nunchatia R.F.	14.955					14.955	
		Sarumula R.F.	20.000					20.000	
		Sukhilakhali R.F.	16.231					16.231	
		Jhatiada V.F.	5.000		5.000				
		Sub-total	***181.017***	***53.831***	***15.000***	***11.000***	***0.000***	***101.186***	***0.000***
	2022-23	Amarda R.F.	15.531	15.531					
		Betnasia R.F.	17.285					17.285	
		Baghajharan R.F.	5.000			5.000			
		Baladia R.F.	10.000					10.000	
		Chitrada R.F.	15.000					15.000	
		Jamsole R.F.	25.000					25.000	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
RASGOVINDPUR	2022-23	Nalagaja R.F.	10.000		10.000				
		Nichuapada R.F.	10.000					10.000	
		Nuhajhalia R.F.	25.558					25.558	
		Nunchatia R.F.	10.000					10.000	
		Sarumula R.F.	17.342					17.342	
		Sukhilakhali R.F.	20.000					20.000	
		Sub-total	***180.716***	***15.531***	***10.000***	***5.000***	***0.000***	***150.185***	***0.000***
	2023-24	Amarda R.F.	1.000			1.000			
		Betnasia R.F.	20.000					20.000	
		Baghajharan R.F.	10.000					10.000	
		Baladia R.F.	10.000					10.000	
		Chitrada R.F.	15.000					15.000	
		Jamsole R.F.	23.516					23.516	
		Moroda R.F.	10.000		10.000				
		Nalagaja R.F.	14.000			14.000			
		Nichuapada R.F.	11.627					11.627	
		Nuhajhalia R.F.	20.000					20.000	
		Nunchatia R.F.	0.767	0.767					
		Sarumula R.F.	20.000					20.000	
		Sukhilakhali R.F.	20.000					20.000	
		Nahiasoli V.F.	**2.940**		**2.940**				
		Sub-total	***178.850***	***0.767***	***12.940***	***15.000***	***0.000***	***150.143***	***0.000***
	2024-25	Amarda R.F.	30.801						30.801
		Baghajharan R.F.	10.000					10.000	
		Baladia R.F.	10.000					10.000	
		Chitrada R.F.	15.000					15.000	
		Jamsole R.F.	6.484		6.484				
		Moroda R.F.	40.000					40.000	
		Nalagaja R.F.	10.000			10.000			
		Nuhajhalia R.F.	2.942						2.942
		Sarumula R.F.	20.000					20.000	
		Sukhilakhali R.F.	20.000					20.000	
		Pharajpur V.F.	5.000		5.000				
		Sub-total	***170.227***	***0.000***	***11.484***	***10.000***	***0.000***	***115.000***	***33.743***
	2025-26	Amarda R.F.	60.000					60.000	
		Baghajharan R.F.	10.000					10.000	
		Baladia R.F.	12.380					12.380	
		Chitrada R.F.	15.000					15.000	
		Jamsole R.F.	24.944						24.944
		Moroda R.F.	40.000					40.000	
		Nalagaja R.F.	20.000					20.000	
		Nichuapada R.F.	5.000		5.000				
		Nalagaja V.F.	2.000		2.000				
		Sub-total	***189.324***	***0.000***	***7.000***	***0.000***	***0.000***	***157.380***	***24.944***
	2026-27	Amarda R.F.	60.000					60.000	
		Baghajharan R.F.	10.000					10.000	
		Chitrada R.F.	10.000					10.000	
		Jamsole R.F.	25.000				25.000		
		Moroda R.F.	40.000					40.000	
		Nalagaja R.F.	20.000					20.000	
		Nuhajhalia R.F.	2.000		2.000				
		Sarumula R.F.	20.000			20.000			
		Sub-total	***187.000***	***0.000***	***2.000***	***20.000***	***25.000***	***140.000***	***0.000***
	2027-28	Amarda R.F.	10.000		10.000				
		Baghajharan R.F.	10.000					10.000	
		Chitrada R.F.	13.718					13.718	
		Jamsole R.F.	25.000						
		Moroda R.F.	40.000				25.000		
		Nalagaja R.F.	23.698					40.000	
		Nunchatia R.F.	19.171					23.698	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
RASGOVINDPUR	2027-28	Sarumula R.F.	23.000			23.000			19.171
		Sarajharan V.F.	7.344		7.344				
		Sub-total	***171.931***	***0.000***	***17.344***	***23.000***	***25.000***	***87.416***	***19.171***
	2028-29	Amarda R.F.	60.000					60.000	
		Baghajharan R.F.	10.000					10.000	
		Chitrada R.F.	20.000						20.000
		Jamsole R.F.	25.000				25.000		
		Moroda R.F.	40.000					40.000	
		Nalagaja R.F.	15.000						15.000
		Duarsuni V.F.	5.000		5.000				
		Sub-total	***175.000***	***0.000***	***5.000***	***0.000***	***25.000***	***110.000***	***35.000***
	2029-30	Amarda R.F.	70.000					70.000	
		Baghajharan R.F.	10.000					10.000	
		Chitrada R.F.	19.400						19.400
		Jamsole R.F.	20.000				20.000		
		Moroda R.F.	45.000					45.000	
		Nalagaja R.F.	14.194						14.194
		Chandanpur V.F.	3.500		3.500				
		Sub-total	***182.094***	***0.000***	***3.500***	***0.000***	***20.000***	***125.000***	***33.594***
	2030-31	Amarda R.F.	71.401					71.401	
		Baghajharan R.F.	9.374					9.374	
		Chitrada R.F.	1.866	1.866					
		Jamsole R.F.	19.106				19.106		
		Moroda R.F.	46.319					46.319	
		Nalagaja R.F.	7.353	7.353					
		Sarumula R.F.	9.148						9.148
		Chikitamatia V.F.	10.000		10.000				
		Sub-total	***174.567***	***9.219***	***10.000***	***0.000***	***19.106***	***127.094***	***9.148***
		Range Total	***1790.726***	***79.348***	***94.268***	***84.000***	***114.106***	***1263.404***	***155.600***
UDALA	2021-22	Anantasahi R.F.	6.174					6.174	
		Belakuti R.F.	3.751	3.751					
		Bhandagaon R.F.	20.000						20.000
		Dhaundia R.F.	35.000	15.000					20.000
		Dimgadia R.F.	4.960	4.960					
		Dugdha R.F.	15.266					15.266	
		Ghantasila R.F.	5.340					5.340	
		Khunta R.F.	24.096	14.096					10.000
		Kuamara R.F.	15.000		15.000				
		Kuriakhunta R.F.	4.673					4.673	
		Marsigaon R.F.	20.000			20.000			
		Nahara R.F.	20.000					20.000	
		Nuapada R.F.	20.000					20.000	
		Phuljhari R.F.	28.188	28.188					
		Udala R.F.	40.000					40.000	
		Purunabaripada mankadakenda V.F.	0.648		0.648				
		Sub-total	***263.096***	***65.995***	***15.648***	***20.000***	***0.000***	***111.453***	***50.000***
	2022-23	Anantasahi R.F.	0.946						0.946
		Belakuti R.F.	30.000			30.000			
		Bhandagaon R.F.	20.871						20.871
		Dhaundia R.F.	30.522	10.553					19.969
		Dimgadia R.F.	2.000			2.000			
		Dugdha R.F.	2.494						2.494
		Khunta R.F.	35.000			25.000			10.000
		Kuamara R.F.	15.000		15.000				
		Marsigaon R.F.	15.000			15.000			
		Nahara R.F.	20.000					20.000	
		Nuapada R.F.	20.000					20.000	
		Phuljhari R.F.	8.923					8.923	
		Udala R.F.	40.000					40.000	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
UDALA	2022-23	Kusunia Patpur V.F.	0.320		0.320				
		Khunta V.F.	0.400		0.400				
		Sub-total	***241.476***	***10.553***	***15.720***	***72.000***	***0.000***	***88.923***	***54.280***
	2023-24	Belakuti R.F.	25.000			25.000			
		Charada R.F.	3.389					3.389	
		Dhaundia R.F.	30.000		15.000	15.000			
		Jaypur R.F.	9.993					9.993	
		Khunta R.F.	35.000			25.000			10.000
		Kuamara R.F.	2.447	2.447					
		Marsigaon R.F.	20.000					20.000	
		Nahara R.F.	20.000					20.000	
		Nuapada R.F.	20.000					20.000	
		Purunabaripada R.F.	7.565					7.565	
		Sirathali R.F.	10.000					10.000	
		Udala R.F.	40.000					40.000	
		Bhalimunduli V.F.	3.900		3.900				
		Khunta V.F.	12.600		12.600				
		Sub-total	***239.894***	***2.447***	***31.500***	***65.000***	***0.000***	***130.947***	***10.000***
	2024-25	Belakuti R.F.	15.000						15.000
		Charada R.F.	3.731						3.731
		Dhaundia R.F.	30.000		15.000	15.000			
		Jaypur R.F.	7.830						7.830
		Khunta R.F.	35.000			25.000			10.000
		Kuamara R.F.	30.000			30.000			
		Marsigaon R.F.	18.560					18.560	
		Nahara R.F.	20.000					20.000	
		Nuapada R.F.	20.000					20.000	
		Phuljhari R.F.	15.000						15.000
		Sirathali R.F.	10.000					10.000	
		Udala R.F.	40.000					40.000	
		Salabani V.F.	2.960		2.960				
		Khunta V.F.	0.096		0.096				
		Sub-total	***248.177***	***0.000***	***18.056***	***70.000***	***0.000***	***108.560***	***51.561***
	2025-26	Belakuti R.F.	15.000						15.000
		Dhaundia R.F.	15.000					15.000	
			15.000			15.000			
		Khunta R.F.	30.000					20.000	10.000
		Kuamara R.F.	30.214			30.214			
		Marsigaon R.F.	20.000		20.000				
		Nahara R.F.	20.000					20.000	
		Nuapada R.F.	20.000					20.000	
		Phuljhari R.F.	13.422						13.422
		Sirathali R.F.	16.459					16.459	
		Udala R.F.	34.799					34.799	
		Sialia V.F.	2.880					2.880	
		Khunta V.F.	6.148		6.148				
		Sub-total	***238.922***	***0.000***	***26.148***	***45.214***	***0.000***	***129.138***	***38.422***
	2026-27	Belakuti R.F.	15.000						15.000
		Bhandagaon R.F.	20.000					20.000	
		Dhaundia R.F.	30.000			15.000		15.000	
		Khunta R.F.	30.000					20.000	10.000
		Kuamara R.F.	30.000					30.000	
		Marsigaon R.F.	30.000						30.000
		Nahara R.F.	21.158					21.158	
		Nuapada R.F.	14.685					14.685	
		Purunabaripada R.F.	11.844						11.844
		Sirathali R.F.	10.000		10.000				
		Udala R.F.	17.316						17.316
		Raghunathpur V.F.	4.660		4.660				
		Khunta V.F.	10.000		10.000				
		Sub-total	***244.663***	***0.000***	***24.660***	***15.000***	***0.000***	***120.843***	***84.160***

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
UDALA	2027-28	Belakuti R.F.	16.164						16.164
		Bhandagaon R.F.	17.800					17.800	
		Dhaundia R.F.	30.000			15.000		15.000	
		Khunta R.F.	30.000					20.000	10.000
		Kuamara R.F.	26.892					26.892	
		Marsigaon R.F.	30.000						30.000
		Nahara R.F.	10.000						10.000
		Nuapada R.F.	20.000						20.000
		Sialia R.F.	7.810					7.810	
		Sunduria R.F.	2.430					2.430	
		Udala R.F.	15.000		15.000				
		Nuagaon V.F.	13.324		13.324				
		Jajpur`V.F.	14.884		14.884				
		Sub-total	***234.304***	***0.000***	***43.208***	***15.000***	***0.000***	***89.932***	***86.164***
	2028-29	Belakuti R.F.	15.000		15.000				
		Bhandagaon R.F.	19.869			19.869			
		Dhaundia R.F.	30.000			15.000		15.000	
		Khunta R.F.	35.620					25.620	10.000
		Kuamara R.F.	25.000						25.000
		Marsigaon R.F.	30.000						30.000
		Nahara R.F.	15.712						15.712
		Nuapada R.F.	22.465						22.465
		Sirathali R.F.	12.681						12.681
		Udala R.F.	17.696	17.696					
		Jamudiha V.F.	2.000		2.000				
		Jogibandha V.F.	2.000		2.000				
		Kochiladiha V.F.	1.640		1.640				
		Khunta V.F.	3.756		3.756				
		Sub-total	***233.439***	***17.696***	***24.396***	***34.869***	***0.000***	***40.620***	***115.858***
	2029-30	Belakuti R.F.	27.643					27.643	
		Bhandagaon R.F.	20.000			20.000			
		Dhaundia R.F.	35.000			20.000		15.000	
		Khunta R.F.	10.000						10.000
		Kuamara R.F.	25.000						25.000
		Marsigaon R.F.	40.000						40.000
		Nahara R.F.	5.000		5.000				
		Mundhakata R.F.	10.000		10.000				
		Sialia R.F.	10.000						10.000
		Sirathali R.F.	15.000						15.000
		Udala R.F.	15.000			15.000			
		Bahanada V.F.	1.300		1.300				
		Gohira V.F.	5.000		5.000				
		Kochiladiha V.F.	13.360					13.360	
		Sub-total	***232.303***	***0.000***	***21.300***	***55.000***	***0.000***	***56.003***	***100.000***
	2030-31	Belakuti R.F.	30.000					30.000	
		Bhandagaon R.F.	3.670	3.670					
		Dhaundia R.F.	36.746			20.000		16.746	
		Khunta R.F.	24.696		10.000				14.696
		Kuamara R.F.	29.977						29.977
		Marsigaon R.F.	39.760						39.760
		Nahara R.F.	10.000			10.000			
		Mundhakata R.F.	10.340					10.340	
		Purunabaripada R.F.	5.000		5.000				
		Sialia R.F.	16.510						16.510
		Udala R.F.	15.000			15.000			
		Jalda V.F.	1.124		1.124				
		Murari V.F.	0.992		0.992				
		Sridamchandrapur V.F.	1.376		1.376				
		Sub-total	***225.191***	***3.670***	***18.492***	***45.000***	***0.000***	***57.086***	***100.943***
		Range Total	***2401.465***	***100.361***	***239.128***	***437.083***	***0.000***	***933.505***	***691.388***

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
BETNOTI	2021-22	Asanbani R.F.	85.000	10.000				15.000	60.000
		Badampur R.F.	45.000	15.000				30.000	
		Baisinga R.F.	15.000					15.000	
		Bartana R.F.	10.000			10.000			
		Beldiha R.F.	7.330					7.330	
		Bishrampur R.F.	10.000			10.000			
		Chhatnna R.F.	10.000	10.000					
		Dalki R.F.	35.000			10.000			25.000
		Durgapur R.F.	20.000	20.000					
		Gandigadha R.F.	51.549	6.549				45.000	
		Hatijhuri R.F.	4.553	4.553					
		Hempur R.F.	20.000					20.000	
		Ajadiha R.F.	2.100					2.100	
		Jagannathpur R.F.	25.000					25.000	
		Jugal R.F.	20.000					20.000	
		Kalma R.F.	8.890			8.890			
		Khiripada R.F.	20.000						20.000
		Krushnachandrapur R.F.	60.000					30.000	30.000
		Machhapada R.F.	26.930		26.930				
		Mamtapal R.F.	10.000	10.000					
		Merda R.F.	20.000					20.000	
		Mohanpur R.F.	0.427	0.427					
		Purunia R.F.	40.000	20.000				20.000	
		Raikama R.F.	20.000					20.000	
		Rautra R.F.	4.019	4.019					
		Sarbana R.F.	6.428	6.428					
		Bharadasole R.F.	4.881					4.881	
		Totapada R.F.	5.445	5.445					
		Patpur RF	10.000					10.000	
		Bhalia P.R.F.	45.000			20.000		25.000	
		Purunia V.F.	10.000		10.000				
		Sub-total	***652.552***	***112.421***	***36.930***	***58.890***	***0.000***	***309.311***	***135.000***
	2022-23	Asanbani R.F.	85.000	10.000				15.000	60.000
		Badampur R.F.	46.944	16.944				30.000	
		Baisinga R.F.	14.722					14.722	
		Bartana R.F.	10.000			10.000			
		Bhimpur R.F.	3.674	3.674					
		Chhatnna R.F.	12.180	12.180					
		Daldali R.F.	10.000		10.000				
		Dalki R.F.	35.000			10.000			25.000
		Durgapur R.F.	65.412	25.412				40.000	
		Gandigadha R.F.	45.000					45.000	
		Haripur R.F.	5.000		5.000				
		Hempur R.F.	20.000					20.000	
		Jagannathpur R.F.	25.000					25.000	
		Jarka R.F.	2.048					2.048	
		Jugal R.F.	17.846					17.846	
		Kapoi R.F.	4.895					4.895	
		Khadikapada R.F.	2.000		2.000				
		Khiripada R.F.	20.000						20.000
		Krushnachandrapur R.F.	60.000					30.000	30.000
		Mamtapal R.F.	10.000	10.000					
		Merda R.F.	20.000					20.000	
		Nuagaon R.F.`	5.000			5.000			
		Purunia R.F.	40.000	20.000				20.000	
		Raikama R.F.	20.000					20.000	
		Rautra R.F.	5.000		5.000				

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
BETNOTI	2022-23	Thakurtota R.F.	25.000		25.000				
		Totapada R.F.	5.000		5.000				
		Tikayatpur R.F.	5.000		5.000				
		Patpur RF	11.554					11.554	
		Bhalia P.R.F.	45.000			20.000		25.000	
		Kathapal V.F.	0.240		0.240				
		Tikayatpur V.F.	0.800		0.800				
		Purunia V.F.	10.000		10.000				
		Sub-total	***687.315***	***98.210***	***68.040***	***45.000***	***0.000***	***341.065***	***135.000***
	2023-24	Asanbani R.F.	85.000	10.000				15.000	60.000
		Badampur R.F.	55.000			25.000		30.000	
		Balka R.F.	3.079	3.079					
		Bartana R.F.	10.000					10.000	
		Bishrampur R.F.	10.000					10.000	
		Chhatnna R.F.	15.000					15.000	
		Daldali R.F.	10.000			10.000			
		Dalki R.F.	35.000			10.000			25.000
		Durgapur R.F.	50.000			10.000		40.000	
		Gandigadha R.F.	45.000					45.000	
		Garudabasa R.F.	11.753					11.753	
		Hempur R.F.	20.000					20.000	
		Jagannathpur R.F.	25.000					25.000	
		Kalma R.F.	10.000					10.000	
		Khiripada R.F.	20.000						20.000
		Krushnachandrapur R.F.	67.363					30.000	37.363
		Machhapada R.F.	17.993					17.993	
		Mamtapal R.F.	21.192	11.192					10.000
		Merda R.F.	20.000					20.000	
		Mohanpur R.F.	9.110					9.110	
		Purunia R.F.	47.591	27.591				20.000	
		Raikama R.F.	20.000					20.000	
		Bhalukchua R.F.	15.000					15.000	
		Tikayatpur R.F.	10.000			10.000			
		Patpur RF	30.000		30.000				
		Bhalia P.R.F.	35.000					25.000	10.000
		Chakulia V.F.	3.000		3.000				
		Angaria V.F.	0.560		0.560				
		Purunia V.F.	3.880		3.880				
		Buguhuda V.F.	2.000		2.000				
		Sub-total	***707.521***	***51.862***	***39.440***	***65.000***	***0.000***	***388.856***	***162.363***
	2024-25	Asanbani R.F.	85.000	10.000				15.000	60.000
		Badampur R.F.	55.000			25.000		30.000	
		Badguma R.F.	3.844	3.844					
		Baisinga R.F.	15.000						15.000
		Bartana R.F.	10.000					10.000	
		Basantapur R.F.	20.000						20.000
		Bishrampur R.F.	10.612					10.612	
		Chhatnna R.F.	15.000					15.000	
		Daldali R.F.	10.000			10.000			
		Dalki R.F.	35.000			10.000			25.000
		Durgapur R.F.	55.000			15.000		40.000	
		Gandigadha R.F.	45.000					45.000	
		Haripur R.F.	10.000					10.000	
		Hempur R.F.	20.000					20.000	
		Jagannathpur R.F.	25.000					25.000	
		Khadikapada R.F.	16.194						16.194
		Khiripada R.F.	20.000						20.000
		Krushnachandrapur R.F.	80.000				50.000	30.000	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
BETNOTI	2024-25	Mamtapal R.F.	20.000		10.000				10.000
		Merda R.F.	20.000					20.000	
		Phuljhari R.F.	20.000		20.000				
		Purunia R.F.	50.000			30.000		20.000	
		Raikama R.F.	12.895					12.895	
		Rautra R.F.	20.000					20.000	
		Thakurtota R.F.	1.388						1.388
		Bhalukchua R.F.	14.727					14.727	
		Tikayatpur R.F.	10.000			10.000			
		Patpur RF	20.000		20.000				
		Bhalia P.R.F.	35.000					25.000	10.000
		Karatpata V.F.	0.780		0.780				
		Asukanda V.F.	3.300		3.300				
		Purunia V.F.	6.560		6.560				
		Nuagaon V.F.	3.200		3.200				
		Sub-total	***768.500***	***13.844***	***63.840***	***100.000***	***50.000***	***363.234***	***177.582***
	2025-26	Asanbani R.F.	85.000	10.000				15.000	60.000
		Badampur R.F.	55.000			25.000		30.000	
		Baisinga R.F.	13.590						13.590
		Bartana R.F.	10.000					10.000	
		Basantapur R.F.	19.384						19.384
		Beldiha R.F.	12.174						12.174
		Chhatnna R.F.	15.000					15.000	
		Daldali R.F.	10.000			10.000			
		Dalki R.F.	50.000					25.000	25.000
		Dumapada R.F.	10.000					10.000	
		Durgapur R.F.	40.000					40.000	
		Gandigadha R.F.	45.000					45.000	
		Garudabasa R.F.	10.207						10.207
		Haripur R.F.	10.672					10.672	
		Hatijhuri R.F.	5.000		5.000				
		Hempur R.F.	40.000		20.000			20.000	
		Jagannathpur R.F.	25.000					25.000	
		Jarka R.F.	4.582						4.582
		Jugal R.F.	15.000						15.000
		Kalma R.F.	5.350						5.350
		Kapoi R.F.	6.115						6.115
		Khiripada R.F.	70.000		50.000				20.000
		Krushnachandrapur R.F.	80.000				50.000	30.000	
		Machhapada R.F.	5.077	5.077					
		Mamtapal R.F.	30.000			20.000			10.000
		Merda R.F.	20.000					20.000	
		Mohanpur R.F.	12.082						12.082
		Phuljhari R.F.	30.000		30.000				
		Purunia R.F.	55.000			35.000		20.000	
		Rautra R.F.	16.709					16.709	
		Sarbana R.F.	10.000		10.000				
		Totapada R.F.	20.000					20.000	
		Tikayatpur R.F.	20.000					20.000	
		Patpur RF	10.000						10.000
		Bhalia P.R.F.	35.000					25.000	10.000
		Chakulia V.F.	4.000		4.000				
		Tulajhuri V.F.	8.000		8.000				
		Balaka V.F.	2.000		2.000				
		Gadadeuli V.F.	7.296		7.296				
		Sub-total	***922.238***	***15.077***	***136.296***	***90.000***	***50.000***	***397.381***	***233.484***
	2026-27	Asanbani R.F.	86.489	11.489				15.000	60.000
		Badampur R.F.	32.000			32.000			
			30.000					30.000	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
BETNOTI	2026-27	Balka R.F.	10.000			10.000			
		Bartana R.F.	12.426					12.426	
		Bhimpur R.F.	8.000			8.000			
		Chhatnna R.F.	15.000					15.000	
		Daldali R.F.	10.000			10.000			
		Dalki R.F.	50.000					25.000	25.000
		Dumapada R.F.	10.000					10.000	
		Durgapur R.F.	40.000					40.000	
		Gad-deulia R.F.	20.000					20.000	
		Gandigadha R.F.	45.000					45.000	
		Hempur R.F.	20.000					20.000	
		Jagannathpur R.F.	25.000					25.000	
		Jugal R.F.	15.000						15.000
		Khadikapada R.F.	20.000					20.000	
		Khetrapatana R.F.	4.210					4.210	
		Khiripada R.F.	60.000					40.000	20.000
		Krushnachandrapur R.F.	30.000					30.000	
		Mamtapal R.F.	30.000			20.000			10.000
		Merda R.F.	20.000					20.000	
		Purunia R.F.	55.000		35.000			20.000	
		Bharadasole R.F.	12.896						12.896
		Totapada R.F.	18.502					18.502	
		Tikayatpur R.F.	20.000					20.000	
		Patpur RF	10.303						10.303
		Bhalia P.R.F.	35.000					25.000	10.000
		Analagadia (Matidahi) V.F.	3.060		3.060				
		Kalana V.F.	10.000		10.000				
		Raghupur V.F.	10.000		10.000				
		Gadadeuli V.F.	0.840		0.840				
		Sub-total	***768.726***	***11.489***	***58.900***	***80.000***	***0.000***	***455.138***	***163.199***
	2027-28	Asanbani R.F.	60.000						60.000
		Asanbani R.F.	20.000					20.000	
		Asankhali R.F.	0.913					0.913	
		Badampur R.F.	30.000					30.000	
		Badguma R.F.	5.306					5.306	
		Balka R.F.	10.000			10.000			
		Bishrampur R.F.	5.067						5.067
		Chhatnna R.F.	22.062					22.062	
		Dalki R.F.	52.147					25.000	27.147
		Dumapada R.F.	10.000					10.000	
		Durgapur R.F.	40.000					40.000	
		Gad-deulia R.F.	18.730					18.730	
		Gandigadha R.F.	45.000					45.000	
		Haripur R.F.	15.268						15.268
		Hatijhuri R.F.	15.000						15.000
		Hempur R.F.	20.000					20.000	
		Jagannathpur R.F.	25.000					25.000	
		Jugal R.F.	18.484						18.484
		Ketakisole R.F.	18.949					18.949	
		Khadikapada R.F.	18.736					18.736	
		Khiripada R.F.	60.000					40.000	20.000
		Krushnachandrapur R.F.	30.000					30.000	
		Machhapada R.F.	12.810						12.810
		Mamtapal R.F.	30.000			20.000			10.000
		Merda R.F.	20.000					20.000	
		Nuagaon R.F.`	10.000					10.000	
		Purunia R.F.	55.000		35.000			20.000	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
BETNOTI	2027-28	Sarbana R.F.	15.348						15.348
		Thakurtota R.F.	10.000					10.000	
		Bhalukchua R.F.	5.300						5.300
		Tikayatpur R.F.	27.507					27.507	
		Kochilakhunta P.R.F.	10.000					10.000	
		Bhalia P.R.F.	35.000					25.000	10.000
		Jhinkiria V.F.	1.600		1.600				
		Rautrapur V.F.	5.000		5.000				
		Raghupur V.F.	7.000		7.000				
		Gadigaon V.F.	9.644		9.644				
		Sub-total	***794.871***	***0.000***	***58.244***	***30.000***	***0.000***	***492.203***	***214.424***
	2028-29	Asanbani R.F.	60.000						60.000
		Asanbani R.F.	23.408					23.408	
		Asankhali R.F.	9.043						9.043
		Badampur R.F.	30.000					30.000	
		Badguma R.F.	12.159						12.159
		Baisinga R.F.	35.000		35.000				
		Balka R.F.	0.881					0.881	
		Bartana R.F.	15.000						15.000
		Bhimpur R.F.	6.616					6.616	
		Daldali R.F.	13.984					13.984	
		Dalki R.F.	25.000					25.000	
		Dumapada R.F.	10.000					10.000	
		Durgapur R.F.	40.000					40.000	
		Gad-deulia R.F.	5.000		5.000				
		Gandigadha R.F.	45.000					45.000	
		Gopalpur R.F.	8.000					8.000	
		Hatijhuri R.F.	13.649						13.649
		Hempur R.F.	40.000					20.000	20.000
		Jagannathpur R.F.	25.000					25.000	
		Khiripada R.F.	60.000					40.000	20.000
		Krushnachandrapur R.F.	30.000					30.000	
		Kochilakhunta R.F.	10.000			10.000			
		Mamtapal R.F.	30.000			20.000			10.000
		Merda R.F.	20.000					20.000	
		Nuagaon R.F.`	10.000					10.000	
		Purunia R.F.	52.377					27.377	25.000
		Raikama R.F.	5.404						5.404
		Rautra R.F.	7.347						7.347
		Thakurtota R.F.	10.000					10.000	
		Totapada R.F.	16.123						16.123
		Tikayatpur R.F.	20.000						20.000
		Kochilakhunta P.R.F.	16.789					16.789	
		Bhalia P.R.F.	35.000					25.000	10.000
		Singida Munduli V.F.	3.320		3.320				
		Kalana V.F.	5.000		5.000				
		Raghupur V.F.	9.600		9.600				
		Raghupur V.F.	7.000		7.000				
		Sub-total	***765.700***	***0.000***	***64.920***	***30.000***	***0.000***	***427.055***	***243.725***
	2029-30	Asanbani R.F.	60.000						60.000
		Asanbani R.F.	5.000			5.000			
		Badampur R.F.	30.000					30.000	
		Baisinga R.F.	15.000		15.000				
		Bartana R.F.	19.529						19.529
		Chhatnna R.F.	19.849						19.849
		Daldali R.F.	1.236						1.236
		Dalki R.F.	25.000					25.000	
		Dumapada R.F.	10.000					10.000	
		Durgapur R.F.	40.000					40.000	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
BETNOTI	2029-30	Gandigadha R.F.	45.000					45.000	
		Gopalpur R.F.	2.880		2.880				
		Hatijhuri R.F.	20.000					20.000	
		Hempur R.F.	40.000					20.000	20.000
		Jagannathpur R.F.	39.979					39.979	
		Ketakisole R.F.	8.741						8.741
		Khiripada R.F.	62.656					42.656	20.000
		Krushnachandrapur R.F.	4.000		4.000				
		Krushnachandrapur R.F.	39.837					39.837	
		Kochilakhunta R.F.	10.000			10.000			
		Mamtapal R.F.	29.523					19.523	10.000
		Merda R.F.	11.095					11.095	
		Nuagaon R.F.`	14.330					14.330	
		Purunia R.F.	25.000						25.000
		Thakurtota R.F.	10.000					10.000	
		Tikayatpur R.F.	20.000						20.000
		Bhalia P.R.F.	27.348					17.348	10.000
		Athabahia V.F.	1.700		1.700				
		Anbagadia V.F.	12.664		12.664				
		Raghupur V.F.	3.000		3.000				
		Raghupur V.F.	11.232		11.232				
		Sub-total	***664.599***	***0.000***	***50.476***	***15.000***	***0.000***	***384.768***	***214.355***
	2030-31	Asanbani R.F.	64.773						64.773
		Badampur R.F.	28.205					28.205	
		Bartana R.F.	30.000		30.000				
		Dalki R.F.	44.930	11.402				33.528	
		Dumapada R.F.	11.532					11.532	
		Durgapur R.F.	50.848					50.848	
		Gad-deulia R.F.	15.000			15.000			
		Gandigadha R.F.	29.542					29.542	
		Gobindapur R.F.	11.820					11.820	
		Hatijhuri R.F.	22.271					22.271	
		Hempur R.F.	50.790					31.718	19.072
		Jagannathpur R.F.	19.700						19.700
		Khiripada R.F.	27.304						27.304
		Kochilakhunta R.F.	10.000			10.000			
		Mamtapal R.F.	12.015						12.015
		Purunia R.F.	20.982						20.982
		Sarbana R.F.	5.282					5.282	
		Thakurtota R.F.	16.942					16.942	
		Tikayatpur R.F.	27.583						27.583
		Kochilakhunta P.R.F.	0.012						0.012
		Bhalia P.R.F.	11.814						11.814
		Mendhamundia V.F.	2.100		2.100				
		Raghupur V.F.	5.684		5.684				
		Sub-total	***519.129***	***11.402***	***37.784***	***25.000***	***0.000***	***241.688***	***203.255***
		Range Total	***7251.151***	***314.305***	***614.870***	***538.890***	***100.000***	***3800.699***	***1882.387***
DEULI	2021-22	Andhari R.F.	80.000			20.000		60.000	
		Chandua R.F.	76.000			6.000		70.000	
		Deuli R.F.	23.263	23.263					
		Kuliana R.F.	55.000					55.000	
		Suliapada R.F.	20.000		20.000				
		Suliapada R.F.	30.000	30.000					
		Badsole P.R.F.	59.194					59.194	
		Tangasole P.R.F.	18.419	18.419					
		Kaliasole P.R.F.	30.000					30.000	
		Dhalu Suliapada V.F.	1.060		1.060				
		Sub-total	***392.936***	***71.682***	***21.060***	***26.000***	***0.000***	***274.194***	***0.000***

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
DEULI	2022-23	Andhari R.F.	85.000			25.000		60.000	
		Chandua R.F.	140.000	70.000				70.000	
		Deuli R.F.	28.450			28.450			
		Kuliana R.F.	70.000		15.000			55.000	
		Suliapada R.F.	100.000					100.000	
		Suliapada R.F.	30.000	30.000					
		Badsole P.R.F.	1.733	1.733					
		Kasia V.F.	1.740		1.740				
		Sub-total	***456.923***	***101.733***	***16.740***	***53.450***	***0.000***	***285.000***	***0.000***
	2023-24	Andhari R.F.	60.852		10.000			50.852	
		Chandua R.F.	140.000	70.000				70.000	
		Deuli R.F.	80.000					80.000	
		Kuliana R.F.	75.000			20.000		55.000	
		Suliapada R.F.	100.000					100.000	
		Suliapada R.F.	30.000	30.000					
		Handibhanga V.F.	2.468		2.468				
		Sub-total	***488.320***	***100.000***	***12.468***	***20.000***	***0.000***	***355.852***	***0.000***
	2024-25	Andhari R.F.	90.000	30.000					60.000
		Chandua R.F.	140.000	70.000				70.000	
		Deuli R.F.	15.000		15.000				
		Kuliana R.F.	80.000			25.000		55.000	
		Suliapada R.F.	100.000					100.000	
		Suliapada R.F.	30.000	30.000					
		Anlakuda V.F.	6.000		6.000				
		Sub-total	***461.000***	***130.000***	***21.000***	***25.000***	***0.000***	***225.000***	***60.000***
	2025-26	Andhari R.F.	90.000	30.000					60.000
		Chandua R.F.	90.000		20.000			70.000	
		Deuli R.F.	80.000					80.000	
		Kuliana R.F.	55.000					55.000	
		Suliapada R.F.	100.000					100.000	
		Suliapada R.F.	21.300	21.300					
		Sankhunta V.F.	2.000		2.000				
		Sub-total	***438.300***	***51.300***	***22.000***	***0.000***	***0.000***	***305.000***	***60.000***
	2026-27	Andhari R.F.	93.466	33.466					60.000
		Chandua R.F.	140.000	70.000				70.000	
		Deuli R.F.	80.000					80.000	
		Kuliana R.F.	55.000					55.000	
		Suliapada R.F.	20.000		20.000				
		Suliapada R.F.	25.000			25.000			
		Kaliasole P.R.F.	30.000					30.000	
		Jalda V.F.	0.276		0.276				
		Sub-total	***443.742***	***103.466***	***20.276***	***25.000***	***0.000***	***235.000***	***60.000***
	2027-28	Andhari R.F.	60.000						60.000
		Chandua R.F.	140.000	70.000				70.000	
		Deuli R.F.	80.000					80.000	
		Kuliana R.F.	70.000		15.000			55.000	
		Suliapada R.F.	100.000					100.000	
		Suliapada R.F.	33.934						33.934
		Sub-total	***483.934***	***70.000***	***15.000***	***0.000***	***0.000***	***305.000***	***93.934***
	2028-29	Andhari R.F.	70.000		10.000				60.000
		Chandua R.F.	140.000	70.000				70.000	
		Deuli R.F.	80.000					80.000	
		Kuliana R.F.	55.000					55.000	
		Suliapada R.F.	100.000					100.000	
		Sub-total	***445.000***	***70.000***	***10.000***	***0.000***	***0.000***	***305.000***	***60.000***
	2029-30	Andhari R.F.	60.000						60.000
		Chandua R.F.	143.555	73.555				70.000	
		Deuli R.F.	15.000		15.000				
		Kuliana R.F.	105.000	50.000				55.000	
		Suliapada R.F.	100.000					100.000	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
DEULI	2029-30	Tangasole P.R.F.	0.606						0.606
		Kaliasole P.R.F.	43.150						43.150
		Sub-total	***467.311***	***123.555***	***15.000***	***0.000***	***0.000***	***225.000***	***103.756***
	2030-31	Andhari R.F.	33.400		10.000				23.400
		Chandua R.F.	96.480					96.480	
		Deuli R.F.	73.440					73.440	
		Kuliana R.F.	113.037	53.972				59.065	
		Suliapada R.F.	86.865					86.865	
		Tangasole P.R.F.	5.961					5.961	
		Kaliasole P.R.F.	31.579					31.579	
		Sub-total	***440.762***	***53.972***	***10.000***	***0.000***	***0.000***	***353.390***	***23.400***
		Range Total	***4518.228***	***875.708***	***163.544***	***149.450***	***0.000***	***2868.436***	***461.090***
KAPTIPADA	2021-22	Asanabani R.F.	3.988	3.988					
		Nachhipur R.F.	20.000			20.000			
		Sukhuapata Hill P.F.	25.000			25.000			
		Sub-total	***48.988***	***3.988***	***0.000***	***45.000***	***0.000***	***0.000***	***0.000***
	2022-23	Asanabani R.F.	20.000			20.000			
		Nachhipur R.F.	4.900						4.900
		Sukhuapata Hill P.F.	20.000			20.000			
		Kaladahi V.F.	1.500		1.500				
		Sub-total	***46.400***	***0.000***	***1.500***	***40.000***	***0.000***	***0.000***	***4.900***
	2023-24	Asanabani R.F.	20.000			20.000			
		Nachhipur R.F.	25.000					25.000	
		Pedagadia V.F.	0.220		0.220				
		Sub-total	***45.220***	***0.000***	***0.220***	***20.000***	***0.000***	***25.000***	***0.000***
	2024-25	Asanabani R.F.	20.000					20.000	
		Nachhipur R.F.	25.000					25.000	
		Sub-total	***45.000***	***0.000***	***0.000***	***0.000***	***0.000***	***45.000***	***0.000***
	2025-26	Asanabani R.F.	20.000					20.000	
		Nachhipur R.F.	25.000					25.000	
		Sub-total	***45.000***	***0.000***	***0.000***	***0.000***	***0.000***	***45.000***	***0.000***
	2026-27	Asanabani R.F.	20.000					20.000	
		Nachhipur R.F.	25.000					25.000	
		Sub-total	***45.000***	***0.000***	***0.000***	***0.000***	***0.000***	***45.000***	***0.000***
	2027-28	Asanabani R.F.	20.000					20.000	
		Nachhipur R.F.	25.000					25.000	
		Sub-total	***45.000***	***0.000***	***0.000***	***0.000***	***0.000***	***45.000***	***0.000***
	2028-29	Asanabani R.F.	20.000					20.000	
		Nachhipur R.F.	25.000					25.000	
		Sub-total	***45.000***	***0.000***	***0.000***	***0.000***	***0.000***	***45.000***	***0.000***
	2029-30	Asanabani R.F.	20.000					20.000	
		Nachhipur R.F.	25.000					25.000	
		Sub-total	***45.000***	***0.000***	***0.000***	***0.000***	***0.000***	***45.000***	***0.000***
	2030-31	Asanabani R.F.	11.477					11.477	
		Nachhipur R.F.	29.100					29.100	
		Khaladi V.F.	2.112		2.112				
		Sub-total	***42.689***	***0.000***	***2.112***	***0.000***	***0.000***	***40.577***	***0.000***
		Range Total	***453.297***	***3.988***	***3.832***	***105.000***	***0.000***	***335.577***	***4.900***
BANGRIPOSI	2021-22	Dighi R.F.	40.000	15.000	5.000				20.000
		Rangahudi R.F.	8.787	8.787					
		Thakurani R.F.	23.127	23.127					
		Manbhanj V.F.	3.940		3.940				
		Brundabanchandrapur V.F.	4.500		4.500				
		Kuabuda V.F.	12.000		12.000				
		Banakati V.F.	3.088		3.088				
		Sub-total	***95.442***	***46.914***	***28.528***	***0.000***	***0.000***	***0.000***	***20.000***
	2022-23	Dighi R.F.	39.830	14.830	5.000				20.000
		Rangahudi R.F.	1.400						1.400
		Thakurani R.F.	30.000					30.000	

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
BANGRIPOSI	2022-23	Juha P.R.F.	17.312	17.312					
		Baghajhampa V.F.	8.000		8.000				
		Brundabanchandrapur V.F.	1.846		1.846				
		Brundabanchandrapur V.F.	0.720		0.720				
		Kuabuda V.F.	5.000		5.000				
		Bagbuda V.F.	0.640		0.640				
		Sub-total	***104.748***	***32.142***	***21.206***	***0.000***	***0.000***	***30.000***	***21.400***
	2023-24	Dighi R.F.	55.000		5.000	30.000			20.000
		Thakurani R.F.	30.000					30.000	
		Jarkani V.F.	7.000					7.000	
		Pahadpur V.F.	1.500		1.500				
		Kuabuda V.F.	8.000		8.000				
		Bagbuda V.F.	0.400		0.400				
		Sub-total	***101.900***	***0.000***	***14.900***	***30.000***	***0.000***	***37.000***	***20.000***
	2024-25	Dighi R.F.	55.000		5.000	30.000			20.000
		Thakurani R.F.	30.000					30.000	
		Juha P.R.F.	9.494					9.494	
		Nata V.F.	7.000		7.000				
		Gopinathpur V.F.	1.424		1.424				
		Kuabuda V.F.	10.608		10.608				
		Jharpokharia V.F.	2.000		2.000				
		Sub-total	***115.526***	***0.000***	***26.032***	***30.000***	***0.000***	***39.494***	***20.000***
	2025-26	Dighi R.F.	61.585		5.000	36.585			20.000
		Thakurani R.F.	30.000					30.000	
		Birsingh V.F.	0.600		0.600				
		Bedhakudar V.F.	10.000		10.000				
		Kuabuda V.F.	5.000		5.000				
		Jharpokharia V.F.	0.540		0.540				
		Sub-total	***107.725***	***0.000***	***21.140***	***36.585***	***0.000***	***30.000***	***20.000***
	2026-27	Dighi R.F.	55.000		5.000			30.000	20.000
		Thakurani R.F.	30.000					30.000	
		Nohanatia V.F.	4.000		4.000				
		Govindpur V.F.	8.000		8.000				
		Pokharia V.F.	6.208		6.208				
		Joka V.F.	8.000		8.000				
		Sub-total	***111.208***	***0.000***	***31.208***	***0.000***	***0.000***	***60.000***	***20.000***
	2027-28	Dighi R.F.	55.000		5.000			30.000	20.000
		Thakurani R.F.	30.000					30.000	
		Pahadpur V.F.	9.000		9.000				
		Pokhariadiha V.F.	8.000		8.000				
		Pokharia V.F.	4.000		4.000				
		Pokharia V.F.	2.108		2.108				
		Sub-total	***108.108***	***0.000***	***28.108***	***0.000***	***0.000***	***60.000***	***20.000***
	2028-29	Dighi R.F.	66.482		10.000			30.000	26.482
		Thakurani R.F.	30.000					30.000	
		Heenachandrapur V.F.	9.000		9.000				
		Bagbuda V.F.	4.000		4.000				
		Pokharia V.F.	10.000		10.000				
		Pokharia V.F.	3.000		3.000				
		Sub-total	***122.482***	***0.000***	***36.000***	***0.000***	***0.000***	***60.000***	***26.482***
	2029-30	Dighi R.F.	10.000		10.000				
		Dighi R.F.	30.000					30.000	
		Rangahudi R.F.	20.000					20.000	
		Thakurani R.F.	30.000					30.000	
		Heenachandrapur V.F.	5.000		5.000				
		Handibhanga V.F.	2.468		2.468				

Name of Range	Year	Name of Forest Block	Area in Ha.	Forest Cover 1-10 %	Eucalyptus, Acacia & SFP	Other Plantation	Teak	Blank Area	Encroachment
BANGRIPOSI	2029-30	Pokharia V.F.	4.000		4.000				
		Pokharia V.F.	6.000		6.000				
		Sub-total	***107.468***	***0.000***	***27.468***	***0.000***	***0.000***	***80.000***	***0.000***
	2030-31	Dighi R.F.	10.000		10.000				
		Dighi R.F.	38.043					38.043	
		Rangahudi R.F.	23.400					23.400	
		Thakurani R.F.	23.997					23.997	
		Jaivilla V.F.	0.532		0.532				
		Sindurgoura V.F.	0.260		0.260				
		Pokharia V.F.	1.608		1.608				
		Pokharia V.F.	0.788		0.788				
		Sub-total	***98.628***	***0.000***	***13.188***	***0.000***	***0.000***	***85.440***	***0.000***
		Range Total	***1073.235***	***79.056***	***247.778***	***96.585***	***0.000***	***481.934***	***167.882***
		Division Total	***21029.019***	***1663.676***	***1612.968***	***1799.008***	***259.106***	***11451.232***	***4243.029***

4.6 Special Objects of Management

The special objects of this working circle will be as follows:-

i) To reforest the barren land and depleted areas with suitable indigenous species. In areas visited by elephants suitable species liked by elephant to be planted.

ii) To produce in perpetuity maximum of timber, firewood, NTFP and fruit by managing the existing plantations scientifically and creating new plantations.

iii) To meet the demand of local villagers on firewood, fodder, small timber, etc.

iv) To produce raw materials of industrial importance by planting suitable species.

v) To enhance the land productivity through soil and moisture conservation.

vi) The objective is to protect and maintain the bio-diversity of the area along with increase in productivity of denuded and degraded forest areas through afforestation programme. These efforts will integrate bio-diversity aspects of eco-system management with afforestation programme.

vii) To increase the bio-diversity through choice of local species, for improvement of local ecology.

viii) To reduce the grazing pressures on forest by supply of fodder grasses through stall feeding for VSS members protecting forest.

ix) To bring blank area in forest wastelands under vegetative cover and to increase the quality and productivity of forest, waste lands by enrichment plantation and finally to protect and maintain the bio-diversity of the adjoining eco-system, as emphasized in revised National Forest Policy, 1988.

Old matured plantation is proposed for removal to be restocked in subsequent years.

4.6.1 Analysis of the crop

The crop is mostly planted crop of eucalyptus, Acacia and other species.

4.6.2 Silvicultural system

- The Silvicultural System for **Blank Area** is "Artificial Regeneration by Planting".
- Silvicultural System for **Teak Plantations** 259.106 Ha. is thinning of trees to facilitate overall growth of the plant. Branch cutting upto 30′ height should be taken up to get clear-bole tree trunk. In these 259.106 Ha. teak plantation areas, the inter cultural operation will be taken up as per field verification by the Divisional Forest Officer.
- **Eucalyptus, Acacia & SFP over matured plantations** (the village woodlots of erstwhile Social Forestry Plantation) will be managed with Silvicultural System "Clear felling with standard followed by Artificial Regeneration". Where ever promising coppice shoots will be developed/ come up, the same will also be retained to reduce the replanting cost. The number of standards per hectare will depend upon biotic interference, possibility of dispersal of seeds for a high forest system, fruit bearing species, having timber value at a higher girth class.

- The section size should not exceed 20 Ha.
- mtr. wide strip of Natural Forest should be retained of all sides of sections.
- No felling should be done on either side of Nalla/ Streams/ River Banks upto 20 mtr. distance.

➢ In areas with **forest canopy density less than 10%** gap planting will be adopted. In areas of poor regeneration, the area should be fenced and the land should be ploughed before seeding. Artificial plantation of two year old seedlings of Sal, Asan or other indigenous species will be taken up to support natural regeneration.

➢ In **encroached forest areas** of notified forest blocks, the areas will be recovered and planted with seedlings with co-operartion of local people.

➢ In **other plantation areas** inter cultural operation will be taken up. Gap planting will be taken up if the survival percentage is below 40%.

Management of Avenue Plantations and Urban Plantations, Rehabilitation of cyclone damaged Avenue Plantations & Urban Plantations

Avenue Plantations and Urban Plantations are frequently damaged by cyclones. Following treatments are recommended for management of valuable plantations.

a) The avenue plantation/ urban plantation site is to be visited and existing plants are to be recorded in the following form

Name of the Range	Name of the Road & Distance in KM	Name of Species	Height in Meter	BGH in cm	Present Condition	Remark/ Suggestion

b) If any plant/ tree are badly damaged above 30cm GBH, it is recommended to remove the plant and a new plant with promising growth is to be planted.

c) Any old/ hollow diseased tree likely to fall down in moderate wind is to be marked. Such trees are to be jointly visited by Range Officer and any representative of PWD/ NH authority and record their suggestion on removal

or retention. In case of suggestion for removal DFO will allow its removal, followed by planting in the assigned year.

d) All retained plants above 3cm GBH are to be checked for hanging branches if require pruning / stacking.

e) In case of avenue plantations the PWD / NH authority may be requested to put Radiant paints on trees at Breast Height for visibility during night.

f) In case of cyclone or storms many avenue trees get uprooted and some get partially uprooted, which can be restored immediately within a week. Some trees can be straightened by pulling from other side with the help of rope. Obstructing soil of root zone can be removed from bottom of tree to keep the tree at erect position. While pulling to straighten the tree, care should be taken to avoid further damage of root system. After erecting, foreign soil can be added to make a soil mound at base of the tree. The tree can be kept at its upright position by teeing its trunk to nearby tree or structure by help of rope. If required broken branches can be used as prop/ stack to provide mechanical support. Regular watering up to a month is required to support the tree to restore its original position.

Species suggested for Road Side Plantation

Considering the soil characteristics the following species are recommended for avenue plantations/ urban plantations. It is also suggested for planting one species on both the sides over a length of 2 km to add to the beauty / aesthetic value of the road. Species suggested are

(I). *Lagerstoemia flosreginae* (Patuli)

(II). *Cassia fistula* (Sunari)

(III). *Dalbergia sissoo* (Sissoo)

(IV). *Syzigium cumini* (Jamu)

(V). *Mangifera indica* (Aamba)

(VI). *Anogeissus accuminata* (Phasi)

(VII). *Samanea saman* (Bada chakunda)

(VIII). *Peltophorum ferrugineum* (Radha chuda)

(IX). *Spathodea campanulata* (Mysore queen)

(X). *Mimosops elengi* (Baula)

(XI). *Azadirachta indica* (Neem)

(XII). *Alstonia scholaris* (Chhatiana)

(XIII). *Pongamia pinnata* (Karanja)

Planting of one year promising seedlings is recommended.

Avenue plantation after upgradation of road:

The village roads after upgradation to concrete or tar road under PMGSY can be taken up with permission from R.W. Department. Avenue plantation on the side of PWD road, NH or SH can be taken up with the permission from the concerned authorities, if they don‟t have planning for widening of Road within 10 years. In many cases it is seen that such roads are being expanded to double lane or 4 lane by cutting the trees on both sides of the road. The NH or PWD authority may be asked to provide land preferably on the same road side to plant the required number of trees after expansion of the road.

Saving roadside trees during road expansion

Instead the cutting the pole size trees, modern technologies can be adopted to uproot the pole size trees and shift them to a distance from the road beyond the expansion area if Forest land or acquired private land is available nearby. In such cases the tree needs to be uprooted along with its ball of earth of 1mt radius and 1mt deep without disturbing its root system by bringing an earth mover or extractor. The uprooted tree can be replanted/ transplanted in a pit already dug at a safer place with 2mt × 2mt × 2mt size. Foreign soil, CDM can be put to plant the tree. Regular watering is to be made for a month or so till it is established.

Farm Forestry

It is required to conduct a survey and identify the areas of Private ownership in a phased & time bound manner and comprehensive planning may be made for raising

plantations and incentive based farm forestry. The help of GIS Cell of PCCF Office, Odisha, ORSAC or Private organization may be availed for identification of vacant land through Satellite imagery interpretation.

Planting, Bio-Diversity Afforestation / Plantation Model

The planting operation consists of the following steps:-

a) Putting BHC in dug out weathered earth and pit.
b) Gradation of seedlings in nursery and sending of only good/healthy seedlings for planting in the field.
c) Carriage of seedlings from nursery to planting site.
d) Distribution of seedlings from pit to pit as per plantation model.
e) Mixing of the earth with BHC – 50% (5g.) Bio-fertilizer (30 gm.) and planting of seedlings after removing polybags. The torn polybags should be placed by the side of each pit.

The above sequences of operations are technical in nature. So proper demonstration should be given to labourers engaged in such operation. Planting operation must be completed by the end of July under proper supervision.

After planting is over, post-planting operation should start by August. Each plant should be cleared by uprooting weeds and other unwanted growth by clearing the soil at a radius of 50cm around each plant with undesired species / weeds, soil should be loosened and NPK fertilizer @20gm. per plant should be applied. The dead seedlings shall be removed and pits will be replanted with seedlings after applying basal dose of fertilizer and BHC. Second soil working, fire tracing and grass cutting shall be carried out during October to December.

Post planting activities shall be carried out in the 2nd year and 3rd year as mentioned in the working norm.

Schedule of Planting

A planting programme is prepared for 10 years. The Divisional Forest Officer should allot the planting area after consultation with other agencies involved in the plantation activity.

Grazing

The plantation areas shall be closed to grazing for a period of 5 years from the year of formation. The Orissa Forest (Grazing of cattle) Rules, 1980 shall be rigidly enforced to all forest blocks included in this Working Circle.

Fire Protection

The plantation area shall be protected from fire. The Orissa Forest Fire Protection Rule 1980 and provision of Chapter XVIII of Orissa Forest Department Code shall be strictly implemented. Fire lines should be drawn to protect Plantation from fire.

Nursery Register and Plantation Journals

Nursery register and plantation journals shall be maintained for each nursery and plantation site respectively in the form prescribed in the Forest Plantation Manual, 1977.

Divisional Forest Officer should ensure that all plantation activities by any agency including forest department shall be carried out in the areas allotted to this working circle.

Intermediate Revision of the Plan

No intermediate revision of plan is anticipated, if annual plantation programme is carried out uninterrupted in order to cover the area. In this regard the different planting agencies may be allotted with the land prescribed in this working circle, so that each planting agency will be able to develop the forest cover in an area assigned to them. Divisional Forest Officer will allot the area and he will monitor the works.

Work Appraisal

Each step of plantation is time bound and technical which requires timely planning, demonstration, execution and appraisal. Divisional Forest Officer & Assistant Conservator of Forests should demonstrate the different nursery techniques and plantation models to Range Officers, so that the technical knowledge of the staff could be refreshed every year. Range Officers on the other hand, will demonstrate such techniques to their sub-ordinate staff and ensure correct implementation. For correct and timely implementation of plantation, proper timely planning, adequate

check work and appraisal is required. The Divisional Forest Officer and the Asst. Conservator of Forests should strictly check the work and expenditure on pre-planting, planting and post-planting operation. Before taking up the planting operations, the climatic conditions of the locality and the attitudes of the local people should be borne in mind and accordingly the species and sites for plantation should be selected. Further the Asst. Conservator of Forests should supervise the works at operation site at least once in a month and report to the Divisional Forest Officer. In emergency, the Divisional Forest Officer would give technical advices to the Range Officers.

Due to such regular supervision, no excess labour can be engaged. Each item of work will be taken up. The labourers will be engaged systematically and staff can be held responsible for any lapses.

Monitoring of Plantation Programme

While a number of organizations (VSS) are involved in plantation programme, proper monitoring of programme from allocation of site to planting and protection afterwards is essential, so that future disputes can be settled. This will also help in implementation of plantation programme and would facilitate better growth of planted species.

The monitoring and review of plantation programme should be taken up by the Divisional Forest Officer in the areas of his jurisdiction. These plantations are important from bio-diversity, environmental and ecological considerations.

The following guidelines are suggested

1) The Divisional Forest Officer shall raise the plantations over the areas included in the working plans with active co-operation and involvement of public. In the situation, when the annual funds lying with the Divisional Forest Officer are not sufficient to meet annual plantation target as prescribed in this working circle, the remaining unplanted areas outside Working plan should be assigned to other organization (VSS) for raising plantation, so that annual treatment for plantation could be achieved.

2) General plantation can be taken up in blank area devoid of any vegetation.

3) When different agencies are to be involved in plantation activities so as to meet the annual target, then the Divisional Forest Officer can ask from such agencies to select plantation sites. The agencies will submit a list of plantation sites outside RF / PRF / PF / VF involved in this working plan to the Divisional Forest Officer by 15th October under intimation to concerned Range Officers. The Range Officers will submit their views to the Divisional Forest Officer by 31st October.

4) The Divisional Forest Officer shall finalize and allot the site for plantation and allow them to execute the preliminary work in a meeting called by him during the 1st week of November. Executing agencies will complete demarcation by 30th November. In case any discrepancy, dispute or difficulty arises, the same shall be brought to the notice of the Divisional Forest Officer/Range Officer. Such disputes shall be solved by mutual dialogue. After demarcation, treatment map of the area shall be prepared and the same shall be handed over to the Divisional Forest Officer along with species to be planted by 15th December. The Divisional Forest Officer after scrutinizing the same will finally allow them to execute the plantation work by 31st December.

5) After every three years of completion of plantation, a joint inspection should be taken up by the Divisional Forest Officer for assessment of the success of plantation and the same will be recorded in terms of bio-mass production, yield, survival percentage with the short comings noticed. The joint inspection report shall be submitted to the Regional Chief Conservator of Forests, Baripada circle and the Officer of the same rank in executing agencies. The old plantations shall be enumerated every year in the month of December and the figures will be entered in the plantation journal and compartment history.

6) The Divisional Forest Officer should emphasize for inclusion of cost of plantation in the district budget, so that plantation can be taken up every year uninterrupted.

4.6.3 Rotation period

The actual rotation will vary according to species planted in particular area. Theoretically a rotation of 15 years shall be adequate for *Eucalyptus hybrid* and 12 years for *Acacia auriculiformis*.

4.6.4 Harvestable diameters

For the purpose of selective felling site quality III has been assumed and following exploitable girth/ harvestable age is suggested which may be rectified after field verification.

Sl. No.	Species	Exploitable girth	Age of attaining exploitable girth	Remarks
1	*Acacia auriculiformis*	60cm	12 years	The purpose of exploitation is to get firewood, small timber and pulp for industry.
2	*Eucalyptus hybrid*	75cm	15 years	
3	Chakunda	60cm	12 years	
4	Sisoo	145cm	60 years	

The fruit, oil and NTFP producing species shall be protected till they become dead. The dead tree shall be harvested and removed.

4.6.5 Reducing factors and reduced areas

No reducing factor has been proposed. Reduced area of PWC in comparision to last working plan is because we have omitted natural forests from PWC.

4.6.6 Felling cycle

10 years felling cycle is proposed in 41 felling series.

4.6.7 Division into periods and allotment to periodic blocks (PB)

No periodic block is proposed in this working circle.

4.6.8 Calculation of yield

Yield Calculation of Eucalyptus & Acacia Plantation

We need to calculate yield of Eucalyptus & Acacia plantations for which formula has been arrived through long trials. In Baripada Forest Division 280.88 ha of pure Eucalyptus plantations, 758.414 ha of Eucalyptus & Acacia mixed plantations and 20

ha of pure Acacia plantation are available in the field. To calculate their yield, we need to follow regression equation.

(A) Yield Calculation of *Acacia auriculiformis* Plantation:

The regression equation for *Acacia auriculiformis* was aimed to develop prediction model by sampling trees from representative plantations of *Acacia auriculiformis* raised by Kerala Forest Development Corporation Ltd., Government of Kerala. Best-fit equations were established on regional basis for Kerala for volume estimation. The best-fit equations developed in the present project for five fast growing short rotation tree crops, one of them is *Acacia auriculiformis* by Dr. C. Buvaneswaran, Scientist-F, Silviculture and Forest Management Division, Institute of Forest Genetics & Tree Breeding, Coimbatore. Based on this regression equation, estimated yield (by volume) of standing crops of *Acacia auriculiformis* of Baripada Forest Division is as follows:

Best-fit equations for predicting volume (OB) of stem wood in *Acacia auriculiformis* plantations.

Sl. No.	Best-fit equations	Remarks
1	V = 0.021(GBH2H) 0.558	Formula applicable when GBH & Height values are available.
2	V = 0.00002 GBH2.345	Formula applicable when only GBH values are available.

Where, V = Volume of the tree (m^3 per trees), GBH = Girth at breast height of the tree (in cm) & H = Height of the tree (in m).

Based on the 2nd regression equation i.e. **$V = 0.00002\ GBH^{2.345}$** for *Acacia auriculiformis*, the yield was calculated which is as follows –

(i) Volume of the tree (over bark) in a Sample plot with 40 trees

When average GBH is 49.71 cm & tree/ha is 40.

Mean GBH of 40 sampled trees = 49.71 cm

Mean volume of 40 sampled tree = 0.204 (m^3 per tree)

Total calculated volume of the 40 sampled tree (V) = 9.1732 m^3

(B) Yield Calculation of Eucalyptus Plantation:

Sl. No.	Volume	Best-fit equations
1	Volume (over bark) V	0.00352 + 0.0341 G2H
2	Volume (under bark) V	0.00258 + 0.0281 G2H

Where, G = Girth of the Eucalyptus Tree

& H = Height of the Eucalyptus Tree.

Based on the above two regression equation of Eucalyptus, the Volume is calculated as follows –

(i) Volume of the tree (over bark)

When average GBH is 4′ & average height of the tree is 30 meter

[G = 1.2 m & H = 30 m]

$V = 0.00352 + 0.0341\ G^2H$

$= 0.00352 + 0.0341\ (1.2)^2(30)$

$= 1.456\ m^3$

Volume of 0.1 ha of plantation with 50 trees in a sample plot

$50 \times 1.456 = 72.8\ m^3$

(ii) Volume of the tree (under bark)

When average GBH is 4′ & average height of the tree is 30 meter

[G = 1.2 m & H = 30 m]

$V = 0.00258 + 0.0281\ G^2H$

$= 0.00258 + 0.0281\ (1.2)^2(30)$

$= 1.216\ m^3$

Volume of 0.1 ha of plantation with 50 trees

$50 \times 1.216 = 60.82\ m^3$

The regression equation and volume table for Eucalyptus clones was prepared (Chaturvedi, 1995).

4.6.9 Table of felling

Management of Over-Matured Eucalyptus/ Acacia Plantations

In most of Eucalyptus / Acacia plantations raised during the past four decades the growth has been found to be very encouraging in the different plantation blocks of Baripada Forest Division. Even the first coppice result has been also very encouraging in many planting sites/ blocks of this Division. However the Divisional Forest Officer will inspect these areas irrespective of original planting and first coppice and then decide to uproot the stems and adopt miscellaneous plantations. Anyway a method of executing felling in Eucalyptus plantations at maturity and coppice areas is prescribed below:

Theoretically a rotation of 15 years shall be adequate for Eucalyptus hybrid and 12 years for *Acacia auriculiformis*.

Plan for Felling over-matured Eucalyptus/ Acacia Plantations

1(A) Proposal for harvesting of over-matured Eucalyptus / Acacia trees during plan period.

Name of Range	Name of Forest Blocks	Harvestable area (in ha)	Species	Age of plantation
Rasgovindpur	Amarda RF	20	Eucalyptus	Above 20 years
	Nalagaja RF	10	Eucalyptus	Above 20 years
	Nuhajhalia RF	02	Eucalyptus	Above 20 years
	Moroda RF	10	Eucalyptus	Above 20 years
	Jamsole RF	6.484	Eucalyptus, Acacia	Above 20 years
	Nichuapada RF	05	Eucalyptus, Acacia	Above 20 years
	Sub-total	**53.484**		

1(B) Year wise proposal for harvesting of over-matured Eucalyptus / Acacia trees during plan period (Rasgovindpur).

Year	Name of forest blocks	Area proposed to be harvested (in ha.)
2021-22	Amarda RF	10
2022-23	Nalagaja RF	10
2023-24	Moroda RF	10
2024-25	Jamsole RF	6.484
2025-26	Nichuapada RF	05
2026-27	Nuhajhalia RF	02
2027-28	Amarda RF	10

2(A) Proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period.

Name of Range	Name of Forest Blocks	Harvestable area (in ha)*	Species	Age of plantation
Deuli	Suliapada RF	40	Eucalyptus	Above 20 years
	Deuli RF	30	Eucalyptus	Above 20 years
	Chandua RF	20	Eucalyptus	Above 20 years
	Kuliana RF	30	Eucalyptus & Acacia	Above 20 years
	Andhari RF	30	Eucalyptus & Acacia	Above 20 years
	Sub-total	**150**		

2(B) Year wise proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period (Deuli).

Year	Name of forest blocks	Area proposed to be harvested (in ha.)
2021-22	Suliapada RF	20
2022-23	Kuliana RF	15
2023-24	Andhari RF	10
2024-25	Deuli RF	15
2025-26	Chandua RF	20
2026-27	Suliapada RF	20
2027-28	Kuliana RF	15
2028-29	Andhari RF	10
2029-30	Deuli RF	15
2030-31	Andhari RF	10

3(A) Proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period.

Name of Range	Name of Forest Blocks	Harvestable area (in ha)*	Species	Age of plantation
Betnoti	Thakurtota R.F	25	Eucalyptus	40 years
	Machhpada R.F	26.93	Eucalyptus Acacia	30 years
	Totapada R.F	5	Eucalyptus	30 years
	Haripur R.F	5	Eucalyptus	30 years
	Routra R.F	5	Eucalyptus	30 years
	Khadikapada R.F	2	Eucalyptus	30 years
	Patpur R.F	50	Eucalyptus, Acacia	30 years
	Mantapal R.F	10	Eucalyptus ,Acacia	30 years
	Phuljhari R.F	50	Eucalyptus ,Acacia	30 years
	Sarbana R.F	10	Eucalyptus, Acacia	30 years
	Hatijhuri R.F	5	Eucalyptus, Acacia	30 years
	Khirpada R.F	50	Eucalyptus, Acacia	30 years
	Daldali R.F	10	Eucalyptus	30 years
	Baisinga R.F	50	Eucalyptus	30 years

Name of Range	Name of Forest Blocks	Harvestable area (in ha)*	Species	Age of plantation
	Tikayatpur R.F	5	Eucalyptus	30 years
	Purunia R.F	70	Eucalyptus, Acacia	30 years
	Gaddeulia R.F	5	Eucalyptus	30 years
	Hempur R.F	20	Acacia	30 years
	Gopalpur R.F	2.88	Eucalyptus	30 years
	Bartana R.F	30	Eucalyptus	30 years
	K.C.Pur R.F	4	Eucalyptus	20 years
	Sub-total	**440.81**		

3(B) Year wise proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period (Betnoti)

Year	Name of forest blocks	Area proposed to be harvested (in ha.)
2021-22	Machhpada R.F	26.93
2022-23	Daldali R.F	10
	Tikayatpur R.F	5
	Thakurtota R.F	25
	Totapada R.F	5
	Haripur R.F	5
	Routra R.F	5
	Khadikapada R.F	2
2023-24	Patpur R.F	30
2024-25	Patpur R.F	20
	Mantapal R.F	10
	Phuljhari R.F	20
2025-26	Phuljhari R.F	30
	Sarbana R.F	10
	Hatijhuri R.F	5
	Khirpada R.F	50
	Hempur R.F	20
2026-27	Purunia R.F	35
2027-28	Purunia R.F	35
2028-29	Baisinga R.F	35
	Gaddeulia R.F	5
2029-30	Baisinga R.F	15
	K.C.Pur R.F	4
	Gopalpur R.F	2.88
2030-31	Bartana R.F	30

4(A) Proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period.

Name of Range	Name of Forest Blocks	Harvestable area (in ha)*	Species	Age of plantation
Dukura	Khanua RF	25	Eucalyptus and Acacia	Above 20 years
	Kerko RF	50	Eucalyptus and Acacia	Above 20 years
	Badasahi RF	20	Eucalyptus and Acacia	Above 20 years
	Kanpura RF	70	Eucalyptus and Acacia	Above 20 years
	Chengua RF	20	Eucalyptus and Acacia	Above 20 years
	Belpal RF	5	Eucalyptus and Acacia	Above 20 years
	Deulia RF	10	Eucalyptus and Acacia	Above 20 years
	Sub-total	**200**		

4(B) Year wise proposal for harvesting of over-matured Eucalyptus trees during plan period (Dukura).

Year	Name of forest blocks	Area proposed to be harvested (in ha.)
2021-22	Khanua RF	10
	Belpal RF	05
2022-23	Deulia RF	10
	Khanua RF	10
2023-24	Khanua RF	05
	Kanpura RF(P)	20
2024-25	Kanpura RF(P)	20
2025-26	Badasahi RF	20
2026-27	Chengua-mangalpur RF	20
2027-28	Kanpura RF(P)	15
	Kerko RF	15
2028-29	Kanpura RF(P)	15
2029-30	Kerko RF	20
2030-31	Kerko RF	15

5(A) Proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period.

Name of Range	Name of Forest Blocks	Harvestable area (in ha)*	Species	Age of plantation
Udala	Udala RF	15	Eucalyptus and Acacia	More than 20 years
	Kuamara RF	30	Eucalyptus and Acacia	More than 20 years
	Dhaundia RF	30	Eucalyptus and Acacia	More than 20 years
	Marsigaon RF	20	Eucalyptus and Acacia	More than 20 years
	Puruna Baripada RF	05	Eucalyptus and Acacia	More than 20 years
	Sirathali RF	10	Eucalyptus and Acacia	More than 20 years
	Mundakati RF	10	Eucalyptus and Acacia	More than 20 years
	Khunta RF	10	Eucalyptus and Acacia	More than 20 years
	Belakuti RF	15	Eucalyptus and Acacia	More than 20 years
	Nahara RF	05	Eucalyptus and Acacia	More than 20 years
	Sub-total	**150**		

5(B) Year wise proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period (Udala).

Year	Name of forest blocks	Area proposed to be harvested (in ha.)
2021-22	Kuamara RF	15
2022-23	Kuamara RF	15
2023-24	Dhaundia RF	15
2024-25	Dhaundia RF	15
2025-26	Marsigaon RF	20
2026-27	Sirathali RF	10
2027-28	Udala RF	15
2028-29	Belakuti RF	15
2029-30	Mundakata RF	10
	Nahara RF	05
2030-31	Khunta RF	10
	Puruna Baripada RF	05

6(A) Year wise proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period (Bangiriposi).

Name of Range	Name of Forest Blocks	Harvestable area (in ha)	Species	Age of plantation
Bangiriposi	Dighi RF	65	Eucalyptus and Acacia	Above 20 years
	Division Total	**65**		

6(B) Year wise proposal for harvesting of over-matured Eucalyptus and Acacia trees during plan period (Bangiriposi).

Year	Name of forest blocks	Area proposed to be harvested (in ha.)
2021-22	Dighi RF (P)	05
2022-23	Dighi RF (P)	05
2023-24	Dighi RF (P)	05
2024-25	Dighi RF (P)	05
2025-26	Dighi RF (P)	05
2026-27	Dighi RF (P)	05
2027-28	Dighi RF (P)	05
2028-29	Dighi RF (P)	10
2029-30	Dighi RF (P)	10
2030-31	Dighi RF (P)	10

4.6.10 Method of Execution of Felling

Table of harvesting (felling) / planting:

The Village Forest/ RF assigned for harvesting & subsequent planting will be taken up as per the table provided.

Method of Executing Harvesting (Felling):

(a) Consultation with VSS/ VFC:

Prior to taking of operation like demarcation, marketing etc. the VSS/ VFC is required to be consulted, if the area is assigned to VSS/ VFC. The process of harvesting and restocking is to be explained. The mechanism of usufruct sharing is to be decided and resolution to be passed to that effect. Sharing of produce either in monetary term or in kind to be specifically discussed & decided. In case of Village Forest the working cost is required to be adjusted against sale value/ royalty of the produce so obtained. Voluntary contribution of labor by villagers for operations may also be examined to reduce the cost of operation. After harvesting, the planting modality is also to be discussed at length.

(b) Demarcation of Area:

In case of RF, the area is to be demarcated on ground by putting RCC pillars, if the demarcating line coincides with the RF Boundary. In other cases, putting of Stone Cairns at a visible distance will be sufficient.

In case of village forest, the area/ Boundary is not demarcated on ground. It is required to demarcate the Village Forest as notified with the help of Revenue Personel in presence of VFC Members. RCC pillars of 20cm × 20cm × 120cm may be posted to keep the boundary line visible permanently. In some cases, the entire block is assigned for working in a single year; in that case only boundary line is of importance. In few cases the area is to be worked in two consecutive years. In that case, boundary line and a tie line dividing the area into two equal half are to be maintained as depicted in the village sheet 16″ = 1 Mile). The demarcation process is to start at least from April-May of previous year. For keeping the boundary line naturally demarcated, it is proposed to put Palm Seeds on the boundary at an interval of 5meters which will grow to a tree within 5 years.

(c) Selection of Standard trees:

As the system to be followed is "**Clear Felling with Standard**", it is required to mark the standards initially. The criteria for selection of standards in general are furnished below.

- Timber species of greater importance.
- Fruit bearing trees like Mango, Jack Fruit, Barkoli (*Zyziphus*), Palm, Cashew.
- Any plus tree suitable for seed collection for raising plantations.
- Any trees associated with sentiments of local villagers are to be retained as standard.

The number of Standard trees per hectare shall be 40-60 per Ha. A list of standard Trees to be prepared and will be a part of Compartment History. The information may be recorded in a standard format.

Suggested Format:

1. Name of the Range:
2. Name of Forest Block/ Coupe
3. Area under marking in Ha:
4. Year of Marking:
5. Name of Marking Officer & Designation.

List of Standard Trees selected for retention					
Sl. No.	**Name of Species**	**GBH in cm**	**Latitude / Longitude**	**Crown diameter in meter**	**Remark**
				Signature of Marking Officer	

(d) Marking of trees for felling:

After selection of standard trees, all remaining trees above 30cm GBH are marked for felling. However marking on sensitive areas, the following marking rules are to be followed.

i. Trees near to perennial nala / river banks to a width of 40m measured from High Flood level / High tide line are not to be marked.
ii. Tree on which bird‟s nests is observed is to be retained.
iii. Trees having cavity, suitable for nocturnal bird‟s habitation up to five numbers per Ha are to be retained.
iv. Trees on rocky surface/ above 30° slope / high erosion prone area are not to be marked for felling.

Marking should be taken up by the Section Forester and to be checked by the Range Officer up to 20% of marked trees. The marking list is to be prepared in quadruplicate

in standard format with a standard estimate of timber and fire wood production. Marking is to be done in February/ March of previous year to year of working.

(e) Delivery of Coupes for Harvesting:

The Coupe are to be delivered to OFDC Ltd for harvesting and marketing thereof. In case the VSS is willing to participate in harvesting operation, they may be engaged by OFDC Ltd for feeling/ logging & conversion operation. The Coupe working may be allowed normally for nine months. Any extension of working period may be allowed as per administrative instruction/ Odisha Forest Contract Rules, 1966.

(f) Feeling of trees & Removal there of:

The marked trees may be felled, converted and removed as per modern logging practices and the Odisha Timber and other Forest Produce Transit Rules, 1980 and up to date amendments thereof. The trees felled by saw do not produce coppice shoots. If the species are good coppicer, it is suggested to fell the trees with axe only. Subsequent logging may be taken up by saw or as convenient to OFDC Ltd as per modern logging practices.

(g) Sharing of Produce in case of VSS/ VFC area:

Sharing of forest produce, in case of VSS area, will be regulated as per **Para 11 of Joint Forest Management Resolution, 2011**. In case of village forests, managed by VFC the sharing of forest produce will be regulated as per **Rule 9 of the Odisha Village Forest Rules, 1985**.

(h) Surrender of Coupe Area:

After harvesting the marked trees and removal thereof, the Coupe area shall be surrendered by OFDC Ltd as soon as possible so as to take subsidiary silvicultural operation/ planting activities on the same area.

4.6.11 Subsidiary Silvicultural Operations Cleanning & Thinning:

Subsidiary silvicultural operation (SSO) after main felling in any coupe is essential to maintain the hygiene of any forest. It involves Cleaning of the debris and thinning of the advance growth if any retained during marking.

(a) Cleaning:

As the silvicultural system adopted is clear felling with standard, the cleaning operation involves

- Removal of debris from the coupe and either buried underground with a purpose to allow left over materials decompose and enrich soil organic content.
- Fell & Remove the marked trees, if not removed by the OFDC Ltd.
- Remove all weeds by uprooting mechanically.
- Make the coupe area suitable for taking up plantation.

(b) Thinning:

In the coupe area, if any advance growth is left unmarked/ not removed for any consideration and the advance growth is at pole stage, it is required to take up thinning. In case of Acacia / Eucalyptus, no thinning will be required as the felling cycle is twelve years for Acacia & 15 years for Eucalyptus and clear felling with standard system is adopted.

4.6.12 Regeneration:

The coupe area is to be restocked through artificial regeneration i.e. by planting of seedlings with adequate Soil & Moisture Conservation measures. The standard planting technique has been enumerated in approved cost norm. To refresh the steps involved, the procedure is summarized in brief.

Method of Execution of Planting

Demarcation of Annual Plantation Coupes

Annual plantation area or coupe shall be demarcated by erecting stone cairons of size 90cm × 60cm × 40cm at corners of the plantation areas or coupes and at 100 M. intervals along coupe line. However if coupe coincides with block/compartments boundary line, the later shall be maintained. Any existing encroachments in the plantation coupes shall be evacuated at the time of demarcation. The plantation coupe shall be divided into quadrants of 4 ha. each with 3M. wide section line and 4M. wide inspection path. Sign board shall be displayed where plantation coupe line crosses the road or block or compartment line. Sign board shall exhibit the name of the Division, Block, and Compartment, year of planting, spacing and species planted. The annual

plantation area shall be shown in stock map of scale 1:25,000 and details of plantation shall be maintained in the plantation journal and compartment history.

Site Improvement

All the bushes must be cleared during January and February. The bushes and herbs or plants having medicinal values and economic species shall be retained. The retained saplings and poles shall be pruned up to 2/3 of their height. The cleaning materials obtained shall be disposed of to meet the demand of the rural poor. The cleaning of site will be meant for improvement of site and this operation should be taken as per the guidance provided in the National Forest Policy, 1988.

Preparation of Site

After clearance of site, pitting will be taken up. Pits of size 30cm × 30cm × 45cm (deep) will be dug and top dug out earth will be kept outside the pit on upper side and buttom dug out earth will be kept on lower side. The spacing between 2 pits will be 2M × 2M. The pits should be dug after alignment and stacking of the position of pits located on ground. The pit digging should be taken up systematically to complete the work by March. By the end of May, the site will be ready for plantation as by that time required weathering of soil in pits and outside the pits would have taken place.

Raising of Seedlings

For raising seedlings, species to be planted shall be categorized into 2 groups. Nursery stock for slow and moderate growing species would be obtained from established nursery or permanent nursery. The nursery activities for such species should be taken up from April in the year proceeding to plantation. Such seedlings will be one year old in the next year at the time of plantation and by that time the height of seedlings will also be grown to 30cm or more.

General Nursery Techniques

Nursery techniques for forestry species is enclosed as **Appendix – XXIV**. For general nursery techniques following steps are prescribed.

Collecting Seeds

There are two important points to be remembered at the time of collection of seeds.

i) As good seeds produce good trees, the seeds from vigorous and straight healthy trees should be collected.

ii) The provenance of the seed is important. So collection of seeds should be made from same altitude, aspects and soil etc. as the area where planning is made to make the forest. Seeds can be collected from either felled trees or standing trees. Only ripen, large and healthy seeds should be collected. In case of purchase of seeds preference should be given to the registered/recognized seed dealers.

Then the treatment of seeds will be done. In this case the good seeds will sink and bad will float. Seeds are to undergo treatment before sowing. There are two ways of treatment i.e. (i) Wet treatment and (ii) Mechanical treatment.

Good seed beds will help germination and will produce good quality seedlings. For this the soil of the seed bed should be very light. It is always necessary to mix sand and soil in optimum proportion. Thus the mixture will give good drainage since drainage is very important. Raised beds are mostly advised than the sunken beds. The mixture should contain 30% soil, 50% C.D.M. and 20% sand in each bed. To protect the soil from erosion a frame should be provided if necessary a wire mesh should be put to protect the seeds from birds. Seedlings are raised by transplanting from cuttings. Hence nursery should be good to produce good seedlings in order to get a good quality plantation.

For planting of species of fast growing and quick maturing, temporary nursery shall be established near the planting site at a suitable place. Seeds should be collected preferably from selected mother trees at proper time keeping in view the viability of seeds. Proper pre-treatment of all the collected seeds should be carried out by soaking and drying. The nursery work shall start during the 1st week of January with clearance of site and demarcation. The mixture of soil, sand and bio-fertilizer in 4:1:1 composition along with 10% BHC powder will be prepared. The polythene bags are to be filled up with this soil mixture and then to be systematically arranged in bed and seeds to be sown afterwards. In case when seeds are not sown directly in polybags but in germination beds prepared for the purpose, then transplanting operation is to be carried out when tender seedlings are one month old. Here care should be taken that

transplanted seedlings should not become dry. Such operation should be completed by the end of February. Normally for such fast growing species the seed germination takes place within 2 weeks. The green foliage set sprouted in 4 to 5 weeks after transplanting. The species watered as per their requirement and application of bio-fertilizer is to be done once in fortnight along with intermittent spray of any growth promoter. Spray of Malathion and Rogor or any fungicides or insecticide may be done to neutralize fungal and insect attack.

Nursery would be maintained properly till field planting and casualty replacement is over. Gradation and shifting of polybags shall be taken up in 2nd week of March and 2nd week of May in planting year respectively. This exercise will produce graded seedlings of height more than 30cm. at the time of planting. In case of mortality the empty polybags shall be filled up by transplanting seedlings from mother bed at the time of grading.

Survey, demarcation, site preparation, alignment & stacking:

The coupe area has been well demarcated and pillars posted during coupe marking. In case of block plantation @1600 trees per Ha at a spacing of 2.5m × 2.5m is to be adopted. In case of Bamboo Plantation a spacing of 4m × 4m will be adopted.

Pitting:

The areas under consideration are mostly sandy alluvial soil/ sandy soil. A pit size of 30cm × 30cm × 30cm is recommended. Though pitting is generally carried out during January-March, there is every possibility of filling of pits during pre-monsoon as the soil is soft & loose. Hence pitting may be carried out in April-May and allow weathering at least for one month before planting.

Choice of Species & Nursery:

It is recommended to plant species matching to the vegetation of the Forest. In areas visited by elephants the species planted should be preferred by elephant as food. Some of the species used by elephant as food are given below.

Species	Local Name (s) in Oriya	Part(s) Consumed by Elephants
1. *Aegle marmelos*	Bela	Fruits
2. *Acacia catechu*	Khair	Leaves
3. *Anogeissus latifolia*	Dhaura	Leaves
4. *Artocarpus heterophyllus*	Panasa	Leaves, bark and fruits
5. *Bauhinia racemosa*	Ambalota	Leaves
6. *Bauhinia vahlii*	Siali	Leaves, bark and stem
7. *Bombax ceiba*	Varuna	Leaves
8. *Boswellia serrata*	Salai	Leaves, branches and bark
9. *Bridelia retusa*	Kasi	Leaves
10. *Careya arborea*	Kumbhi	Leaves and fruits
11. *Cassia fistula*	Sunari	Leaves and small stem
12. *Dalbergia Sissoo*	Bali Sissoo	Leaves
13. *Dendrocalamus strictus*	Salia baunsa	Leaves, branches and shoots
14. *Dioscorea spp.*	Bainya alu, Kasa alu	Tubers
15. *Emblica officinalis*	Anla	Leaves
16. *Erythrina indica / suberosa*	Paladhua	Leaves and branches
17. *Ficus benghalensis*	Bara	Leaves and bark
18. *Ficus glomerata*	Dimiri	Leaves and fruits
19. *Ficus religiosa*	Aswatha	Leaves and branches
20. *Ficus retusa*	Jari	Leaves and branches
21. *Glycosmis pentaphylla*	Chauldhua	Leaves
22. *Grewia tiliaefolia*	Simili	Leaves and small stems
23. *Lagerstroemia parviflora*	Siddha	Bark
24. *Limonia acidissima*	Kaitha	Bark and fruits
25. *Madhuca indica*	Mahula	Flowers
26. *Magnifera indica*	Amba	Fruits
27. *Mallotus philippinensis*	Kamalagundi	Leaves
28. *Manilkara hexandra*	Khirkuli	Leaves
29. *Melia azadirachta*	Mahaneema	Leaves
30. *Mimusops elengi*	Baula	Leaves
31. *Morinda tinctoria*	Achu	Leaves
32. *Ptercarpus santalinus*	Raktachandan	Roots of young plant
33. *Samanea saman*	Bada chakunda	Leaves, bark and fruits
34. *Schleichera oleosa*	Kusums	Leaves
35. *Shorea robusta*	Sal	Bark
36. *Sterculia urens*	Genduli	Stem and bark
37. *Sterculia villosa*	Kodalo	Leaves and bark
38. *Streblus asper*	Sahara	Leaves and branches
39. *Strychnos nuxvomica*	Kochila	Leaves
40. *Syzygium cumini*	Jamu	Leaves
41. *Terminalia belerica*	Bahada	Leaves
42. *Terminalia chebula*	Harida	Leaves
43. *Terminalia tomentosa*	Asan	Asan
44. *Trewia nudiflora*	Panigambhari	Bark
45. *Zizyphus mauritiana*	Barkoli	Leaves

Nursery for required species and number may be raised in permanent nursery or in a temporary nursery as convenient. The standard nursery technique found in any silvicultural text or standard practices may be followed. The recommended height of

seedling before planting is 60cm to 75cm in case of Six month old seedlings and 100cm in case of One year old seedlings. For seed collection, plus trees available in the locality or brought from known source of origin may only be utilized. Unknown sources should be strictly avoided to have a better plantation.

Planting:

Planting of seedlings shall be taken up during last week of June/ 1st week of July. During planting, application of Chemical fertilizer is not recommended at sites close to water sources as there is possibility of leaching and subsequent contamination of water bodies. In that case application of FYM / Organic fertilizer is recommended. In other cases chemical fertilizer and insecticides should be applied.

After planting, following Post-planting care is recommended.

(a) Casualty Replacement

After planting, some planted seedlings may get damaged. These dead/ defective seedlings are required to be replaced within 15 days of planting or as soon as possible with better seedlings.

(b) Weeding & Soil Working:

After 30 days of planting, the planted seedlings start bearing new leaf. From 30 days to 45 days soil working around the plant along with application of fertilizer is recommended. Weeding around the plant i.e. patch weeding is to be taken up. In case of area with heavy weeds / grasses strip-weeding proves beneficial. Number of weeding in a year may be decided as per cost norm provisions. Two weeding in 1st year is always prescribed.

(c) Mulching:

In sandy soil, mulching by dried grasses from February to June helps in retaining soil moisture. Hence it is recommended in case of sandy soil with complete open areas.

(d) Watering:

In case of medicinal plantations / valuable plantations watering provisions are inbuilt with the cost norm. Hence watering is to be provided during summer for first year and second year.

(e) Fire Protection / Watch & Ward:

Fire protection measures and watch & ward against grazing are strictly to be implemented.

4.6.13 Associated Regulations and Measures:

In case of plantations the plantation journal and Nursery journal are to be maintained. The details of operation, yield, year of working etc. along with the photographs are to be recorded/ placed in the compartment history.

Eviction of Encroachments & Planting:

There are RFs/ PRFs/ PFs/ VFs which have been partly encroached either by individual/ group or community. It will be the prime endeavor to get the area vacated and make the area free from encroachment. The area free from encroachment is to be brought under plantation. It is programmed to plant the evicted area as per suitability. Either Agro Forestry Model or Block Plantation model may be adopted depending upon situation.

Plantation Control Form:

After completion of planting, a plantation control form is required to be submitted by the Range Officer to regulate activities as per Working Plan prescription.

Plantation Control Form						
Name of Planting Series	Year of Working	Area assigned in ha	No. of Standard Trees marked	Quantum of Timber / F.W. obtained	Area actually planted up	Reason of Deviation if any

Some over matured plantations raised under Social Forestry Scheme, mostly of Eucalyptus, Acacia and other species need to be removed for replanting the area out of sale proceeds of harvested forest produces after resolution in Village Forest Committee, protecting the plantations. Therefore the year of removal has not been prescribed. The removal will be as per Resolution of VFC followed by plantion.

Choice of Species

The species proposed for plantation are *Dendrocalamus strictus, Bambusa nutans, Bambusa vulgaris*, Piasal, Sisoo, Arjun, Gambhar, Panjan, Asan, Amla, Harida, Bahada, Siris, Khair, Simul and other species suitable for elephants as intimated earlier.

Monoculture shall be avoided and mixed plantation shall be taken up by mixing suitable proportion of timber, firewood, NTFP fruit bearing, small timber and plants eaten by elephant. Also choice of species should be according to requirement of people, their occupation and of status as well as source of livelihood. Before deciding the choice of species and wherever possible the local inhabitants should also be consulted in this regard.

The decision of site quality, soil type moisture condition, aspect etc. should be well assessed in regards of the species to be planted, spacing, technique, number of plants required for plantation should be taken by 15th December by the Divisional Forest Officer with consultation of local people, site condition and departmental staff and Forest plantation manual, 1977.

Mega Nursery:

One mega Nursery is being maintained at Sankhabhanga Central Nursery with Poly-house, Seed storage house, Seed treatment yard and watcher shed. About three lakh seedlings can be produced at a time and this nursery can handle the requirement of the nearby ranges by establishing root trainer nursery and mist chamber.

Recommendation:

At mega nursery annual seedling production of one lakh or more shall be arranged for plantation, Farm Forestry and supply to public on cost plus basis throughout the year. To modernize the facilities and encourage clonally propagation, a clonal orchard may be developed at different sites of the Range. To felicitate vegetative propagation a mist chamber, Sprinkler irrigation system may be developed in a phased manner with root trainers.

Intermediate Revision

Intermediate revision of the plan is not expected during the implementation of this working plan. If required the action may be taken accordingly.

5. CHAPTER – V

WILDLIFE (OVERLAPPING) WORKING CIRCLE

5.1 Introduction

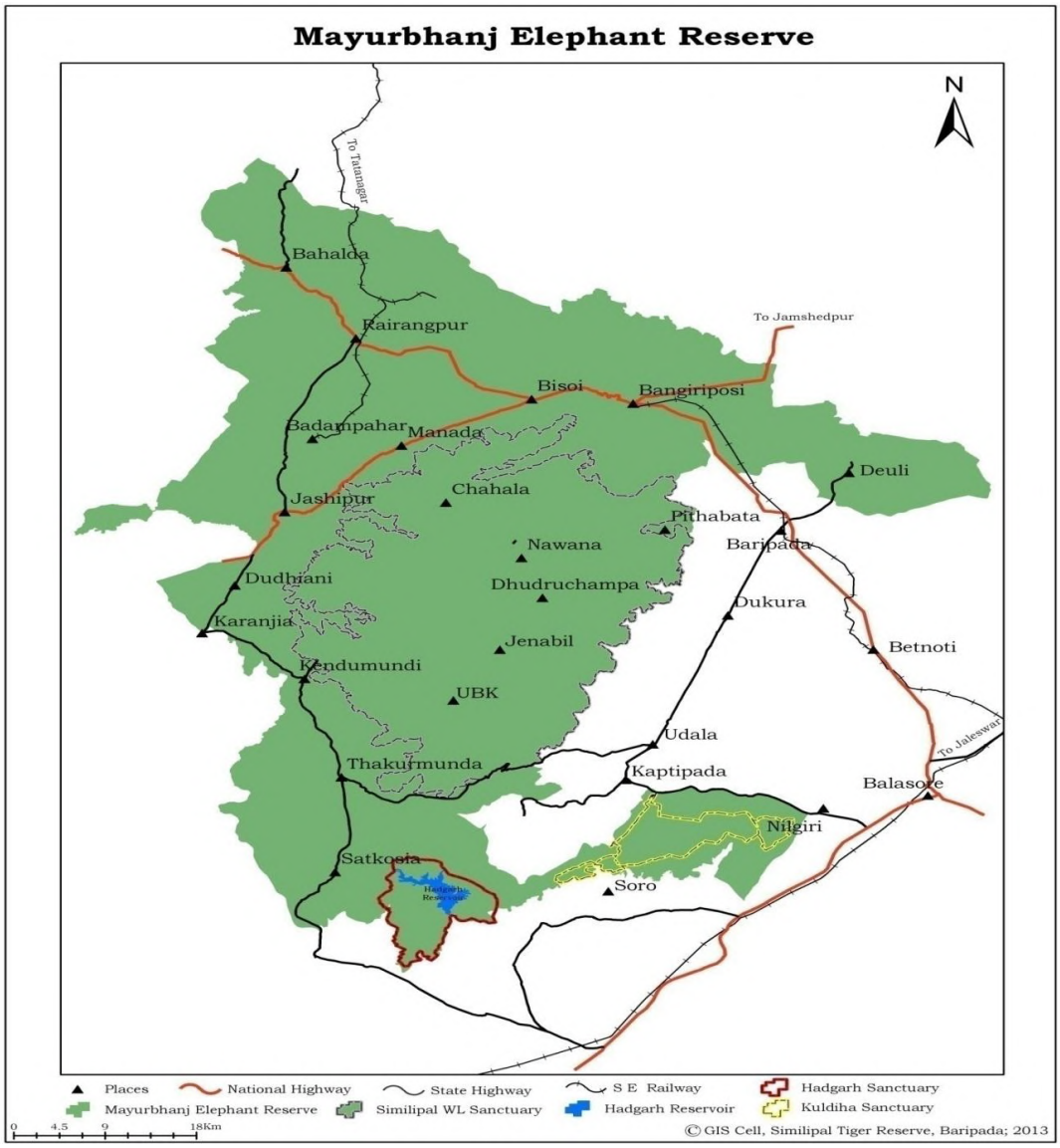
The wild life is an integral part of the forests. Our first Prime Minister, Pandit Jawaharlal Nehru, wrote that "*Wild Life? That is how we refer to the magnificent animals of our jungles and to the beautiful birds that brighten our lives. I wonder sometimes what these animals and birds think of man and how they would describe him if they had the capacity to do so. I rather doubt if their description would be very complimentary to man. In spite of our culture and civilization, in many ways man continues to be not only wild but more dangerous than any of the so-called wild animals. We must try to preserve whatever is left of our forests and the wild life that inhibits them*"

Though there is general decline in the forests and the wild life habitat, the Division continues to have rich wild life resources. In fact, the National Forest Policy, 1988 has emphasized the need to conserve the Wild Life and their habitat. As we know, the term „wildlife" embraces all forms that are wild, and is therefore any plant or animal which is neither domesticated nor reared/ cultivated; and inhabits a wild landscape which may include even land, wetlands and sea. Therefore, for protection of the existing wild life; to improve their habitat and to conserve bio-diversity, this overlapping Working Circle that extends to 29108.96 ha over 100 Forest blocks has been constituted**.**

This working circle includes Forest block areas with canopy density above 0.3 and is the house of wildlives / is visited by wild animals in Baripada Forest Division.

From wildlife management point of view, much emphasis has to be given for this over-lapping working circle. The management interventions are to be concentrated on improvement of habitat and conservation of bio-diversity. There are two nos. of notified Elephant corridors, i.e. one in Deuli-Suliapada and other in Kaptipada Range. Inter-State migration of Elephant is a regular feature of this Division. It needs a long term action plan to address the challenges faced by the Division. Baripada Forest

Division is a major stakeholder of the Mayurbhanj Elephant reserve. There are quite good number of Elephants in this forest Division. Their conservation is the primary responsibility of the Division administration.



5.2 General Constitution of Working Circle

Wildlife Overlapping Working Circle has been constituted by adding all the areas allotted to Improvement Working Circle and Rehabilitation Working Circle. Notto RF is coming under Buffer Area of Similipal Tiger Reserve and is rich in Wildlife. Migratory elephants move inside forest areas & non-forest areas but make camps at some locations within forest areas which have been included under Wildlife Overlapping Working Circle.

Range	No. of Reserve Forest Block	No. of Proposed Reserve Forest Block	No. of Protected Forest Block	No. of Village Forest Block	Area allotted to WL (O) WC in Ha
Pithabata	7	1	--	--	1911.00
Dukura	7	8	--	--	1450.00
R.G. Pur	11	--	--	--	2125.00
Udala	22	--	--	--	2250.00
Betnoti	21	2	-	--	6231.00
Deuli	5	3	--	--	5882.00
Kaptipada	3	--	1	1	8290.96
Bangiriposi	2	1	5	--	979.00
Division Total	**79**	**15**	**6**	**1**	**29108.96**

5.3 General Characteristics of Vegetation

The biodiversity of flora and fauna has been adversely affected due to considerable degradation of forests over the years. No systematic biodiversity survey has been made in the past, barring some qualitative observations. Formal floral-diversity surveys have been taken for the first time in order to provide a bench mark for future comparisons. These sample flora-diversity surveys, though not very comprehensive, are a modest beginning.This Division is frequently visited by wild elephants & elephants use to eat the vegetation available in forest blocks

As per study of Mohapatra *et. al (2013)* following fodder species are consumed by Asian elephants in Baripada Forest Division areas both inside forest & outside.

Order	Plant species	Local name (Oriya)	Parts eaten
Ranales	*Polyathia longifolia*	Debadaru (Tree)	Leaf
Theals	*Shorea robusta*	Sal (Tree)	Leaf bark Root
Parietales	*Crateva magna*	Varuna (Tree)	Leaf
Malvales	*Bombax ceiba*	Simile (Tree)	Leaf
	Grewia helicterifolia *Kydia calycina*	Sonaranga (Tree) Kapasia (Tree)	Leaf Leaf
	Helicteres isora	Murmuika (Tree)	Leaf
	Pterospermum canesces *Sterculia villosa*	M champa (Shrub) Kodal (Tree)	Leaf Bark Leaf
Euphorbiales	*Bridelia retusa*	Kasi (Tree)	Leaf
	Emblica officinalis	Anala (Tree)	Leaf
	Mallotus philippinensis	Kamalagundi (tree)	Leaf
Urticales	*Trewia nudiflora* *Celtis cinnamomea*	Panigambhari (Tree) Parbatakaian (Tree)	Bark Leaf
	Artocarpus heterophyllus	Panasa (Tree)	Leaf, Bark,Fruit
	Ficus benghalensis	Bara (Tree)	Leaf, Bark

Order	Plant species	Local name (Oriya)	Parts eaten
	Ficus glomerata	Dimiri(Shrubs)	Leaf, Fruit
	Ficus religiosa *Ficus retusa*	Aswatha (Tree) Jari (Tree)	Leaf, Twigs
	Streblus asper	Sahada (Shrub)	Leaf, Twigs
Geraniales	*Hugonia mystax*	Chuliginka (Climber)	Leaf, Twigs
	Aegle marmelos	Bela(Tree)	Fruit
	Atalantia monophylla *Limonia acidissima*	Narguni (Tree) Kaitha (Tree)	Leaf Bark, Twigs
	Glycosmisconmis pentaphylla	Chauldhua (Shrubs)	Leaf
Sapindales	*Mangifera indica* *Schleichera oleasa*	Amba (Tree) Kusuma (Tree)	Fruit Leaf
Rhamnales	*Zizyphus mauritiana*	Barkoli (Shrubs)	Leaf
	Zizyphus oenoplia *Zizyphus xylopyrus*	Kontaklia (Shrubs) Ghonto (Shrubs)	Leaf Leaf
Santalales	*Cissus quadrangularis* *Loranthus spp.*	Hadabhanga (Shrubs) Malanga (Shrubs)	Tree Tree
	Bauhinia racemosa	Ambalota (Climber)	Leaf
	Bauchinia vahlii *Tamarindus indica*	Siali (Climber) Tentuli (Tree)	Leaf, Bark, Twigs Leaf, Fruit.
	Cassia fistula *Acacia ferruginiea*	Sunari (Tree) Kantachira (Climber)	Leaf, Twigs Leaf
	Acacia leucophloea	Gohera (Tree)	Leaf
	Acacia torta *Dichrostachys cineriea*	Dontari (Herb) Vurtuli (Shrubs)	Leaf Leaf
	Mimosa pudica *Albizzia procers*	Lajakuli (Shrubs) Siris (Tree)	Leaf Leaf, Twigs
	Butea monosperma	Palasa (tree)	Leaf, Tree
	Pterocarpus santalinus *Pterocarpus marsupium*	Kanchana (Tree) Pia sal (Tree)	Root Leaf
Mytrtales	*Dalbergia sissoo* *Anogeissus latifolia* *Terminalia chebula*	Sisoo (Tree)Dhaura (Shrubs) Harida (Tree)	LeafLeaf Leaf
	Terminalia belerica	Behada (Tree)	Leaf
	Syzygium cumini *Careya aroborea*	Jamu (Tree) Kumbhi (Tree)	Leaf Leaf Fruit bark
Ebenales	*Lagerstroemia parviflora* *Madhuca indica*	Sidha (Tree) Mahula (Tree)	Bark Fruit Leaf
	Manilkara hexandra	Khirkoli (Shrubs)	Leaf
	Mimusops elengi *Diospyros melanonxylon*	Baula (Tree) Kendu (Tree)	Leaf Leaf, Root Fruit
Oleales	*Carissa spinarum*	Dudhkoli (Shrubs)	Leaf
	Strychnos nuxvomca	Kochila (Tree)	Leaf
Polemoniales	*Ipomoea spp.*	Amari (Shrub)	Whole plant
Rubiales	*Randia dumetorum*	Potuaphala (Shrubs)	Leaf
Spadicifloreae	*Typha angustata*	Hatia ghasa (Herbs) (Monocot)	Leaf, Root
	Calamus spp.	Beta (Herbs) (Monocot)	Leaf, Root

Order	Plant species	Local name (Oriya)	Parts eaten
Glumielopeae	*Brachiaria spp.*	Ghasa (Herbs) (Monocot)	Leaf, Root
	Cynodon dactylon *Oryza sativa*	Dubaghas (Herbs) (Monocot) Dhana (Herbs) (Monocot)	Leaf, Root Leaf, root Fruit
	Zea mays	Maka (Herbs) (Monocot)	Leaf, Root Fruit.
Liliflorae	*Dioscorea spp.* *Asparagus racemosus*	Bana alu (Climber) (Monocot) Satabari (Climber) (Monocot)	Root Leaf Root
	Smilax zeylanica	Muturi (Climber)	Leaf
Scitamineae	*Musa paradisiaca*	Kadali (Herbs) (Monocot)	Tree, Fruit
(Source: Journal of Environmental Biology, Vol. 34, 87-92, January 2013,)			

5.4 Felling Series, Cutting Sections and JFM Areas

No felling is prescribed in Wildlife Overlapping Working Circle.

5.5 Blocks, Compartments and JFM Areas

5.5.1 Allotment of forest blocks

Forest block wise area allotted to wildlife (over lapping) circle is given below.

Name of Range	Name of RF/ PRF /PF/ VF		Forest Block Area in ha.	Plan Area after Forest Diversion	Wildlife (O) WC
PITHABATA	1	Baldiha R.F.	110.130	109.130	70.130
	2	Bhagabat Chandrapur R.F.	806.280	795.480	661.280
	3	Budhikhamari R.F.	863.100	856.620	525.670
	4	Dungurusahi R.F.	10.950	10.950	10.950
	5	Hatikote R.F.	556.840	553.720	356.840
	6	Lulung-Purunapani R.F.	223.310	223.310	133.310
	7	Manchabandha R.F.	1020.920	1013.960	95.790
	8	Asanabani P.R.F.	57.030	57.030	57.030
		Sub-total	**3648.560**	**3620.200**	**1911.000**
DUKURA	9	Chakradharpur R.F.	141.310	141.310	71.310
	10	Deulia R.F.	241.670	241.670	37.570
	11	Gojodi-Damodarpur R.F.	33.020	33.020	33.020
	12	Itamundia R.F.	111.370	111.370	81.370
	13	Kanpura R.F.	533.850	532.960	155.150
	14	Belpal R.F.	110.600	110.600	30.600
	15	Dukura R.F.	162.750	162.750	122.750
	16	Nigirdha (A) P.R.F.	15.750	15.750	15.750
	17	Nigirdha (B) P.R.F.	37.120	37.120	37.120
	18	Kukurbhuka (1)P.R.F.	122.820	122.820	122.820
	19	Kukurbhuka (2)P.R.F.	124.580	124.580	124.580
	20	Sanamakabadi P.R.F.	129.000	129.000	129.000
	21	Budhabalang (A) P.R.F.	46.560	46.560	46.560
	22	Budhabalang (B) P.R.F.	76.000	76.000	76.000
	23	Gopinathpur P.R.F.	566.400	566.400	366.400
		Sub-total	**2452.800**	**2451.910**	**1450.000**

Name of Range	Name of RF/ PRF /PF/ VF		Forest Block Area in ha.	Plan Area after Forest Diversion	Wildlife (O) WC
RASGOBINDPUR	24	Amarda R.F.	1512.200	1511.552	641.009
	25	Betnasia R.F.	110.230	110.230	109.883
	26	Baghajharan R.F.	147.950	145.550	63.583
	27	Chitrada R.F.	422.640	409.840	169.004
	28	Moroda R.F.	1479.140	1464.290	538.555
	29	Nalagaja R.F.	260.290	260.290	210.290
	30	Nichuapada R.F.	52.280	52.280	12.200
	31	Nuhajhalia R.F.	50.500	50.500	33.103
	32	Nunchatia R.F.	148.270	148.270	90.270
	33	Sarumula R.F.	330.220	329.840	107.000
	34	Sukhilakhali R.F.	231.310	230.560	150.103
		Sub-total	**4745.030**	**4713.202**	**2125.000**
UDALA	35	Anantasahi R.F.	7.120	7.120	7.120
	36	Belakuti R.F.	223.380	223.380	93.380
	37	Bhandagaon R.F.	122.210	122.210	122.210
	38	Charada R.F.	7.120	7.120	7.120
	39	Dhaundia R.F.	524.790	523.990	369.850
	40	Dimgadia R.F.	6.960	6.960	6.960
	41	Dugdha R.F.	35.290	35.290	17.290
	42	Ghantasila R.F.	5.340	5.340	5.340
	43	Jaypur R.F.	27.800	27.800	27.800
	44	Khunta R.F.	427.990	423.400	259.990
	45	Kuamara R.F.	229.530	229.530	139.530
	46	Kuriakhunta R.F.	7.450	7.450	109.180
	47	Marsigaon R.F.	263.320	263.320	93.320
	48	Nahara R.F.	161.870	161.870	101.870
	49	Nuapada R.F.	324.380	324.380	182.380
	50	Mundhakata R.F.	20.400	20.340	20.340
	51	Phuljhari R.F.	315.650	315.650	95.650
	52	Purunabaripada R.F.	25.850	25.850	25.850
	53	Sialia R.F.	34.320	34.320	34.320
	54	Sunduria R.F.	2.430	2.430	102.430
	55	Sirathali R.F.	74.140	74.140	52.140
	56	Udala R.F.	533.930	533.930	375.930
		Sub-total	**3381.270**	**3375.820**	**2250.000**
BETNOTI	57	Asanbani R.F.	810.170	804.670	506.230
	58	Badampur R.F.	952.290	952.251	287.290
	59	Bartana R.F.	194.890	194.890	94.890
	60	Chhatnna R.F.	393.510	391.460	143.510
	61	Dalki R.F.	827.970	827.970	333.000
	62	Dumapada R.F.	224.350	219.550	219.550
	63	Durgapur R.F.	961.840	957.540	661.840
	64	Gandigadha R.F.	1085.180	1066.381	565.664
	65	Hatijhuri R.F.	109.110	109.110	59.110
	66	Hempur R.F.	290.790	290.790	34.949
	67	Jagannathpur R.F.	452.590	451.240	451.240
	68	Jugal R.F.	305.290	304.790	255.290
	69	Khiripada R.F.	420.540	419.960	320.540
	70	Krushnachandrapur R.F.	1272.070	1252.910	647.054
	71	Kochilakhunta R.F.	259.320	259.320	159.320
	72	Mamtapal R.F.	222.730	222.730	172.730
	73	Merda R.F.	495.820	495.820	395.820
	74	Phuljhari R.F.	217.420	217.420	117.420
	75	Raikama R.F.	191.340	181.340	181.340
	76	Bharadasole R.F.	50.670	50.670	35.623
	77	Bhalukchua R.F.	199.430	199.430	149.430
	78	Kochilakhunta P.R.F.	99.000	99.000	99.000
	79	Bhalia P.R.F.	340.160	340.160	340.160
		Sub-total	**10376.480**	**10309.402**	**6231.000**

Name of Range	Name of RF/ PRF /PF/ VF		Forest Block Area in ha.	Plan Area after Forest Diversion	Wildlife (O) WC
DEULI	80	Andhari R.F.	731.630	731.630	185.630
	81	Chandua R.F.	3073.120	3064.280	1471.880
	82	Deuli R.F.	2379.260	2378.060	1244.380
	83	Kuliana R.F.	1203.680	1198.880	771.680
	84	Suliapada R.F.	2889.560	2881.560	1439.560
	85	Badsole P.R.F.	227.030	217.030	217.030
	86	Tangasole P.R.F.	236.800	231.680	231.680
	87	Kaliasole P.R.F.	320.160	320.160	320.160
		Sub-total	**11061.240**	**11023.280**	**5882.000**
KAPTIPADA	88	Asanabani R.F.	262.560	262.560	262.560
	89	Nachhipur R.F.	229.000	229.000	229.000
	90	Notto R.F.	7707.080	7707.080	7707.080
	91	Sukhuapata Hill P.F.	92.320	91.990	91.990
	92	Kaladahi V.F.	1.500	1.500	0.330
		Sub-total	**8292.460**	**8292.130**	**8290.96**
BANGIRIPOSI	93	Rangahudi R.F.	86.670	86.670	60.000
	94	Thakurani R.F.	497.020	497.020	226.050
	95	Juha P.R.F.	86.040	86.040	86.040
	96	Pimpudijharan P.F.	60.970	60.970	60.970
	97	Kapadiha P.F.	10.730	10.730	10.730
	98	Ambadiha P.F.	14.030	14.030	14.030
	99	Hill Block-1 P.F.	712.750	712.750	412.750
	100	Maheshpur P.F.	98.430	98.430	98.430
		Sub-total	**1566.640**	**1566.640**	**969.000**
Grand Total		**100 Forest Blocks**	***45524.480***	***45352.584***	***29108.96***

5.6 Special Objective of Management

- To improve, maintain and preserve the environment around Similipal Sanctuary areas. To conserve, protect and improve wild life habitat with special emphasis on elephant.
- To conserve the diversity and integrity of biotic communities of plants and animals within natural eco-system and safeguard the genetic diversity of species on which their continuing evolution depend.
- In consistent with the above objectives to carry out ecological, scientific, cultural, economic and environmental research, particularly base line studies, both within and adjacent to these Forest areas.
- To promote wild life in general and endangered species in particular.
- To create awareness among the local people regarding the necessity to conserve and protect the wild life and their habitat.
- To conserve and develop important wild life habitat for the purpose of eco-tourism.

5.6.1 Analysis of Crop

The vegetation of this working circle are the sal dominated forest. The species which occur in the area of this working circle are Sal, Karada, Amla, Jamun, Sunari, Dhatki, Palas, Gohira, Dhaura, Kendu, Ban-khajuri, Asan, Bela and Gambhar. At places Duba grass occurs in moist patches but generally floors remain exposed. These exposed patches look green with grasses and weeds during rainy season but look barren and dry during winter and summer. Sample vegetation under rehabilitation working circle is presented below, showing girth class, minimum DBH and maximum DBH.

The wild life habitat continues to be degraded leading to even frequent man-animal conflict due to the following reasons:-

- Increasing incidences of encroachment and shifting cultivation in these forests
- Increasing demand for fuel wood, timber, fodder and other non-timber forest products
- Mass-hunting which is associated with local festivals and rituals like "Chaitra-Parba"
- Poaching for sport and meat
- Inadequacy of the forest staff to combat poaching
- Lack of awareness
- Inadequate works on improvement of wildlife habitat

5.6.2 Silvicultural System

SPECIES STRUCTURE

Distribution of Wildlife & Habitat Systems with Relation to Vegetative Cover.

- **Autotrophs:** Most of the vegetation in Notto forest block of the Division support almost dry miscellaneous types of forest. The top canopy includes species like *Shorea robusta; Pterocarpus marsupium; Terminalia tomantosa; Bombax ceiba; Mitragyna parvifolia; Anogeissus latifolia and Gmelina arborea* etc. The middle storey consists of *Bridellia retusa; Dalbergia sissoo; Desmodium oojeinensis; Lannea coromandelica; Lagerstroemia parviflora; Buchanania lanzan; Aegle marmelos; Terminalia bellirica; Terminalia chebula; Semecarpus anacardium; Sygygium cumini; Diospyros melanoxylon; Schleichera oleosa; Madhuca indica; Cleistanthus collinus; Sterculia urens;*

Dellenia pentagyna; Emblica officinalis; Tamarindus indica; Anogeissus accuminata; Mangifera indica; Bauhinia variegata; Mallotus philippensis and *Pongamia pinnata* etc. Undergrowth like *Woodfordia fructicosa; Holarrhena antidysenterica; Indigofera pulchela; Andrographis paniculata; Eupatorium odoratum and Clerodendron infortunatum* etc are also noticed in this forest type.

Heterotrophs: The species structure of major communities is as follows:-

- Primary heterotrophs are Sambar (*Cervus unicolor*); Cheetal (*Axis axis*); Barking deer (*Muntiacus muntjak*); Pangolin (*Manis crassicaudata*); Wild boar (*Sus scrofa*); Mouse deer (*Tragullus memina*) etc.
- Secondary heterotrophs are Tiger (*Panthera tigris*); Leopard (*Panthera pardus*); Jungle cat (*Felis chaus*); Civet cat (*Vivericula indica*); Leopard cat (*Felis bengalensis*) etc
- Scavengers and other animals are Hyaena (*Hyaena hyaena*); Jackal (Ca*nis aureus*); Wild dog (*Cuon alpinus*); Sloth bear (*Melursus ursinus*); Mongoose (*Herpestes edwardsii*); large Indian squirrel (*Ratufa indica*) and Otters (*Lutrogale perspiciclata*) etc
- The primates are represented by the common Langur (*Presbytis entellus*) and the common Pati (*Macaca mullata*).
- Amongst the snakes, Dhamana (*Zamaris nucosus*), Cobra (*Naja naja*), Viper (*Vipera russelii*) and the Krait (*Bungarus candidus*) and Python (*Python molurus*) found all over the Division.
- The avifauna includes peafowl, red jungle fowl, common quail, green pigeon, the imperial pigeon, doves, the hill mynas, the red-vented bulbuls, the golden back and the pied wood-peckers, the koels, the crow pheasants, large Indian parakeets, the common king fisher, the common horn-bills, the common Indian night jar, the screech owl, the great horned owl, the swifts, pariah kite, the eagles, bush quail (Perdicula asiatica), the grey patridge, the cattle egret, storks, pond herons, the jungle crow, pipits and wagtails etc.

❖ **Major Mammals of Baripada Forest Division:**

IUCN Status: EN—Endangered, VU—Vulnerable, NT—Near Threatened, LC—Least Concern, DD—Data Deficient.

Scientific name	Common name	IUCN status	WPA, 1972 schedule	CITES appendix
ORDER PROBOSCIDEA				
I. Family Elephantidae (Elephants)				
Elephas maximus Linnaeus, 1758	Asian Elephant	EN	I	I
ORDER PRIMATES				
Family Cercopithecidae (Old world monkeys)				
Macaca mulatta (Zimmermann, 1780)	Rhesus Macaque	LC	II	II
Semnopithecus entellus (Dufresne, 1797)	Northern Plains Gray Langur	LC	II	I
ORDER RODENTIA				
Family Sciuridae (Squirrels)				
Funambulus palmarum (Linnaeus, 1766)	Three-striped Palm Squirrel	LC	Not listed	Not listed
Funambulus pennantii Wroughton, 1905	Northern Palm Squirrel	LC	IV	Not listed
Petaurista philippensis (Elliot, 1839)	Indian Giant Flying Squirrel	LC	II	Not listed
Ratufa indica (Erxleben, 1777)	Indian Giant Squirrel	LC	II	II
Family Hystricidae (Porcupines)				
Hystrix indica Kerr, 1792	Indian Crested Porcupine	LC	IV	Not listed
Family Muridae (Rats and Mice)				
Bandicota bengalensis (Gray, 1835)	Lesser Bandicoot Rat	LC	V	Not listed
Bandicota indica (Bechstein, 1800)	Greater Bandicoot Rat	LC	V	Not listed
Golunda ellioti Gray, 1837	Indian Bush-rat	LC	V	Not listed
Madromys blanfordi (Thomas, 1881)	White-tailed Wood Rat	LC	V	Not listed
Mus booduga (Gray, 1837)	Common Indian Field Mouse	LC	V	Not listed
Mus musculus Linnaeus, 1758	House Mouse	LC	V	Not listed
Rattus norvegicus (Berkenhout, 1769)	Brown Rat	LC	V	Not listed

Scientific name	Common name	IUCN status	WPA, 1972 schedule	CITES appendix
Rattus rattus (Linnaeus, 1758)	House Rat	LC	V	Not listed
ORDER LAGOMORPHA				
Family Leporidae (Hares)				
Lepus nigricollis F. Cuvier, 1823	Black-naped Hare	LC	IV	Not listed
ORDER SORICOMORPHA				
Family Soricidae (Shrews)				
Suncus etruscus (Savi, 1822)	Savi‟s Pygmy Shrew	LC	Not listed	Not listed
Suncus murinus Linnaeus, 1766	House Shrew	LC	V	Not listed
ORDER CHIROPTERA				
Cynopterus sphinx (Vahl, 1797)	Greater Short-nosed Fruit Bat	LC	V	Not listed
Pteropus giganteus (Brünnich, 1782)	Indian Flying Fox	LC	V	II
Rousettus leschenaultii	Leschenault‟s Rousette	LC	V	Not listed
Family Vespertilionidae (Evening Bats)				
Scotophilus heathii (Horsfield, 1831)	Greater Asiatic Yellow House Bat	LC	Not listed	Not listed
Scotophilus kuhlii Leach, 1821	Lesser Asiatic Yellow House Bat	LC	Not listed	Not listed
Scotozous dormeri Dobson, 1875	Dormer‟s Pipistrelle	LC	Not listed	Not listed
ORDER PHOLIDOTA				
Family Manidae (Pangolins)				
Manis crassicaudata E. Geoffroy, 1803	Indian Pangolin	EN	I	II
ORDER CARNIVORA				
Family Canidae (Dogs)				
Canis aureus Linnaeus, 1758	Golden Jackal	LC	II	III
Vulpes bengalensis (Shaw, 1800)	Bengal Fox	LC	II	III
Family Felidae (Cats)				
Felis chaus Schreber, 1777	Jungle Cat	LC	II	II
Prionailurus bengalensis (Kerr, 1792)	Leopard Cat	LC	I	I
Prionailurus viverrinus (Bennett, 1833)	Fishing Cat	VU	I	II
Panthera pardus (Linnaeus, 1758)	Leopard	VU	I	I
Panthera tigris (Linnaeus, 1758)	Tiger	EN	I	I
Family Hyaenidae (Hyaenas)				

Scientific name	Common name	IUCN status	WPA, 1972 schedule	CITES appendix
Hyaena hyaena (Linnaeus, 1758)	Striped Hyaena	NT	III	III
Family Ursidae (Bears)				
Melursus ursinus (Shaw, 1791)	Sloth Bear	VU	I	I
. Family Mustelidae (Otters and Honey Badger)				
.Family Viverridae (Civets and Palm Civets)				
Paradoxurus hermaphroditus (Pallas, 1777)	Common Palm Civet	LC	II	III
Viverricula indica (E. Geoffroy Saint-Hilaire, 1803)	Small Indian Civet	LC	II	III
Family Herpestidae (Mongooses)				
Herpestes auropunctatus (Hodgson, 1836)	Small Indian Mongoose	LC	II	III
Herpestes edwardsii (E. Geoffroy Saint-Hilaire, 1818)	Indian Grey Mongoose	LC	II	III
Axis axis (Erxleben, 1777)	Spotted Deer	LC	III	Not listed
Rusa unicolor (Kerr, 1792)	Sambar	VU	III	Not listed
Family Tragulidae (Mouse Deer)				
Moschiola indica (Gray, 1852)	Gurandi , Mouse Deer	LC	I	Not listed
Family Suidae (Wild Pigs)				
Sus scrofa Linnaeus, 1758	Wild Boar	LC	III	Not listed
Source- Biswajeet Panda, Dept. of Bio Sc & Biotech. Fakir Mohan University, Baleshwar				

Wildlife Crime and Poaching

- As wildlife is everywhere so also is the crime against it. This is in fact man‟s oldest crime. It has been appropriately observed that "*Nature is said to be red in tooth and claw and life is precarious in the forest. The strong prey on the weak and the weak develop subterfuges and camouflages to protect themselves. But this eternal way of the forest is due principally to the quest for food*." However, man kills the wildlife just for his fun & fancy and quick monetary gains. It has been estimated that illegal trade worldwide in wildlife products is to the extent of about $25 billion annually.
- Wildlife crime may comprise of killing; capture; possession; transport or trade of live animals and plants or their parts, products & derivatives. It also

includes incidental killing of wildlife; and damaging or destroying its habitat besides the mass-hunting which is associated with local festivals and rituals like “Makara Parbo and Chaitra Parba” in the Division as a customary practice. In fact, this crime is one of the fastest growing crimes in the world and is next to only the narcotic trade. A wildlife criminal may be a villager or a poor tribal or he may be a smuggler operating from towns/cities, depending on the level at which he is operating in the trade link starting from poaching within a locality to cross-border smuggling.

- Methods of poaching the wild animals are many and vary from place to place depending upon even the type of animal being poached. Shooting is the common method for all kinds of mammals and some birds. However, poisoning big cats and large herbivores, trapping and snaring mammals like deer & some reptiles, and netting small mammals, small birds & butterflies are frequently resorted to. Stick and glue for fast flying birds; and taking young hatchlings from birds‟ nest holes on trees are also commonly practiced. Digging out of snakes; porcupines; lizards etc from underground pits is commonly seen.
- Poaching of herbivores which is reportedly quite frequent is mainly for meat and/or their trophy and includes deer; sambhar; wild boar; mouse deer; hare etc. During summer and in paddy ripening times in November/December, these animals generally stray into the human habitation and are shot dead by the villagers. These animals are also killed by laying traps & snares on the jungle paths. Wire nooses for hare are a common sight in most of the villages near Similipal. Tribals use bows, arrows and guns to kill deer and sambhar. They are expert trackers and go on following it for two to three days accompanied with their local breed trained hunting dogs and when the tired animal falls down; it is shot by arrows/guns.

Many cases of poaching go undetected for variety of reasons. In fact, most of the poaching of birds and herbivores goes either undetected or not reported. However, organized poaching for trade is seen for pangolin. Capture of Parakeet (Rose ringed & Alaxandrine) in the Division has been observed.

Wildlife Crime and Poaching:

Occasionally Elephant and other animals of the cat family becomes victim of poachers. Sometimes snakes are captured for smuggling outside state for poison and skin. Different types of snares used to trap animals are locally prepared with the help of rope, plastic rope, wire, stick and glue.

Anti-Poaching Squad:

Each squad should consist of 6 (six) local youth headed by a Forester and assisted by 1 (one) Forest Guard along with one vehicle. 2 (two) Trackers/ Gaja-Bandhu per each herd of Elephants shall also be engaged. The Range Officer shall be entrusted for engagement of the local youth after assessing their aptitude and ability as well as verifying their antecedent. The number of squads and Elephant trackers to be engaged in different range is left to the wisdom of Divisional Forest Officer.

5.6.3 Rotation Period

Rotation period for monitoring wildlife activities will be from 1st October to 30th September of following year in Wildlife Overlapping Working Circle.

5.6.4 Harvestable Diameters

No harvest is prescribed in Wildlife Overlapping Working Circle.

5.6.5 Reducing Factors and Reduced Areas

The reduced area under Wildlife Overlapping Working Circle in comparision to last working plan is because of judicious allotment of area, used by wild animals.

5.6.6 Felling Cycle

No felling is prescribed in Wildlife Overlapping Working Circle

5.6.7 Division into Periods and allotment to PB

No periodic block is prescribed in Wildlife Overlapping Working Circle**.**

5.6.8 Calculation of Yield

No harvest is prescribed in Wildlife Overlapping Working Circle. So there is no yield.

5.6.9 Table of Felling

No felling is prescribed in Wildlife Overlapping Working Circle

5.6.10 Method of Execution

Development of habitat: Habitat shall be developed with the cooperation of local people using sound silvicultural techniques. The aim should be to provide more food, water and shelter to the wild life so as to even reduce the man-animal conflict.Special habitats like snags, sang recruits, down wood, isolated large old trees, trees with fluting boles, buttresses, lianas, some significant species of fruit bearing trees and shrubs being originated biologically provide habitat functions in the forests. Apart from the usual habitat of good forest cover, pasture and water source, some special habitats consists of burrows and crevices along with the accumulated rock pieces at the foothills. Cracks in rocky patches on steep slopes provide good habitat for reptiles like snakes, lizards etc. Some geo-morphological structures like caves, overhangs, dens, cliffs, ledges etc. are unique habitats for some wild life.

Improving the cover: Providing adequate forest cover to different wild animals within their habitat is necessary to provide shelter and protection of wild animals from weather, predators and enemies. Keeping in view this aspect, it has been prescribed in Improvement Working Circle not to fell even those mature trees, which create a lasting gap in the canopy. Retention of few damaged hollow trees per hectare will provide shelter to fauna like owls etc. It is also prescribed not to fell trees near water holes, wallows, and saltlicks to maintain cover. In case of rehabilitation working circle it has been prescribed to go for mixed plantations instead of pure plantations to create ground flora and middle storey to provide cover for different types of wild animals. Tree cover around the stream, water holes and salt licks shall also be maintained and improved.

Improving availability of Food: The adequacy of food in a particular wild life habitat depends upon the quality and quantity of food produced and the animal population living therein. Keeping in view this aspect of wild life management, the exploitable diameter of various species has been kept on higher side and the percentage of removal of exploitable size trees have been properly regulated and safe guarded. Similarly under various subsidiary silvicultural operations like opening of canopy, thinning of congested patches, improving the general availability of food for wild animals shall always be taken into consideration. For these reasons and also, for their utility as NTFPs, the fruit bearing trees have been prohibited from felling under

the respective working circles. Further, the species as discussed in the following paragraphs will be part of any plantation taken in forest areas.

- Food availability in a habitat changes with the season. Herbivores depend on plant materials like leaves, barks, twigs, flowers, fruits and seeds of species like *Mallotus philippinensis, Dendrocalamus strictus, Haldina cordifolia, Albizzia lebbek, Aegle marmelos, Cassia fistula, Ficus bengalensis, Ougeinia ougenensis, Shorea robusta, Syzygium cumini, Terminalia alata, Terminalia belerica, Zizyphus mauritiana, Bombax ceiba* etc.
- Deer, Monkey, Langur, Rats and Hare feed on wild fruits of plants like Ficus species, *Terminalia belerica, Buchanania lanzan, Aegle marmelos, Syzygium cumini, Emblica officinalis, Zizyphus mauritiana, Diospyros melanoxylon, Grewia hirsute* etc. These animals help in dispersal of fruits and seeds in the forests.
- Among the plant materials, grasses constitute major portion of the herbivores" food. Grasses, which are highly preferred and consumed by herbivores, should be raised in the wild life concentrated areas to meet the food requirement of herbivores.

Development and Improvement of Wildlife Habitat

The Wildlife Conservation efforts got a tremendous boost through the provision of Wild Life (Protection) Act, 1972. The creation of schedule amendment and stringent provision for safeguarding these animals resulted in the improvement of their population. Reckless killing of wildlife in general was reduced and many rare and endangered species were saved from extinction. The illegal trade in wild animals was brought under control and watch.

i) Integrated development

Adequate planning should be taken up for socio-economic development of local communities. However such planning in forest and the area adjoining to it should be in consistent with wildlife management.

Following precaution measures are suggested:-

a) Leasing out Revenue Forest / DLC Forest for agriculture purpose to land less persons / Ex-service men should be prohibited.

b) Collection of NTFP without resorting to fire or any damage to tree should be taught to the villagers through training.
c) Grazing of cattle in wildlife habitats should be controlled in order to reduce grazing pressure on the forests.
d) Illegal removal of forest produce, eaten by wild animals should be strictly prohibited.

Water availability

Generally, there is no dearth of water from July to December. However, scarcity is felt from January to June, when most of the nallahs and streams dry up. Hence, it is necessary to create waterholes and check dams on the higher slopes across nallahs to improve water availability during summer.

It is proposed to provide adequate protection of water holes and creation of check dams on precipitous and higher slopes along nalas, streams which will provide drinking water to wild animals during scarcity period of summer.

Natural Salt licks

Natural salt licks mostly on nala side and in foot hills throughout the forest area and other area of the Division should be identified and shown on wild life map.

Improvement of Wildlife Habitat

The habitat improvements could be achieved by adopting following measures:-

a) No felling of dead, green diseased trees in the area supporting habitats of wild animals.
b) No removal of hollow trees.
c) Enrichment planting of favourable species of wild life in blank patches, planting of grasses at suitable places.
d) Encouragement of undergrowth, middle storey and ground flora in Forest blocks coming under this WC.
e) Strict protection of forest area from fires, grazing and illicit felling and illegal poaching.
f) Maximum emphasis on improvement of flora composition and density.
g) In order to maintain prey-predator ratio within the limit, manipulation of herbivorous should be ensured by providing favourable habitat for them.

h) No fruit bearing trees like Harida, Bahada, Amla, Zizyphus species, Ficus spp. should be felled.

i) Artificial nesting facilities for birds like fixing of nesting boxes will be introduced. Stones will not be removed from Forest blocks as they serve as nesting place for Wild lives.

j) Soil and water conservation measures will be taken up. Natural water holes will be repaired.

k) Formation of wildlife protection committee involving the active association of local people and informal village level organizations is necessary to make plan functional. The labour force available in tribal dominated Baripada Forest Division comprising 50% of women should be made active partners in the management of wildlife. The Govt. interventions should also be planned at appropriate level in order to ensure smooth implementation of participatory wildlife management.

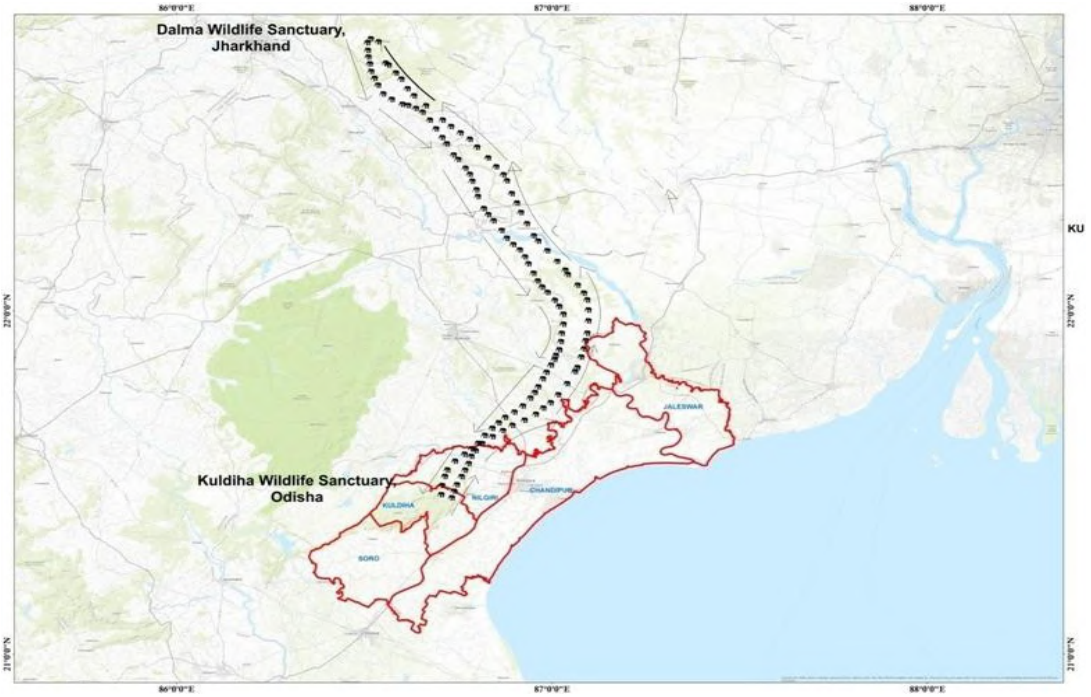
l) Installation of solar power light system at locations where staffs are staying.

Maintenance and Improvement of Corridors

Corridor means a long and narrow strip of land connecting two different habitats. Further the transit path followed by the animals during harvesting period is also called "Corridors". There are two notified elephant corridors in Baripada Forest Division (1) Deuli-Suliapada elephant corridor and (2) Similipal-Hadgarh-Kuldiha elephant corridor. Another elephant corridor is proposed from Suliapada/ Moroda (West Bengal Border) - Phuljhari RF - Kuldiha as this route is regularly visited by wild elephants. It is prosed to extend existing Elephant corridor to Elephant movement areas and improve the present elephant movement areas with water sources and Elephant food vegetation for better Wildlife Management. The Elephant corridor Deuli-Suliapada is regularly used by the migratory wild Elephants coming from Dalma Wildlife sanctuary through West Bengal. This area is very sensitive as far as Elephant depredation is concerned. Since 2010, migration takes place through a new route i.e. West Bengal-Rasgovindpur-Betnoti-Kuldiha, establishing a new corridor. Human-Elephant conflict is very common in those areas, in spite of the best effort put by the department. Considering the gravity of the situation (Human-Wildlife conflict), special plan and programme should be formulated to address such type of issues. Thus, it needs to be included in this Wildlife (O) Working Circle.

Special Objectives of Management of Elephant Corridor

1) To imperatively protect and promote the elephant emphasizing on male elephant.
2) To Lessen Elephant depredation and Human-wildlife conflict to the maximum possible extent.
3) To enrich forest visited by elephant with elephant food plantations and water harvesting structures for drinking water of elephants.
4) To sensitize the people living within elephant corridor to be elephant friendly.
5) To protect the harvested crop from visiting elephants with provision of elephant proof trench islands.



INTER STATE ELEPHANT MIGRATION ROUTE

Control of Human-Wildlife Conflict:

The major conflict is the crop damage by the Elephants during the harvest season is a matter of great concern. The villages usually affected by such menace need to be given special attention for controlling human-wildlife conflict.

The major conflict is the crop and house damage by the Elephants during the harvest season which is a matter of great concern. Human death and Elephant death are to be

prevented at all cost. The villages usually affected by such menace require special attention for controlling measure

Since 2010, Wild Elephant migration takes place through West Bengal-Rasgovindpur-Betnoti-Phuljhari RF-Nilgiri, establishing a new corridor. Human-Elephant conflict is very common in these areas, in spite of the best effort put by the department. Considering the gravity of the situation (Human-Wildlife conflict), special plan and programme should be formulated to address such type of issues. Thus, it needs to be included in this Wildlife (O) Working Circle. The wildlife death and human casualty/ injury have been furnished in **Appendix – XII, XIII(a) and XIII(b)**.

Proposals need to be prescribed for food availability for the wild animals and habitat development. The following specific problem needs to be redressed by specific prescription.

i. Habitat improvement by planting fruit bearing trees, fodder and grasses.
ii. Mitigation of human and wildlife conflict.
iii. 50% of Compassionate payment for human injury and human death by wildlife should be paid immediately within 48 hours.
iv. Creation of water bodies and artificial salt licks.
v. Control of forest fire.
vi. Involvement of community and awareness creation through VSS
vii. Deployment of Anti-poaching squad in the vulnerable areas by providing high power torch to drive Elephant from human habitation.
viii. Energize fencing around selected village to reduce house damage by migratory wild Elephant coming from Jharkhand / West Bengal.

OTHER PRESCRIPTIONS

The distribution of wildlife in different forest blocks shall be studied and their occurrence in different habitats in different seasons shall be estimated. Census of wild animals shall be done every alternate year in consultation with the Chief Wildlife Warden to even assess the prey-predator base; this will even help in further improving the management prescriptions.

Wildlife habitats of endangered species shall be identified and mapped. Presence of natural waterholes, saltlicks and natural meadows shall be estimated and their

adequacy shall be assessed with reference to their population estimates. Watch towers shall be constructed near crucial waterholes and saltlicks to not only facilitate estimation of occurrence of wildlife but also to discourage hunting.

Migration routes for wild animals shall be identified and preventive measures taken to protect and improve those corridors. The areas vulnerable to poaching shall be protected from all sorts of biotic interference.

The fire lines should be cleared and material removed should be dumped in such a way that it facilitates rodents, insects, jungle fowl and other birds to build their nests for safe breeding.

Cattle population in different areas shall be estimated vis-à-vis the carrying capacity of the forests and fodder enhancement measures shall be taken up keeping the requirements of cattle and wildlife in view.

Generating awareness about the wildlife and its relevance to the well-being of mankind needs be given priority through different campaigns. In fact, the local people shall be actively involved in the process of habitat improvement and conservation through the concept of JFM. Local villagers are the treasure of information which can be of immense help even in tracking down the poachers‟ vis-à-vis control of wildlife crime.

5.6.11 Subsidiary Silvicultural Operations Cleaning and Thinning

WILDLIFE PROTECTION MEASURES

The immediate need is to collect and tabulate all available spatio-temporal information about incidence of wildlife crime including identity and modus operandi of the criminals. The second step is to analyze the information and prepare a strategy & action plan while third step is to carry out enforcement. Speed of working is the all-important here.

The staff deployed for anti-poaching operations shall be extremely alert, in good health with high motivation. They should be trained in handling of arms & ammunition and in proper identification of wildlife species & their parts. They should be properly armed and provided with VHF handsets for communication. Satisfactory

maintenance of the fixed and mobile VHF sets is a pre-requisite for efficient operation. The staff involved in the entire operation shall also be conversant with the basics of litigation & court procedure with regard to wildlife crime

Further, the patrolling party/anti-poaching squads must be well acquainted with the entire terrain. Patrolling paths should be planned out in advance and such paths should not follow the beaten tracks always, but should be varied on random choice or based on specific information. Proper dialogue with the local villagers during a patrol is important to gain vital information, and also to gain their trust. The patrol party must always try to obtain information that can be used to prevent further poaching in the area.

As information collection is vital for prevention and/or detection of wild life crime, both covert & overt information shall be gathered. The officer who is handling the full time informers and information inflow should ensure proper follow up of the said information. Decoy and undercover operations may also be adopted to arrest the offenders and seize the wildlife products being traded

An aspect of concern is the lack of proper prosecution leading to very low conviction rate in wildlife cases. The success of protection efforts can not only be judged with regard to the number and nature of wildlife offence cases booked but also the effectiveness with which such offence cases are investigated and contested in the appropriate courts of law. Mostly, the offenders booked in wildlife offence go out on bail and/or acquitted to commit the crime again. Very often, the accused escape due to technical flaws or perfunctory prosecution report or shoddy investigation. Hence, appropriate training in wildlife crime investigation methods & techniques shall be imparted to adequate number of staff. It is vital that proper evidence is recorded at every stage of investigation and case records are meticulously built / maintained on daily basis. Moreover, the prosecution report shall be thoroughly scrutinized by the ACF/ DFO before being filed in the court. Even, the cases shall be pursued regularly in the court so as to ensure greater rate of conviction. These measures will have long lasting effect even on the overall forest and wildlife protection in the entire Division as well.

5.6.12 Regeneration

Regeneration of trees, shrubs, herbs and climbers are good. The regeneration of fauna spp. needs improvement through less interference/ less movement within the area.

5.6.13 Associated Regulations and Measures

Awareness: The awareness for wildlife preservation may be created through celebration of wildlife week; competitions & debate among the school/college students. Even, publicity material shall be distributed and the benefits of wildlife conservation explained through electronic media. The legal provisions under the Wildlife (Protection) Act‟1972 shall also be brought to the notice of all including the scope & extent of the compassionate amount for wildlife depredation

Infrastructure and Training: To ensure better protection & to enhance their effectiveness, the field staff shall be provided with modern equipment‟s including proper arms and ammunition. As fast and better communication is the key for protection of forests and wildlife, Divisional headquarters, all the range headquarters, section headquarters, sensitive beats and check gates should be provided with VHF sets. More and more field staff shall be trained in wildlife management vis-à-vis detection & investigation of wildlife crimes

Wildlife is not only confined to forest blocks but also seen in vegetation outside Forest blocks in rivers, habitations and agricultural fields. The local public has a responsibility towards protection and conservation of wild animals. Enforcement should be strengthened with forest staff, local VSS members and wildlife enthusiasts through regular communication. Elephant proof trench for harvest yard may be provided to Farmers in affected villages, where the elephant use to eat away harvested produce / rice stacks stored in habitation areas.

Information network and records keeping: A regular data base should be maintained at Divisional level comprising of details like schedule species found in the area; pictorial directory of all identified poachers to be prepared and circulated in the locality; list of traders in cattle & goatskins as well as tanneries; list of poachers alleged to be serving bird/deer meat and timely & proper documentation of all the

incidences of man-animal conflicts including poaching. Further, the DFO shall also submit half-yearly report to the authorities concerned with regard to steps taken by him to protect wildlife and to improve their habitat. He shall also report constraints faced by him in implementing the prescriptions of this Working Circle.

Wildlife Depredation: Depredation by wild animals is gradually increasing and the main reason for this conflict is shrinkage of their habitat and shortage of food. To mitigate miseries of people due to wild animals, the compassionate amount for crop damage, house damage, injuries and death, should be disbursed to them as quickly as possible. Delay makes people lose faith in the forest department and they tend to take revengeful self-protection measures even by resorting to killing/poisoning of animals.

Control of Grazing: The wildlife rich areas shall be closed for grazing. However, grazing may be controlled elsewhere as per the provisions of the Orissa Forest (Grazing of Cattle) Rules, 1980. The local people may even be motivated to immune their cattle which graze inside the forests.

Fire protection measures: Fire lines should be cleared and maintained regularly. As most of the forest fires are man-made, it can be prevented to a large extent by motivating & educating the local people. Adequate field staff should be stationed with necessary infrastructure in fire prone areas to control and suppress the fire menace during the summer season.

Wildlife Census

A systematic collection of data on occurrence, dynamics and movements of wild animals at regular intervals and scientific analysis of these data will provide information regarding population estimate, variation, in population structure with vegetation cover, breeding behavior, mortality rates etc.

The following scientific studies can be taken up.

1) Migration pattern: - Migration pattern of wild elephants outside sanctuary should be studied.
2) Environmental monitoring in respect of physical change of environment such as precipitation, temperature, silt wash, siltation water retention can be taken up.

3) Scientific study involving change of wildlife with vegetation particularly, how the change in structure, composition and density of vegetation affect the composition of wildlife can be taken up.
4) Studies on methods to handle wild elephant entering human habitation.
5) Study on health and disease of wild animals with curative measures.
6) Study on development of computerized data base system.
7) Research on rare endangered species should be taken in order adequate protection conservation measures.

Incentives and Rewards: There shall be provision for rewards and incentives to the staff and public including the informers whose efforts lead to detection of wildlife crime and arrest of the offenders. Moreover, their deeds shall also be given media publicity in the locality as well as recognition on the occasions like Independence Day; Republic Day and District/Division formation days.

Others: Since the job of wildlife protection by anti-poaching squads requires complete dedication and whole time efforts, there shall be no upper limit on the traveling expenses (TE) claim of the forest personnel involved in the task. Moreover steps should be taken to further increase and have concentrated wildlife management including their protection in wildlife rich Notto RF areas.

Rights and Concessions: Rights and concessions under this Working Circle shall be regulated in accordance with the provisions of the Orissa Forest Act,1972; the Wildlife (Protection) Act‟1972; Rules made there under besides the Government policies in force.

SUB-CHAPTER – 5.7

ELEPHANT MANAGEMENT TECHNIQUES DURING HUMAN-ELEPHANT CONFLICT

Elephas maximus is placed in Schedule-I and Part-I of Indian Wildlife Protection Act, 1972 conferring it the highest level of protection. Historically, the significance of the elephant in Indian culture and mythology, as well as its economic and military role in sub continental armies, has also contributed to a remarkable level of tolerance and support of people towards its survival and conservation .The home ranges of Asian elephants have been estimated from radio-telemetric studies carried out in India. These indicate home-range of 250–1000 sq.Km for family herds in Indian populations [Sukumar, R. (2006). A brief review of the status, distribution and biology of wild Asian elephants. Int. Zoo Yb., 40: 1–8].

Elephant spend 14-18 Hours/Day for feeding in order to fuel the enormous body and needed 100-200 Kg of Vegetation each day [Centre for Environment Education. (2002). CEE"s Nature Scope India: Endangered Elephant. CEE, Ahmedabad]. To find all of the foods, elephants may have to walk 10 or 40 K.M. each day. Main foods of Elephants are grasses to bark, leaves, branches, roots, seedling, flower, stems and fruits depending upon seasonal availability. An elephant drinks over 100 litres of water at one time and up to 225 litres in a day.

5.7.1 Installation of Barriers

Barriers are used for preventing elephant exit outside reserve forest areas or entry into cultivated fields or human inhabited areas. Barriers may be used to guide elephants through funneling to over-bridges or under-passes set up for them to negotiate railway lines, highways or canals safely. The principal types of barriers used against elephants:

● Elephant proof trenches (EPT) - It require high investment and are difficult to maintain. They are prone to soil erosion, especially along slopes in high rainfall regions. The recommended design of EPTs consists of segments separated by walls – known as septa – to prevent water flow. This precaution is sometimes overlooked

causing severe soil erosion. EPTs should be strongly discouraged in regions with rainfall higher than about 1500-2000 mm per annum.

- Solar-powered high voltage electric fences –
- Rubble walls
- Other types of fences made from steel channels and bars etc.

There are different strategies to install barriers.

i. Construction of barriers **around forest areas** to keep elephant inside the forest.
ii. Sometimes barriers are constructed **across the landscape**, between two states, two districts and even between two countries.
iii. Barriers can be constructed **around the settlement/ harvest yard** to be protected such as a village or an enclave.

5.7.2 Anti-Depredation Squad (ADS)

Anti-depredation squad is commonly used when large groups of elephants raid agricultural crops. ADS are equipped with a vehicle, torch, siren, fire crackers and sometimes even double barrel guns. The presence of ADS gives the community a sense of reassurance that the government is protecting them and their property. ADS are effective if it is managed by technically competent persons, trained Mahouts and Kunki elephants. It requires high level of coordination between Divisions. However, the manner in which it is often implemented is not systematic and there is a lack of standard operating procedures. There is lot of chaos in activities of ADS, with participation of local mobs which reduces their effectiveness. Shots are sometimes fired in the ground near the elephants to keep them moving towards the forests. Elephants, including calves, are also slowly poked with iron spears to guide them towards required direction.

5.7.3 Commonly Used Repellent Methods

These are techniques used to drive away elephants when they have already entered human habitations.

(a) Loud noises and crackers

This is the most common technique used because it is simple and can be used by anyone. Typically these consist of drum beating, shouting, and bursting crackers. These measures are sometimes effective and at other times ineffective, depending on the habit of the elephants. Male elephants are generally more resistant to such measures. Sometimes presence of a large crowd is most effective in guiding safely elephants away from habitation. However, in certain case e.g. in urban settings and congested places crowd management becomes biggest challenge and may lead to injury to people.

(b) Other repellent methods

Other repellent methods such as electric torch, kerosene torch (mashāl) and swinging fireball are used. These are all moderately effective if done systematically.

5.7.4 Modern Repellent Methods

(a) Bee-hive fences - Elephants are known to be afraid of bees. In Africa bee-hive fences have been found to effective in deterring elephants. A series of bee-hives is created at short intervals along fences at the boundary of the enclave. The bee-hives are connected to the fence. The bee-hive model commonly used is the top bar model. When elephants try to enter the bees get disturbed and start buzzing around the elephant thus driving away the elephants. It is also said that if elephants encounter bees, they will alert other members of their herd through low frequency sounds (inaudible to humans). Farmers get additional benefit of income from honey and better pollination.

(b) Carnivores sound – Playback calls of predators such as Tiger and Leopard may evoke negative response in Elephants which many times are effective during Human-Elephant Conflict especially during entering into agricultural areas.

(c) Drones - It have been recently used in Africa to guide movement of elephants over long distances, and found to be very effective. Elephants are scared of drones and quickly run away from the site when buzzed by a drone. Drones use the same principle as the bee fences where the sound of the drone is perceived as swarm of bees

and elephants beat a hasty retreat. It is a good option to implement if the resources for drones are available.

5.7.5 Deterrent Methods

These are measures used to prevent entry of elephant in human use areas such as villages, agricultural fields and urban areas etc.

(a) **Trip alarm** - This method consists of a string stretched across entry points of elephants and connected to a switch of a battery-operated electric bell. The alarm bell rings when elephants cross the trip. This gives sufficient warning to the community to come to the point and drive away elephants. Trip alarms are very effective in situations when entry points of elephants are known.

(b) **Sensor based alarm system –** This system could be tried to detect animals in or near village/ agriculture land or even to detect elephant near railway tracks. These are solar powered infra-red system and could be even fitted with camera and can alert villagers/ driving squad when elephants are detected close to human settlement or agriculture land through SMS/lights/sound, etc. The PRT (Primary Response Team) and RRT (Rapid Response team) could then come in action to drive the elephant. This will help from physically guarding the agriculture field by villagers.

(c) **Night Guarding -** Community guarding is one of the most effective ways of protecting crops. Farmers should sleep on watch towers created in their fields or on machans (platforms constructed on trees). This should be a community activity. It needs to be done only when elephants are known to be active in the area for crop raiding. It is more effective when combined with trip alarms.

(d) **Social Media/SMS based information circulation** – Social media like WhatsApp, Facebook etc. and SMS on mobile could play an important role in circulation of Elephant location in surrounding area to caution people of the locality to stay indoor.

5.7.6 Chilli Fences

Chilli is known to have an irritating effect on olfactory nerves of elephants. Hence chilli-based methods are found to effective against elephants. It may also act as a

psychological barrier. Chilly as a repellent can be used in the form of Chilli smoke, Chilli rope, chilli curtain and chilli bricks. Chilli ropes were found to be more effective against elephant family groups than bulls, and in drier regions as compared to high rainfall regions (Chelliah *et al*. 2010, Current Science); thus it is more appropriate to use this deterrent for only a few weeks prior to harvest of cereal.

Chilli smoke is one of the effective methods as elephants are known to sneeze and cough while inhaling the smoke. Elephants change their paths if they come across Chilli smoke. Chilli smoke can be generated in many ways, limited only by human ingenuity. It can be generated by incorporating Chilli in slow burning grass bundles or dung cake, sprinkling on slow burning ember and camp fires.

5.7.7 VHF Pairing and Setting Up Direct Hotline

For avoiding rail collisions, VHF pairing with railway authorities, round the clock deployment of one forest staff in control rooms of DRMs of Railways and erection watch tower and temporary sheds has to be done in strategic locations. Measures should be taken to set up direct hotlines to contact with railway authorities, where passage of elephants across railway tracks is regular.

5.7.8 Alternate Cropping

Alternate cropping with non-edible crops like Ginger, Chilli, Citrus not consumed by elephants could be grown in forest fringes as well as areas near settlements in forest fringes may deter elephants from reaching and raiding the crop fields. These act as effective vegetative barriers**.**

5.7.9 Community Based Conflict Management (CBCM)

The Forest Department has limited number of staff that can participate in HEC management. If an elephant enters a village the manpower available in the village is far more than the Forest Department can provide. By empowering the community and capacity building it is possible to have a much stronger manpower force for protection of crops from elephants. In many cases shortage of staff is a major hurdle in HEC management and answer lies with working in cooperation with the community. The main concept is that the community should take responsibility for crop protection with emphasis on low cost deterrent methods such as trip alarms and Chilli based methods such as Chilli-smoke and Chilli-rope. There is strong emphasis on night guarding. In

case elephants enter they are pushed back by some of the repellant methods described above. There is a lot of scope for involving communities in planning, constructing and maintaining barriers; recruiting night guards and labour for ADS / Rapid Response Teams; and verification of claims for ex-gratia relief. Insurance cover should be provided to the community members involved in HEC management.

(**Reference:** MoEF & CC, HEC Guidelines, 2019).

6. CHAPTER – VI

NTFP (OVER LAPPING) WORKING CIRCLE

6.1 Introduction

The people living in and around the forests rely on NTFPs as a critical component for their sustenance. Since the Division has variety of NTFPs like fruits, leaves, roots, flowers etc. of many species and that rural population constitutes about 92.34% (2011 Census Report) in the Division, the dependence of the people on these forest resources needs no elaboration. In fact, NTFPs are one of the major sources of income generation for the people in the Division. A large population of tribal people is dependent on these natural resources for their consumption and for sale to add to their earnings. In recent times, there is even increased demand of the NTFPs as a raw material for many industries like cosmetics, confectionary, drugs etc. The dominance of market of certain NTFPs is over riding the concept of ecological sustainability leading to unsustainable & destructive exploitation of these resources abetted by traders and middlemen. It might endanger the resource, causing its depletion. Already, evidences are galore about damage to natural regeneration of many such species on this account frequent forest fires and illegal felling of trees. Many practices of exploitation of NTFPs being injurious to the forests are also accelerating further the depletion of these resources.

All these issues have resulted in the increasing interest in NTFPs amongst the Conservationists, Development Workers, Foresters and indigenous people‟s groups. This has prompted numerous initiatives aimed at promoting NTFP‟s use and commercialization as a means of improving the wellbeing of rural population & at the same time, conserving the existing forests. The State Govt. Resolution of March‟2000 & the Gram Panchayat (Minor Forest Produce) Rules‟2002 are the steps in this direction

6.2 General Constitution of Working Circle

To address the issues mentioned in the foregoing paragraphs including the felt needs to ensure long term sustenance of this varied forest resource, the Non Timber Forest

Produce (Overlapping) Working Circle has been prescribed overlapping 27193 ha spread over 100 forest blocks.

This overlapping working circle is constituted with a view to provide avenues of economic development of rural and tribal people, who are illiterate and under-employed, by generating employment through a planned and regular collection of Minor forest produce throughout the year. Overall estimate is that 33% of livelihood of the tribal is earned from forests and minor forest produce. It is also felt that the collection of minor forest produce is not regulated in proper way, so as the maximum potential of minor forest produce yielding of the Division could be explored. In the outgoing Working plan, almost all forest areas were allotted to this working circle. It is proposed to continue this Working Circle like the previous one with 27193 ha allotted to this working circle.

Range wise forest area alloted to NTFP (O) Working Circle

Range	No. of Reserve Forest Block	No. of Proposed Reserve Forest Block	No. of Protected Forest Block	No. of Village Forest Block	Area allotted to NTFP (O) WC in Ha
Pithabata	7	1	--	--	1880
Dukura	7	8	--	--	750
R.G. Pur	11	--	--	--	2200
Udala	22	--	--	--	2705
Betnoti	21	2	-	--	7000
Deuli	5	3	--	--	5221
Kaptipada	3	--	1	1	6558
Bangiriposi	2	1	5	--	879
Division Total	**78**	**15**	**6**	**1**	**27193**

6.3 General Characteristics of Vegetation

The details of the major NTFP items available in the Division are given below,

Name of the NTFP item	Botanical name	Period of collection
Tamarind	*Tamarindus indica*	December – Feb.
Mahua flower	*Madhuca indica*	April – May
Arrow root	*Curcuma leucorrhiza*	May – June
Nox vomica	*Strychnus nuxvomica*	Dec. – January
Chireita (Bhuineem)	*Andrographis paniculata*	Sept. – May
Gilo	*Entada scandens*	March – May
Amla	*Emblica officinalis*	Oct. – April
Bahada	*Terminalia bellirica*	January – February

Name of the NTFP item	Botanical name	Period of collection
Harida	*Terminalia chebula*	November – February
Mahua seed	*Madhuca indica*	May – June
Kusum seed	*Schleichera oleosa*	June – August
Sal seed	*Shorea robusta*	June – July
Karanja seed	*Pongamia pinnata*	Dec. – January
Char seed	*Buchanania langen*	April – May
Palas	*Butea monosperma*	May – July
Dhatiki flower	*Woodfordia fruticosa*	Feb. – April
Sabai grass	*Eulaleppsis binata*	Dec.-Jan. & Aug.-Sept.
Bana tulasi	*Perila ocimoides*	Oct. – December
Indrajaba	*Wrightia tinctoria*	Oct. – February
Baghanakhi	*Martynia annua*	Nov.- December
Gaba (castor seeds)	*Ricinus communis*	April – June
Merda seeds	*Polygala chinensis*	July – December
Baidanka	*Mucuna monosperma*	February – April
Sikakai	*Acacia concinna*	December – March
Sunari	*Cassia fistula*	March – April
Kaju	*Anacardium occidentale*	March – June

6.4 Felling Series, Cutting Sections and JFM Areas

No felling is prescribed in NTFP Overlapping Working Circle.

6.5 Blocks, Compartments and JFM Areas

100 Forest blocks are allotted to NTFP (O) Working Circle as given below

Area Allotment

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
PITHABATA	1	Bhagabat Chandrapur R.F.	806.280	795.480	795.480
	2	Budhikhamari R.F.	863.100	856.620	625.000
	3	Hatikote R.F.	556.840	553.720	495.000
	4	Lulung-Purunapani R.F.	223.310	223.310	79.400
	5	Manchabandha R.F.	1020.920	1013.960	644.000
	6	Asanabani P.R..F	57.030	57.030	57.030
	7	Goplapur V.F.	4.000	4.000	4.000
	8	Srirampur V.F.	3.140	3.140	3.140
	9	Gadadharapur V.F.	0.840	0.840	0.840
	10	Baunsda V.F.	0.940	0.940	0.940
	11	Dumuria V.F.	5.000	5.000	5.000
		Sub-total	**3541.400**	**3514.040**	**2709.830**

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
DUKURA	1	Badsahi R.F.	340.740	340.700	340.700
	2	Bidhyadharpur R.F.	238.760	238.760	238.760
	3	Chakradharpur R.F.	141.310	141.310	82.400
	4	Chengua-Mangalpur R.F.	79.640	79.640	75.000
	5	Deulia R.F.	241.670	241.670	100.000
	6	Itamundia R.F.	111.370	111.370	110.000
	7	Kanpura R.F.	533.850	532.960	320.000
	8	Purunapani R.F.	42.730	42.730	42.730
	9	Belpal R.F.	110.600	110.600	73.900
	10	Dukura R.F.	162.750	162.750	150.000
	11	Khanua R.F.	113.680	113.680	80.000
	12	Kerko R.F.	110.070	110.070	40.000
	13	Manatri V.F.	6.400	6.400	6.400
	14	Bhupad V.F.	5.000	5.000	5.000
	15	Manatri V.F.	3.480	3.480	3.480
	16	Rangahidi V.F.	4.588	4.588	4.588
	17	Ranibandha V.F.	3.440	3.440	3.440
	18	Khanua V.F.	6.000	6.000	6.000
	19	Basipitha V.F.	10.000	10.000	10.000
	20	Basipitha V.F.	8.120	8.120	8.120
		Sub-total	**2274.198**	**2273.268**	**1700.518**
R.G.PUR	1	Amarda R.F.	1512.200	1511.552	1045.000
	2	Betnasia R.F.	110.230	110.230	110.000
	3	Baghajharan R.F.	147.950	145.550	145.550
	4	Baladia R.F.	95.830	95.830	95.830
	5	Chitrada R.F.	422.640	409.840	350.000
	6	Jamsole R.F.	434.300	219.050	162.280
	7	Moroda R.F.	1479.140	1464.290	1464.290
	8	Nalagaja R.F.	260.290	260.290	260.290
	9	Nunchatia R.F.	148.270	148.270	148.270
	10	Sarumula R.F.	330.220	329.840	325.000
	11	Sukhilakhali R.F.	231.310	230.560	200.000
	12	Chikitamatia V.F.	10.000	10.000	10.000
	13	Sarajharan V.F.	7.344	7.344	7.344
	14	Pharajpur V.F.	5.000	5.000	5.000
	15	Duarsuni V.F.	5.000	5.000	5.000
	16	Nahiasoli V.F.	2.940	2.940	2.940
	17	Jhatiada V.F.	5.000	5.000	5.000
	18	Nalagaja V.F.	2.000	2.000	2.000
	19	Chandanpur V.F.	3.500	3.500	3.500
		Sub-total	**5213.164**	**4966.086**	**4347.294**

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
UDALA	1	Belakuti R.F.	223.380	223.380	223.380
	2	Bhandagaon R.F.	122.210	122.210	122.210
	3	Dhaundia R.F.	524.790	523.990	380.200
	4	Dimgadia R.F.	6.960	6.960	6.960
	5	Dugdha R.F.	35.290	35.290	35.290
	6	Khunta R.F.	427.990	423.400	200.000
	7	Kuamara R.F.	229.530	229.530	229.530
	8	Marsigaon R.F.	263.320	263.320	100.000
	9	Nahara R.F.	161.870	161.870	161.870
	10	Nuapada R.F.	324.380	324.380	324.380
	11	Phuljhari R.F.	315.650	315.650	218.300
	12	Udala R.F.	533.930	533.930	500.000
	13	Purunabaripada mankadakenda V.F.	0.648	0.648	0.648
	14	Kusunia Patpur V.F.	0.320	0.320	0.320
	15	Bhalimunduli V.F.	3.900	3.900	3.900
	16	Salabani V.F.	2.960	2.960	2.960
	17	Sialia V.F.	2.880	2.880	2.880
	18	Raghunathpur V.F.	4.660	4.660	4.660
	19	Jamudiha V.F.	2.000	2.000	2.000
	20	Nuagaon V.F.	13.324	13.324	13.324
	21	Bahanada V.F.	1.300	1.300	1.300
	22	Jalda V.F.	1.124	1.124	1.124
	23	Murari V.F.	0.992	0.992	0.992
	24	Gohira V.F.	5.000	5.000	5.000
	25	Jogibandha V.F.	2.000	2.000	2.000
	26	Jajpur`V.F.	14.884	14.884	14.884
	27	Kochiladiha V.F.	15.000	15.000	15.000
	28	Khunta V.F.	10.000	10.000	10.000
	29	Khunta V.F.	3.756	3.756	3.756
	30	Khunta V.F.	0.096	0.096	0.096
	31	Khunta V.F.	6.148	6.148	6.148
	32	Khunta V.F.	0.400	0.400	0.400
	33	Khunta V.F.	12.600	12.600	12.600
	34	Sridamchandrapur V.F.	1.376	1.376	1.376
		Sub-total	**3274.668**	**3269.278**	**2607.488**
BETNOTI	1	Asanbani R.F.	810.170	804.670	804.670
	2	Badampur R.F.	952.290	952.251	940.000
	3	Badguma R.F.	28.970	28.970	28.970
	4	Baisinga R.F.	108.440	108.312	50.000
	5	Bartana R.F.	194.890	194.890	190.000
	6	Beldiha R.F.	41.600	41.600	41.600

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
BETNOTI	7	Chhatnna R.F.	393.510	391.460	100.000
	8	Daldali R.F.	71.220	65.220	65.220
	9	Dalki R.F.	827.970	827.970	800.000
	10	Dumapada R.F.	224.350	219.550	219.550
	11	Durgapur R.F.	961.840	957.540	957.540
	12	Gad-deulia R.F.	58.730	58.730	58.730
	13	Gandigadha R.F.	1085.180	1066.381	960.000
	14	Garudabasa R.F.	71.870	71.870	71.870
	15	Haripur R.F.	41.280	40.940	40.940
	16	Hatijhuri R.F.	109.110	109.110	100.000
	17	Jagannathpur R.F.	452.590	451.240	250.000
	18	Jugal R.F.	305.290	304.790	300.000
	19	Ketakisole R.F.	39.330	39.330	39.330
	20	Khadikapada R.F.	75.110	75.110	75.110
	21	Khiripada R.F.	420.540	419.960	419.960
	22	Krushnachandrapur R.F.	1272.070	1252.910	350.000
	23	Kochilakhunta R.F.	259.320	259.320	250.000
	24	Machhapada R.F.	62.810	62.810	62.810
	25	Mamtapal R.F.	222.730	222.730	100.000
	26	Merda R.F.	495.820	495.820	400.000
	27	Mohanpur R.F.	35.130	35.130	35.130
	28	Phuljhari R.F.	217.420	217.420	217.420
	29	Purunia R.F.	442.300	440.950	200.000
	30	Raikama R.F.	191.340	181.340	80.000
	31	Rautra R.F.	119.460	119.160	119.160
	32	Bharadasole R.F.	50.670	50.670	50.670
	33	Bhalukchua R.F.	199.430	199.430	199.000
	34	Tikayatpur R.F.	160.960	160.090	50.000
	35	Patpur RF	141.480	140.880	140.880
	36	Bhalia P.R.F.	340.160	340.160	300.000
	37	Kathapal V.F.	0.240	0.240	0.240
	38	Chakulia V.F.	3.000	3.000	3.000
	39	Karatpata V.F.	0.780	0.780	0.780
	40	Chakulia V.F.	4.000	4.000	4.000
	41	Analagadia (Matidahi) V.F.	3.060	3.060	3.060
	42	Jhinkiria V.F.	1.600	1.600	1.600
	43	Singida Munduli V.F.	3.320	3.320	3.320
	44	Athabahia V.F.	1.700	1.700	1.700
	45	Mendhamundia V.F.	2.100	2.100	2.100
	46	Anbagadia V.F.	12.664	12.664	12.664
	47	Kalana	5.000	5.000	5.000

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
BETNOTI	48	Rautrapur V.F.	5.000	5.000	5.000
	49	Kalana V.F.	10.000	10.000	10.000
	50	Tulajhuri V.F.	8.000	8.000	8.000
	51	Asukanda V.F.	3.300	3.300	3.300
	52	Angaria V.F.	0.560	0.560	0.560
	53	Tikayatpur V.F.	0.800	0.800	0.800
	54	Purunia V.F.	10.000	10.000	10.000
	55	Purunia V.F.	10.000	10.000	10.000
	56	Purunia V.F.	3.880	3.880	3.880
	57	Purunia V.F.	6.560	6.560	6.560
	58	Balaka V.F.	2.000	2.000	2.000
	59	Raghupur V.F.	10.000	10.000	10.000
	60	Raghupur V.F.	7.000	7.000	7.000
	61	Raghupur V.F.	9.600	9.600	9.600
	62	Raghupur V.F.	3.000	3.000	3.000
	63	Raghupur V.F.	5.684	5.684	5.684
	64	Raghupur V.F.	11.232	11.232	11.232
	65	Raghupur V.F.	7.000	7.000	7.000
	66	Gadigaon V.F.	9.644	9.644	9.644
	67	Gadadeuli V.F.	0.840	0.840	0.840
	68	Gadadeuli V.F.	7.296	7.296	7.296
	69	Nuagaon V.F.	3.200	3.200	3.200
	70	Buguhuda V.F.	2.000	2.000	2.000
		Sub-total	**11659.440**	**11582.774**	**9242.620**
DEULI	1	Andhari R.F.	731.630	731.630	216.550
	2	Chandua R.F.	3073.120	3064.280	1383.650
	3	Deuli R.F.	2379.260	2378.060	2378.060
	4	Kuliana R.F.	1203.680	1198.880	960.000
	5	Suliapada R.F.	2889.560	2881.560	2000.000
	6	Badsole P.R.F.	227.030	217.030	217.030
	7	Tangasole P.R.F.	236.800	231.680	231.680
	8	Kaliasole P.R.F.	320.160	320.160	100.000
	9	Dhalu Suliapada V.F.	1.060	1.060	1.060
	10	Kasia V.F.	1.740	1.740	1.740
	11	Handibhanga V.F.	2.468	2.468	2.468
	12	Anlakuda V.F.	6.000	6.000	6.000
	13	Sankhunta V.F.	2.000	2.000	2.000
	14	Jalda V.F.	0.276	0.276	0.276
		Sub-total	**11074.784**	**11036.824**	**7500.514**
KAPTIPADA	1	Asanabani R.F.	262.560	262.560	262.560
	2	Nachhipur R.F.	229.000	229.000	100.000
	3	Notto R.F.	7707.080	7707.080	1215.000

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
KAPTIPADA	4	Sukhuapata Hill P.F.	92.320	91.990	92.320
	5	Kaladahi V.F.	1.500	1.500	1.500
	6	Pedagadia V.F.	0.220	0.220	0.220
	7	Khaladi V.F.	2.112	2.112	2.112
		Sub-total	**8294.792**	**8294.462**	**1673.712**
BANGRIPOSI	1	Dighi R.F.	515.940	515.940	110.000
	2	Rangahudi R.F.	86.670	86.670	86.670
	3	Thakurani R.F.	497.020	497.020	200.000
	4	Manbhanj V.F.	3.940	3.940	3.940
	5	Baghajhampa V.F.	8.000	8.000	8.000
	6	Jarkani V.F.	7.000	7.000	7.000
	7	Nata V.F.	7.000	7.000	7.000
	8	Birsingh V.F.	0.600	0.600	0.600
	9	Nohanatia V.F.	4.000	4.000	4.000
	10	Pahadpur V.F.	9.000	9.000	9.000
	11	Heenachandrapur V.F.	9.000	9.000	9.000
	12	Heenachandrapur V.F.	5.000	5.000	5.000
	13	Jaivilla V.F.	0.532	0.532	0.532
	14	Sindurgoura V.F.	0.260	0.260	0.260
	15	Handibhanga V.F.	2.468	2.468	2.468
	16	Bagbuda V.F.	4.000	4.000	4.000
	17	Pokhariadiha V.F.	8.000	8.000	8.000
	18	Govindpur V.F.	8.000	8.000	8.000
	19	Bedhakudar V.F.	10.000	10.000	10.000
	20	Gopinathpur V.F.	1.424	1.424	1.424
	21	Pahadpur V.F.	1.500	1.500	1.500
	22	Brundabanchandrapur V.F.	1.846	1.846	1.846
	23	Brundabanchandrapur V.F.	4.500	4.500	4.500
	24	Brundabanchandrapur V.F.	0.720	0.720	0.720
	25	Kuabuda V.F.	12.000	12.000	12.000
	26	Kuabuda V.F.	5.000	5.000	5.000
	27	Kuabuda V.F.	8.000	8.000	8.000
	28	Kuabuda V.F.	10.608	10.608	10.608
	29	Kuabuda V.F.	5.000	5.000	5.000
	30	Pokharia V.F.	6.208	6.208	6.208
	31	Pokharia V.F.	4.000	4.000	4.000
	32	Pokharia V.F.	10.000	10.000	10.000
	33	Pokharia V.F.	4.000	4.000	4.000
	34	Pokharia V.F.	1.608	1.608	1.608
	35	Pokharia V.F.	0.788	0.788	0.788
	36	Pokharia V.F.	6.000	6.000	6.000

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
BANGRIPOSI	37	Pokharia V.F.	3.000	3.000	3.000
	38	Pokharia V.F.	2.108	2.108	2.108
	39	Joka V.F.	8.000	8.000	8.000
	40	Jharpokharia V.F.	0.540	0.540	0.540
	41	Jharpokharia V.F.	2.000	2.000	2.000
	42	Bagbuda V.F.	0.400	0.400	0.400
	43	Bagbuda V.F.	0.640	0.640	0.640
	44	Banakati V.F.	3.088	3.088	3.088
		Sub-total	**1289.408**	**1289.408**	**586.448**
G. Total		**219 Forest Blocks**	***46621.854***	***46226.140***	***30368.424***

6.6 Special Objectives of Management:

The Special objectives of management of this working circle are as follows:-

- To regulate and optimize extraction and utilization of various NTFPs in conformity with Government policy with a view to promote sustainable management of forest.
- To develop the NTFP potential in the forests with the objectives to alleviate the economy of rural and tribal people.
- To develop skills and capabilities of local inhabitants through extensive training so that collection of NTFP will cause least damage to forest .
- Creating Alternative Avenue of income generation and also permanent assets which could directly contribute to house hold economy.
- Effective exploitation and marketing in order to provide maximum revenue to State exchequer.

- To Nurture the crops having the potentiality of N.T.F.P including medicinal plant species for their improvement through suitable silvicultural treatment to increase the production on perpetuity.
- vi) To Take up measures on priority basis to prevent destructive harvesting method with a view to check the further degradation of the crop and to ensure the collection to the permissible extent.
- vii) To Facilitate the marketing of the products collected by the local people.

- viii) To promote the local skill for value addition, processing and marketing of some major forest products to increase the quality of end-product and to enhance the income.

6.6.1 Analysis of the Crop:

No systematic study has been done in the past to assess the potentiality vis-à-vis availability of various NTFPs and to ascertain impact of collection etc of such NTFPs on sustainability of the forest. However, an attempt has been made while carrying out the forest resource survey of the Division to assess & estimate the availability of some NTFPs. Though such estimation does not indicate about sustainability of extraction but it certainly gives an idea about their availability in the Division.

Name of the NTFP item	Locality	Name of the Range
Siali Leaves	Bangiriposi, Dukura, Udala, Kaptipada	Bangiriposi, Dukura, Udala, Kaptipada
Sal Leaves	Entire Division.	Entire Division.
Harida/ Bahada/ Amla	Entire Division	Entire Division
Amla	Entire Division	Entire Division
Mahua Seed and flowers	Entire Division	Entire Division
Neem Seed	Entire Division	Entire Division
Char Seed	Entire Division	Entire Division
Karanja Seed	Entire Division	Entire Division
Kusum	Entire Division	Entire Division
Sabai Grass & Ropes	Entire Division	Entire Division
Chironji	Entire Division	Entire Division

About 26 products were recorded as being commercialized in the region that are sold in large volume through local markets though there are more than **62 items available** and marketed but in very meager quantity. The forest in the district is typically multilayered comprising of top canopy, lower canopy, shrub layer, and lower grasses and herb layer and hence the availability is categorized in the same manner.

Grasses and Fiber

The most widely collected grass species in the District is *Sabai* grass which is most commonly known as *„Bubai"* in local language. It is a perennial species cultivated in upland land and lasts for 25 to 30 years. A number of handicraft industries use it for making furniture such as sofas, beds and chairs. *Sabai* grass is the raw material for rope making and paper industries which has a huge market within and outside the

state. *Jhadu* grass is another grass widely available in the district but has low commercial value.

Leaves

Sal leaves are the most commonly collected species which are converted and used as cups and plates. District has coppice forest which provides better quality leaves. Majority of the households depend on *Sal* leaf collection for their livelihoods.

Vegetables

Different types of wild tubers viz. *Pitalu, Chunalu, Panalu, Kundri, Kankada* are collected from the forest in sizable quantities and consumed as supplementary source of food, especially in the month of October when there is food shortage.

Flowers

Mahua flower is a very common species found in forests as well as in the private lands. The flowers are eaten fried, and also powdered to make a cake and fed to the cattle. *Mahua* flowers are usually stored in home after drying and often consumed at times of distress. Another popular use of *Mahua* flower is for making liquor for self consumption.

Mushrooms

Wild mushrooms locally known as ‟Chattu‟ and „Rugra‟ are collected from the forests mainly from June to October and used for both consumption and sale.

Oil Seeds

Mahua, Kusum and *Karanj* are amongst the edible variety of oil seeds available in the forest. *Mahua* seeds (known locally as *„Mahul monjee"*) are collected during April to July and are used for cooking purpose. Its cake is used as fertilizer. It is also used as a raw material in soap industries. It has an oil content of 33 to 35 %. *Karanj* seeds, collected during February to May, are also used to extract oil which is used for lighting lamps. The oil cake is used as manure.

Sal seeds found in the nearby forests are good source of oil. Forest Department used to buy the seeds in large quantities but stopped procurement after the new NTFP policy was introduced. The Panchayatiraj Department takes no intrest in processing of Sal seeds. *Chironji* seeds, locally known as *„Char,* is also found in the forests in large quantities. This is used as a dry fruit in most of the north Indian recipes.

Myrobalans

Harida (*Terminalia chebula*) and *Bahada* (*Terminalia bellerica*) are two important NTFPs which are collected from the forests but in very small quantities except in places around Notto RF. Very few households are involved in their collection. The local Ayurvedic doctors are known as *Kaviraj* use them in preparation of Ayurvedic medicines. These are also used by the households for treating many local diseases.

Medicinal plants

Many medicinal plants are available in abundance in the forests but very few families collect them. *Haldi, Bela, Bhuinimba, Satabari, Neem* and *Brahmi* are some of the species found in the forests.

Important Fruit bearing trees of Baripada Forest Division

Local Name	Scientific Name	Uses
Amba	*Mangifera indica*	Fruit is edible
Anla	*Emblica officinalis*	Medicinal
Aswastha	*Ficus religiosa*	Fruit for Animals
Bara	*Ficus bengalensis*	Fruits eaten by Birds & Animals
Bahada	*Terminalia belerica*	Medicinal and Edible for Animal
Barkoli	*Zizyphus mauritiana*	Fruit is edible
Baula	*Mimusops elengi*	Fruit is edible
Bela	*Aegle marmels*	Edible Fruit
Bhalia	*Semicarpus anacardium*	Medicinal Use
Chara	*Buchanania lanzan*	Edible Fruit
Dimiri	*Ficus racemosa*	Fruits eaten by Birds & Animals
Gambhar	*Gmelina arborea*	Fruits for Animals
Harida	*Terminalia chebula*	Fruit for Medicine
Jamu	*Syzygium cumini*	Edible Fruit
Karanja	*Pongamia pinnata*	Oil & Medicine
Kendu	*Dyospyros melanoxylon*	Edible Fruit
Kochila	*Strictnous naxvomica*	Fruit for Medicine& Birds
Kusum	*Schleichera oleosa*	Edible Oil &Fruit

Local Name	Scientific Name	Uses
Mahula	*Madhnca indica*	Edible Oil &Fruit
Neem	*Azadirachta indica*	Medicine & Oil
Panas	*Artocarpus integrifolia*	Edible Fruit
Sal	*Shorea robusta*	Edible Oil
Simal	*Bombax ceiba*	Cotton yield
Tentuli	*Tamarindus indica*	Edible Fruit for Man

Important Oil yielding Species			
Local Name	**Botanical Name**	**Useful part**	**Uses**
Karanja	*Pongamia pinnata*	Seed	Medicines
Kochila	*Strychnos nuxvomica*	Seed	Medicines
Kusum	*Schleichera oleosa*	Seed	Cooking, and soap making
Mohula	*Madhuca indica*	Seed	Edible
Neem	*Azadirachta indica*	Seed	Medicines
Polanga	*Callophylum inophyllum*	Seed	Soap making
Sal	*Shorea robusta*	Seed	Edible

6.6.2 Silvicultural System

No silvicultural System is prescribed for management of NTFP species found in the forests. It is proposed to manage the NTFP resource through

- Scientific method of collection of NTFP causing no harm to the existing vegetation.
- Harvesting only 30 % of medicinal plants leaving 70 % for regeneration.
- Regulated collection & trading with Value addition by regular training.
- Improve growing Stock by checking biotic interference.
- In-situ & Ex-situ Conservation

The forest staff must have a clear perception of threats from various faulty/injurious local practices that adversely affect the sustenance of forests. Keeping in view the perceived threats to forests, they shall take appropriate steps to minimize the impact of injurious practices on forests. Several options have been suggested. These may be

used in combination or as alternative options. For example, vulnerable forests may be temporarily closed for NTFP collection for specified periods so that regeneration of desired species is not adversely affected. Collection period may be reduced in some cases (e.g., seeds) to ensure that sufficient seeds are left on forest floor to induce regeneration. Seed collection may be terminated at least fifteen days before expected closing period. The Divisional staff may work in close co-operation with local people who may be motivated not to collect entire seed from forest floors and to allow some seed to remain on ground for regeneration purposes. Similarly, local people may also be encouraged to adopt more forest friendly techniques to collect barks, branches, leaves and roots so that forests are not adversely affected. They may also be encouraged not to resort to forest fires. The collection of leaves, barks from standing trees and collection of roots must be scrupulously supervised so as to cause minimum damage to the trees.

The forest staff should prevent the purchase of the NTFPs at lower price by middlemen and ensure collection/disposal in accordance with the Rules‟2002. The minimum procurement prices should be given wide publicity through VSS and other media. Audio and video methods may also be utilized to create awareness among the public. More emphasis should be given on the medicinal plants, their derivatives and uses.

6.6.3 Rotation Period:

Collection cycle will be the collection period for different NTFP items from 1st October to 30th September of following year.

A tentative period of collection of a number of major NTFP is described in Table below.

Calendar for Collection of Major NTFP

NTFP	Collection Time	NTFP	Collection Time
Kendu Leaf	March – June	Semal Cotton	March-May
Sal Seed	May-June	Honey-wax	January
Siali leaf	October-Feb	Honey	January
Siali fibre	October-Feb	Khajuri leaves	October-May
Harida	November-January	Sabai grass	October-April

NTFP	Collection Time	NTFP	Collection Time
Bahada	January-April	Sunari	September-April
Cashewnut	April-May	Tentuli	March-April
Aonla	Jan-April	Neem seed	June-July
Char seed	April-May	Genduli gum	October-May
Jatropha seed	Dec-April	Kurei fruit	Dec-Feb
Bel	May-June	Hill broom	March-June
Marking nut	December-March	Khair	October-May
Thatch grass	January	Sal resin	January-April
Kochila seed	Dec-Jan	Broom grass	October-May
Mahua flower	April- May	Siali fibre	October-May
Mahua seed	May - June	Lemon grass	March-April
Dhakti flower	January to April	Kamal gundi	February-March
Karanja seed	Dec-Jan	Banatulsi seeds	Nov-March
Kusum seed	May - June	Lodha bark	October-May
Kendu fruits	April to May	Dantari bark	October-May
Arrow root	Dec-Jan	Phenphena bark	October-May
Gum	Sept-June	Mango Kernel	Jun-July
(Sources: Field observations and survey)			

6.6.4 Harvestable Diameters

As it is the NTFP (OL) Working Circle, no calculation of harvestable diameter is required.

6.6.5 Reducing Factors and Reduced Areas:

In outgoing plan period entire area under working plan was included under NTFP Overlapping Working Circle. Some forest blocks lost their potentiality due to severe biotic interference and repeated fire attacks where involvement of forest people is less, a good number of forest blocks regained their potentiality with active participation of local people and dedicated forest personnel.

6.6.6 Felling Cycle:

As it is the NTFP (OL) Working Circle, no Felling cycle is prescribed.

6.6.7 Division into Periods and Allotment to Periodic Blocks.

In 100 forest blocks 27193 ha. has been taken into this NTFP (Overlapping) Working Circle. But there is no division into periodic blocks.

6.6.8 Calculation of the Yield:

The collection figures shows fluctuations both in quantity collected and royalty realized. This is because the outturn depends on weather conditions and the minimum selling price. The figures do not indicate the actual outturn or potential of NTFP items as many of them are consumed locally and only surplus is sold if it fetches good price. In view of these factors it is not possible to prescribe any regulation of yield. However, it has been the general observation that many NTFPs have been on decline, mainly for the reason of over exploitation and degradation of the forests

6.6.9 Table of Felling

As the Timber operation is not the objective in this Working Circle, no Table of felling is required.

6.6.10 Method of Execution:

This working circle is aimed at scientific collection, storage, processing & management of NTFP and designed for improvement of Socio-economic condition of the rural people. The NTFP policy of the state Government has been implemented since 2002 that requires revision for the greater interest of the forest and its dependents. Volume of NTFP collection is largest in Kaptipada Range and more or less equal among other Ranges like Betnoti, Rasgovindpur, and Deuli. The rural economy of Mayurbhanj mainly depends on Sal leaf trading, which is mostly collected from the forests of this Division. The second most important NTFP product is Char seeds, which is widely collected throughout the Division area. Following activities are prescribed under this Working Circle.

1. Routine NTFP survey has been done during 2020 & will be done again in this Division during the year 2025-26.
2. Formation of S.H.G.s for livelihood improvement.
3. VSS wise micro plan preparation.
4. Training for sustainable collection and value addition for better quality product.
5. Capacity building for VSS members for quality storage of forest produces.
6. Adequate infrastructure and funding for processing and marketing.

7. Creation of marketing centre at block and district level and their linkages with buyers.
8. Plantation of NTFP species at selected sites.

The rural and tribal economy is still very much dependent on forest produce for meeting their various needs and requirements. They are not fully governed by the modern institutions. They resist to fast changes. The vegetation providing NTFP is dwindling and rural/tribal people have to work hard for collection, storage, processing and marketing of NTFP. The private businessmen are not purchasing the NTFP items regularly during collection period and are not paying minimum support price in time. The NTFP items like sal seeds are getting lost in forest due to lack of minimum support price which can supply income to the local people, if exploited and marketed in an effective manner. Baripada Forest Division requires functioning as a regulating authority in regards of exploitation and marketing of minor forest produce.

Collection Cycle

Collection cycle will be the collection period for different NTFP items from April to March of a financial year i.e. one year.

Harvesting and exploitation of sal leaves from the forest area will be permissible subject to silvicultural viability. Removal should normally be in conformity with management plan or micro plan; but until the silviculturally permissible limits have been proposed in such management plan/ micro plan a thumb rule will be adopted. The thumb rule will be that not more than 2 (two) quintals of sal leaves will be allowed to be collected during a forest year per ha. of fully stocked forests. In case of forests with a sparse growth, the upper limit of collection of leaves will be one quintal per ha.

Removal or collection of sal leaves shall not be allowed during the spring season (from 1st January to 31st March) and the rainy season (1st of July to 30th September) in order to allow growth of sal trees. Collection will be permissible only during the periods from 1st October to 31st December and again from 1st April to 30th June. Fifty percent of annual limit will be allowed to be removed during the October-December quarter and the remaining fifty percent during the April-June quarter.

For the collection of sal leaves from any forest area, the area should be devided into convenient strips of equal width and leaves should be collected during each quarter from alternate strips leaving the intervening strips untouched.

Plucking should be allowed from the sal springs of less than three meter height. Plucking of leaf from any tree will be allowed up to 2 meter height only and leaves at the top should be allowed to remain. Leaf shall not be plucked from the leading shoots and may be collected only from the branches and the non-leading shoots. Leading shoots of Sal saplings should be clearly visible from a distance after leaf plucking has taken place in the area.

This hampers the tree growth. This should be stopped. During March-April the local people use to kindle the forests to collect Mahua flowers. During collection of Char seeds, Amla fruit etc. the collectors use to cut the branches to collect forest produces. Such practice should stop.

Similarly scientific method of collection of other NTFP should be practiced.

Analysis and Valuation

All the Sal forests and its associates and NTFP trees provide multi-product advantage to low income families and women. As their opportunity cost of time is low, they can therefore spend more time and capture larger benefits. On the other hand the investment by forest department on established sal forest and NTFP trees is relatively low and forest department can use this opportunity for further encourage these communities to collect NTFP items throughout the collection period.

It is presumed that rapid assessment of forest regeneration pattern and NTFP collection, processing & marketing system can be useful in framing various programmes and schemes for the socio-economic development of these tribal/rural communities. A brief account on primary NTFP collected in Mayurbhanj is described in Sub-chapter 2.17.7 below.

Yield

Interviews with local community members revealed the data on utilities, collection seasons and volume of collection. The various NTFP and productive species fell into several utility categories including raw materials for commercial sale, subsistence foods, drinks and fuel. The period of collection of different NTFP items is given below.

Method of Collection of NTFP

The rural and tribal people should be asked to collect the NTFP in the collection months of calendar year/financial year to the permissible limits. They should be trained in scientific procedure of collection of NTFP, proper drying, grinding and storage in case of seeds. In case of leaves they shall be trained in plucking pattern, drying and storage.

Besides this, they should be trained and encouraged for taking up such forest based engagements which would provide income to their house hold. These are:-

b) Sal Leaf Plate & Bowl making
c) Rope making from sabai grass.

c) Sericultural practices.

d) Angora rabbit rearing.

e) Mushroom cultivation.

f) Honey collection.

g) Pickles preparation.

h) Orchid cultivation.

i) Siali leaf plates from Siali leaves.

The above activities can be taken up at their houses in leisure period.

The method of exploitation of NTFP should be changed. The private agencies working in collection and marketing of NTFP should be prohibited and should be replaced by the tribal cooperative finance and Development Corporation which should be created with the following objectives.

a) To purchase their surplus grains and minor forest produce collected by them.

b) To supply them the articles of their daily need such as Kerosene, Oil, salt, food materials, cloth etc.

c) To provide them easy credit facilities.

Extensive and intensive (high density close spacing) energy plantation in the Village forests / Revenue Forests /DLC forests /waste lands meant for production of biomass, NTFP and fodder are essential to solve the energy crisis. Such plantations shall be taken up by Divisional Forest Officer Baripada. Such plantation would be suitable because:-

i) Small timber, fuel wood, fodder, etc. for meeting the needs and requirement or local inhabitants can be produced at a short rotation of 3-5 years as per the bio-diversity afforestation model discussed in plantation working circle.

ii) More volume per unit area can be produced through close spacing in a given time and lesser cost.

iii) Less area involved thereby curtailing supervision cost and productivity can be increased through fertilization and irrigation from nearby natural stream.

Skill Up-gradation

The skill up gradation of local people for processing technique, value addition and storage in respect of major NTFP items individually shall be made along with marketing strategy.

6.6.11 Subsidiary Silvicultural Operations Cleaning and Thinning:

As the said Working Circle is overlapped with Improvement Working Circle and Rehabilitation Working Circle, no prescription has been made separately for Subsidiary Silvicultural operations.

6.6.12 Regeneration

The regeneration of NTFP species is fair. At the time of silvicultural cleaning the NTFP species collected by local people should be retained.

6.6.13 Associated Regulations and Measures:

Many NTFPs have been neglected or overlooked because they are often outside the established marketing channels. In fact, marketing has been found to be the major weak point of the primary collectors. And, where ever, such channels are existing, they are too long that the primary collector finds it difficult to fetch good returns for the NTFPs collected by him. Even, at times, the middleman exploits the illiterate NTFP gatherer in the name of inferior quality. Hence, all these marketing aspects of various NTFPs need to be attended to on priority. The Divisional Forest Officer shall contact the State Cooperatives like TDCC, TRIFED and other organizations for marketing of NTFPs available in the Division. The VSS and Gram Panchayats should be given information about the marketing prospects of various NTFPs.

The DFO shall organize regular trainings on collection, exploitation and utilization of NTFP in accordance with the relevant Government policies in force from time to time. The main objectives of such trainings should be broadly two fold. **First**, collection, exploitation and utilization of desired NTFP shall be regulated in such a manner that composition, regeneration and sustenance of forests are not adversely affected. **Second,** the DFO and his staff must work in tandem with local people and direct their efforts to ensure that local people benefit most from NTFP through even simple value addition where ever possible/desirable.

The DFO shall maintain a proper account of different NTFP items, their quantities collected, areas/forests from which collected, and period during which collected. An annual assessment of potential availability of various NTFP shall also be made in the beginning of each calendar year. Steps taken, in accordance with above regulations to ensure sustainable management of forests and fair deal to local people, shall also be recorded and reviewed periodically by the DFO and higher authorities. Even, the impact of transfer of NTFPs (MFPs) to the Gram Panchayats on the Forests & the primary collectors shall also be studied and annual reports submitted suggesting any changes if required.

All forests shall be strictly protected against forest fires, un-authorized grazing and illicit-felling. Effective measures shall also be taken to contain shifting cultivation and other encroachments in forests.

Compartment history files and Control forms besides other records shall be maintained in accordance with the Management Plan Procedure, 1991 and other instructions in vogue.

SUB-CHAPTER – 6.7

NTFP RESOURCE PROCESSING & MARKETING IN MAYURBHANJ

6.7.1 Forest and NTFPs

NTFP status in forests of Baripada Forest Division is similar to forests of Mayurbhanj District. Forests of Mayurbhanj produce a wide array of NTFP commodities which are extensively consumed as food, fuel and fodder besides being used for industrial purpose. Statistics / secondary information on availability of NTFP commodities in the district was not available; therefore during the Rapid Market Assessment and field investigation, different NTFPs were mapped based on the feedback from community and local traders. **Potential NTFPs**

Potential NTFPs were selected for detailed analysis and exploration of enterprise development options on following aspects.

a) Block wise availability of the NTFP product
b) Ecological and social significance
c) Volume of the product available in the Division
d) Economic value of the traded volume
e) Percentage of households dependent on its collection
f) Products contribution to household income
g) Percentage of households dependent on each of the NTFPs
h) Current Market (local and external)
i) NTFP"s economic potential to contribute to livelihoods of the dependent community

Based on the above factors, the following NTFP commodities were selected:

- ***Sal* (*Shorea robusta*) Leaf**
- ***Sabai Grass* (*Eulaliopsis binata*)**
- ***Mahua (Madhuca indica)* flowers and Seed**
- ***Chironji* (*Buchanania lanzan*)**

Local community‟s dependence on these products is very high and they also have a high potential to improve the livelihoods further.

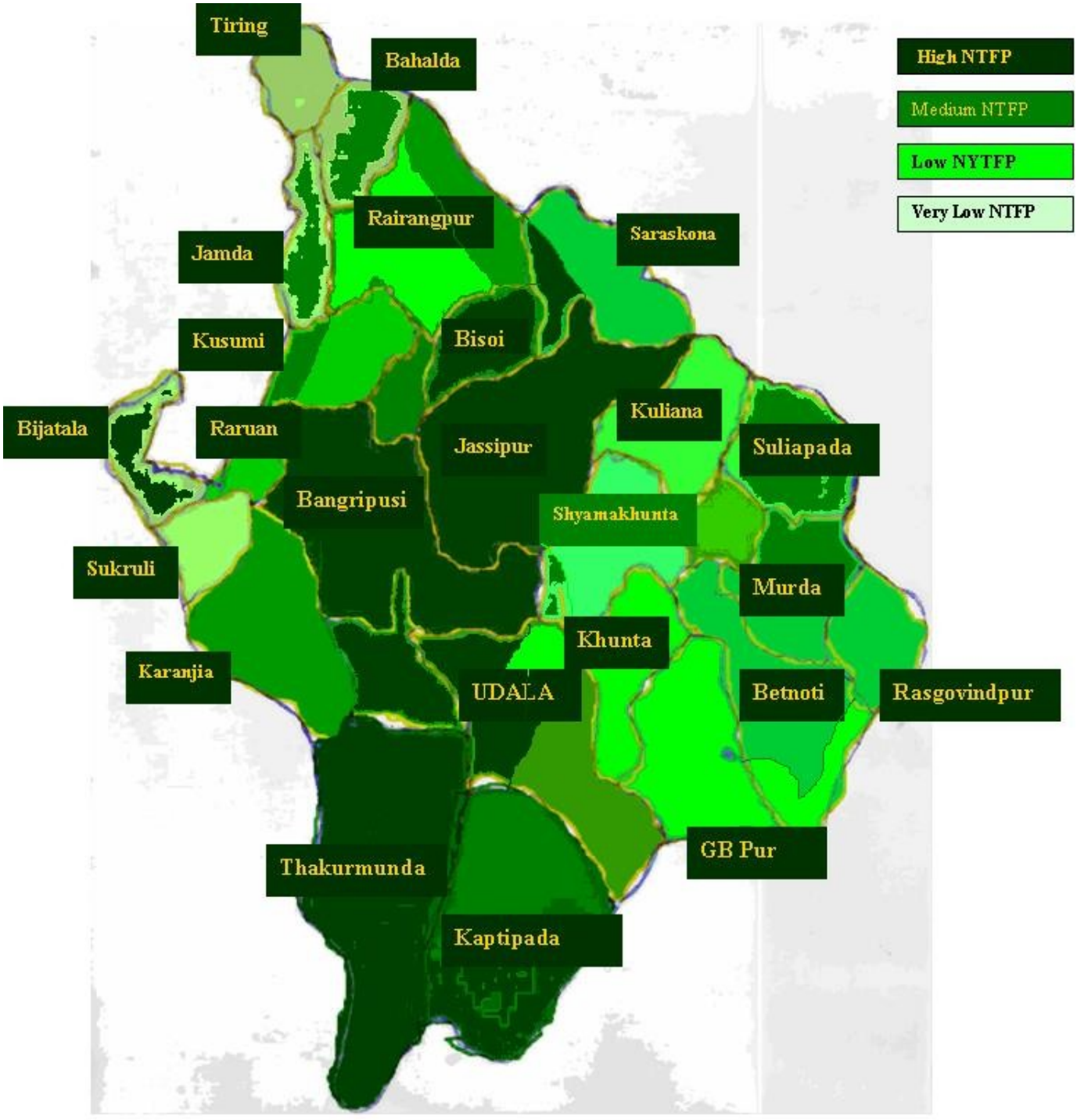
6.7.2 Block wise Availability of NTFPs

Based on the above exercise, block wise availability was mapped on a geographic map of the area. The information was gathered from secondary as well as primary sources. NTFP traders located in different blocks provided the information on arrivals patterns of different NTFPs in the local market and simultaneously PRA exercise helped in triangulating the information. Based on all the available information, the final picture is presented in Map 1 and 2. Details of block wise availability of NTFP is given in Maps below.

6.7.3 Volume of the Product Traded in Baripada Forest Division

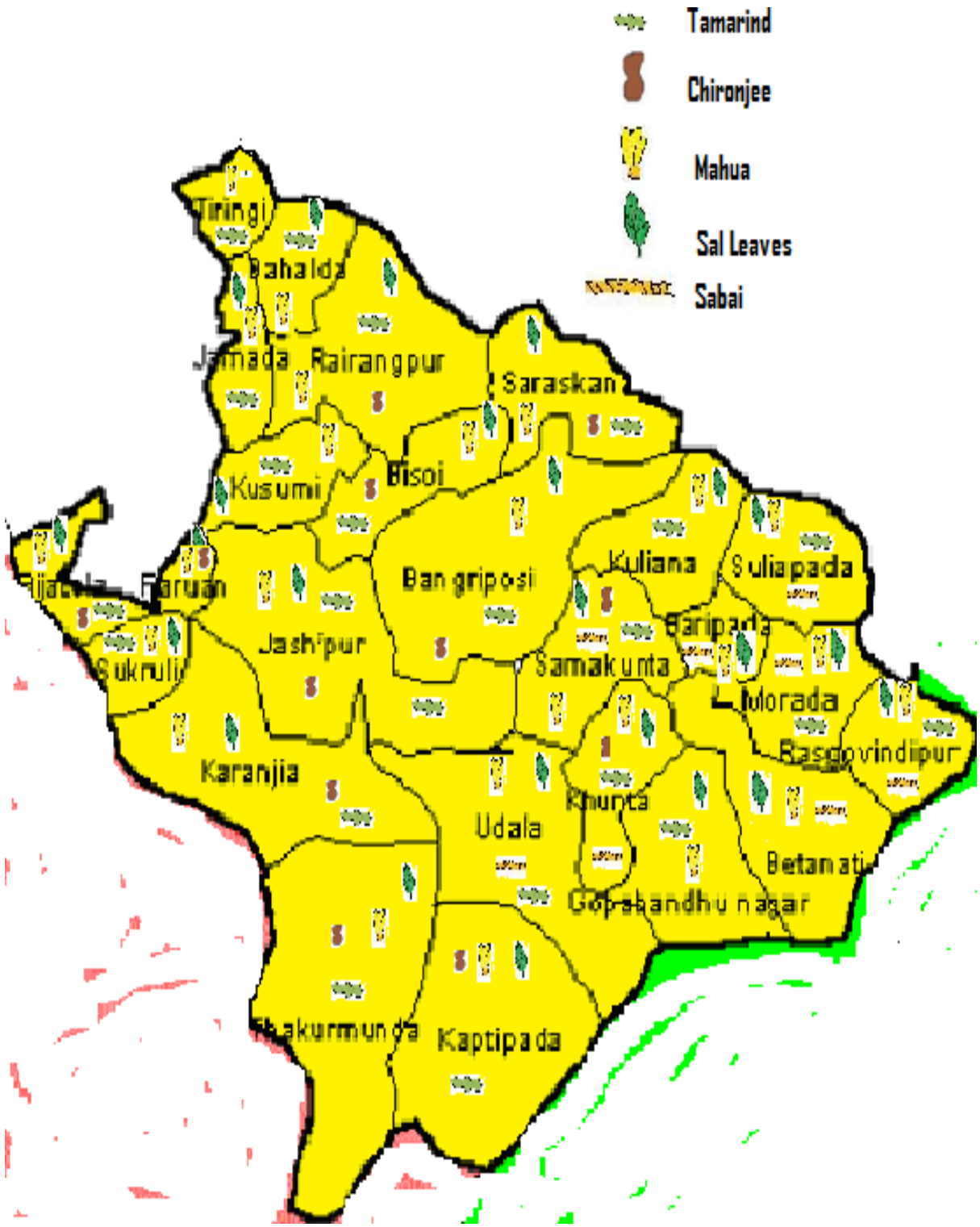
Sl.No.	NTFPs	Price (Block Level)	Volume of Trade	Turnover (Rs Crores)
1.	*Sal* Products	*Khali*-Rs.90/1000 *Dwipatree*-Rs.15/1000, Pressed Cups-Rs.120/2100 Pressed Plates-Rs.35/100	7.5 MT	20
2.	*Sabai* Grass and Ropes	Grass-Rs.5/kg Rope-Rs.18/kg	100MT	1
3.	*Mahua* Flower and Seed	Flower Rs.10/kg Seed Rs.10/Kg	1000 MT	1.5
4.	*Chironji*	Seed Rs. 20/Kg Kernel Rs. 120/Kg	100 MT	1

NTFP Density Map of Mayurbhanj

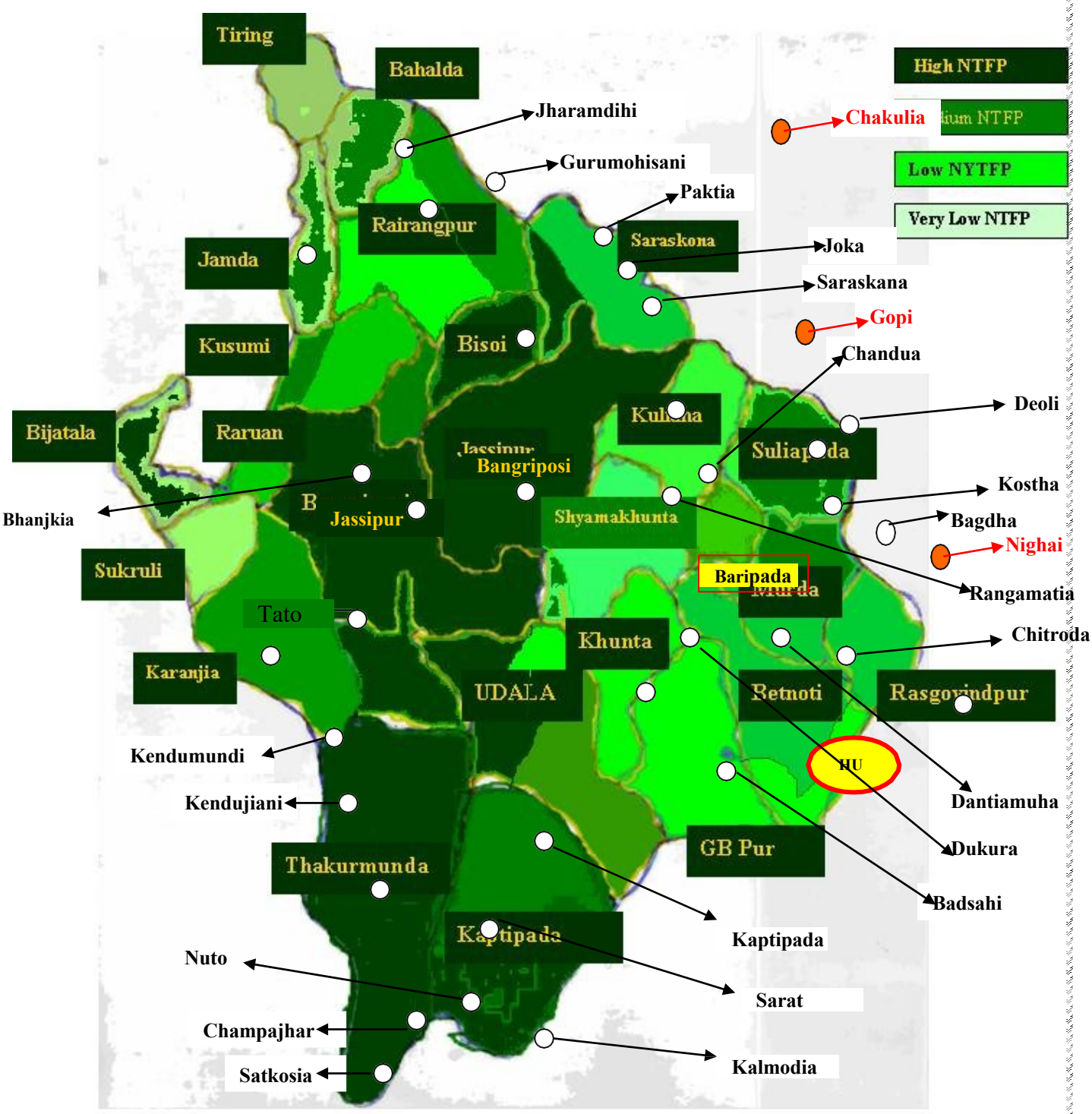


NTFP Density Map of Mayurbhanj

Block wise Availability of Major NTFPs



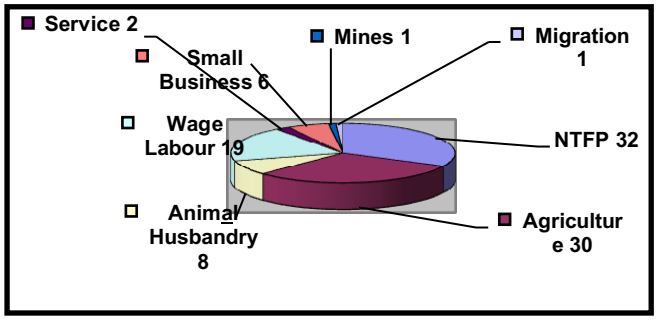
NTFP Haats of Mayurbhanj



NTFP Density Map of Mayurbhanj

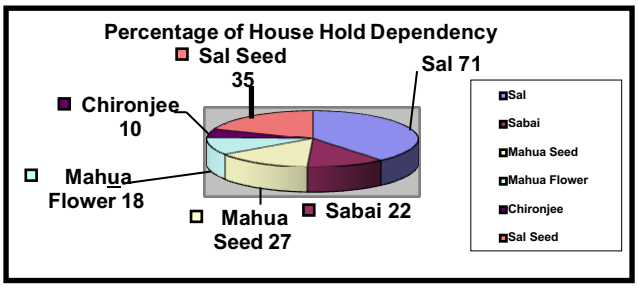
6.7.4 NTFP and Livelihoods

Contribution of different sources of livelihood in Gross Family Income



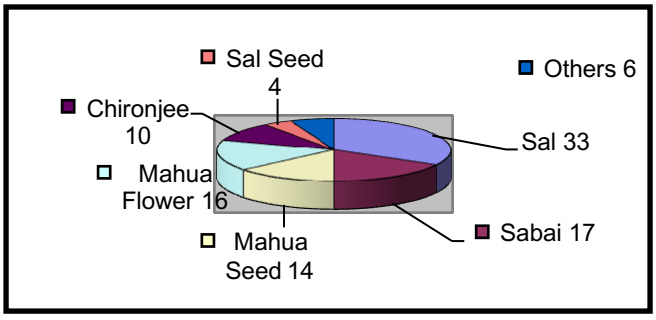
During the field research it has been found that most of the family income (Gross) comes from NTFP (32%) and Agriculture (30%) followed by wage earnings (19%), animal husbandry (8%), small business (6%), service (2%), mines and migration (1%). The primary collectors keep small stalks like goat and poultry birds for emergency cash needs. The wage earnings are on higher side in the District due to the fact that jobs are available under the MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act).

Household Dependency on different NTFPs



The field research in 50 sampled villages reveals that most of the families depend on *Sal* leaf collection (71%) followed by *Sal* seed (35%), *Sabai* (22%), *Mahua* Seed (27%), *Mahua* Flower (18%) and *Chironji* (10%).

Percentage of income from each NTFP



On account verification of family income from each NTFP *Sal* leaf collection contributed the maximum income (33) followed by *Sabai* (17%), *Mahua* flower (16%) *Mahua* seed (14%), *Chironji* (10%) and other NTFPs (6%) like Tamarind, Harida, Bahada, Mushroom, Honey etc.

6.7.5 NTFP Seasonality

Seasonality mapping was one of the very important factors in selecting the most potential NTFP as we need to see the period of employment which a particular NTFP could provide. When the NTFPs were mapped month wise in terms of its availability it was found that *Sal* and *Sabai* remains available for maximum number of days and could provide maximum employment followed by *Mahua*, and *Chironji*. Where as other NTFPs are less significant in terms of employment generation except Tamarind.

NTFP Seasonality in Mayurbhanj

NTFP	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mahua flower												
Mahua seed												
Chironji												
Sal seed												
Sal leaves												
Sabai												

6.7.6 Existing System of Collection, Processing and Marketing

The study on NTFPs was focused on five major products which evolved after the first Phase of the study. The species short listed were *Sal*, *Sabai Mahua* seed, *Mahua* flower and *Chironji*. A product wise detailed findings regarding collection, processing and marketing practices is described below:

6.7.7 Sabai (*Eulaliopsis binata*)

Sabai grass is grown in the open and degraded areas of forest and considerably high proportion of households have been using this resource to make ropes for domestic purpose, such as tying roof, making paper and fencing. Most of the raw material is used for rope making. The value goes on increasing after it is dried and finally when converted to rope.

This is one of the important sources of livelihoods for the tribal people in Baripada Forest Division. Sal and Sabai as a whole brings more than 80 % income to a house hold engaged in both the activities. Majority of the *Sabai* trading is done through weekly *haat* and involves number of intermediaries till it reaches the final consumer.

Product range vs price

Grade	Quality parameters	Per day capacity of processors in Rs.	Cost of raw material in Rs.	Use	Price offered Max-Min in Rs.
Grade-A	Tightly twisted, Yellowish brown Fine and smooth surface	2-3 kg per day	8/kg	Furniture	25 per kg
Grade-B	Loosely twisted as compared to grade-a colour is Yellowish brown but not so good looking, having smooth surface and thick appearance	4-5 kg per day	6/kg	Tent house, Roof making etc.	17 per kg
Grade-C	Loosely twisted, colour is brownish yellow but not so good looking, having rough surface and thick appearance	8-10 kg per day	5/kg	Paper	14 per kg

Stakeholders

Primary Growers

Primary growers belong to village community where most of the family earnings come from harvest and processing of *Sabai* grass. They either harvest *Sabai* from forest land or grow this crop in private land. Once the crop transplantation is done it remains for 15 to 20 years without any replacement hence the productivity goes on decreasing. They do not follow any scientific cultivation rather leave the field as such.

Rope Sellers/Makers

They are the landless poor community from the forest fringe villages who usually make ropes by purchasing raw material from haat or primary growers. They sell the rope in local market earning Rs. 300 in a week‟s time. The average capacity of a Rope Seller/Maker is around 20 to 30 kg a week if entire family members are involved in the production process.

Commission Agents

They are one of the important market players who invest their own capital on behalf of traders. They trap the rope sellers and negotiate the rate and in a week‟s time they get commission from the trader for whom they work. In this way they enhance the intake capacity of the market by floating their capital for purchasing rope from the rope sellers.

Medium Level Traders

The medium traders are buyers of rope or raw material from either primary harvesters or commission agents. They either sell it to big traders or supply it to paper industry. Generally they don‟t have storage facility but carries the purchased produce on hired tempo. Their purchasing capacity per haat day is around 25 thousand rupees worth of produce.

Big Traders

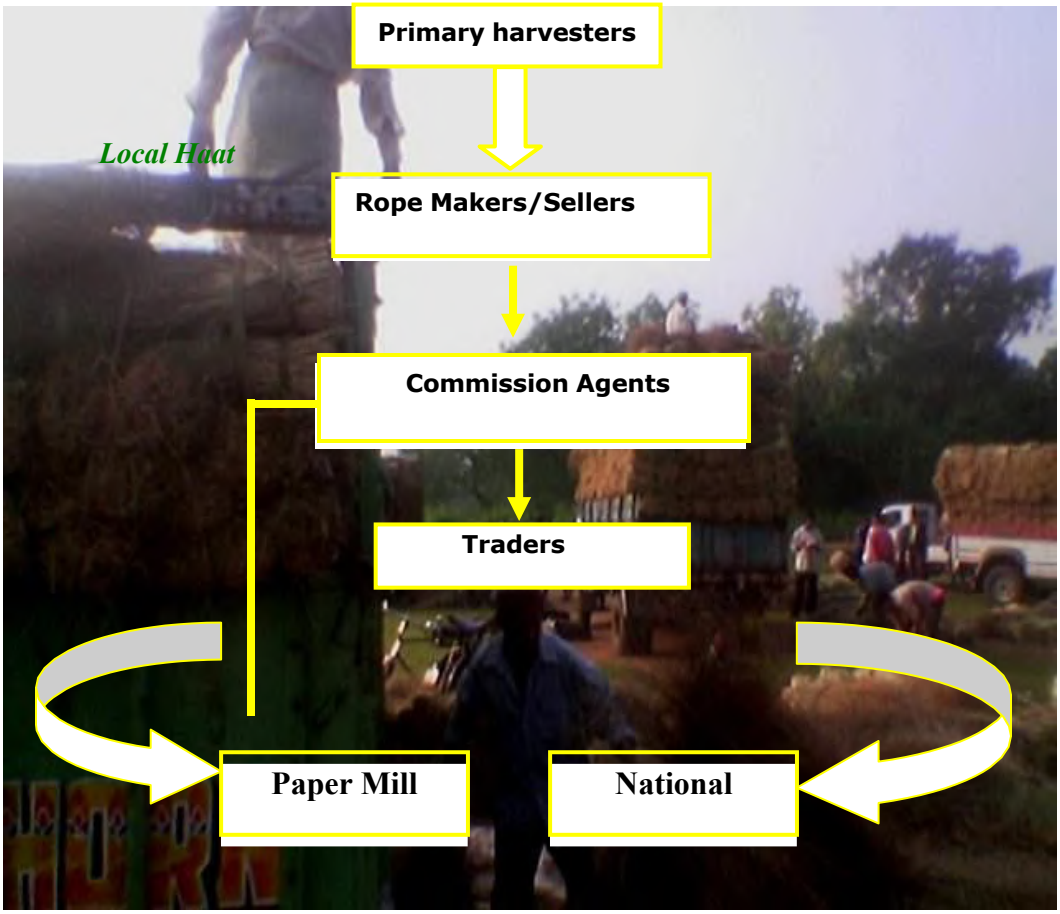
This category is of traders having greater capacity in terms of capital and infrastructure. They store the produce for 2 to 3 months and sell it in the month of February and March when the prices are very high. There are around 20 to 25 traders involved in *Sabai* business in Baripada Forest Division.

Paper Industry

Paper industry has a very important role where they influence the market by deciding the volume of purchase. They generally buy low grade ropes and grasses as a result the rope sellers prefer to make the same as it involves less manpower.

The sad part of the entire story is that the poor farmers purchase the same sabai that they sold earlier at lower price, from the traders at higher price later.

Market Channel (*Sabai* grass)



Harvesting and Value Addition

Harvesting

The raw sabai grass is harvested from the field in the month of September and October, and tied in to bundles of 40 kg.

Then the produce is either sold in the weekly haat or kept for drying.

Drying

The bundles of *Sabai* grass is sun dried either in the field or brought to house for drying it on the road side or drying floor. It takes a fortnight for complete drying if the intensity of sunlight remains good. The drying is done till it remains green and is sold within 4 to 5 months, other wise it becomes brown and fetches lesser prices in the market.

Hand twisting

The dried sabai grass is then twisted in to rope using both the palm. It takes two hours to make one kg of rope if it is done continuously. But generally the twisting is either done in spare time or during the cooking.

Wheel Twisting

After spraying water on hand twisted ropes it is further twisted by a roller twister which is locally known as *„Ghodra"*. It provides greater strength when dried under sun. The cycle wheel is used for twisting locally manufactured ropes at village level. Recently the people are using ball barring in the wheel to make it smooth while paddling.

Ranjha (Polishing)

The rope is finally polished called ranjha in local language. It is tied with some trees and rubbed against its surface to make it smooth. And after this process the rope is ready to be marketed.

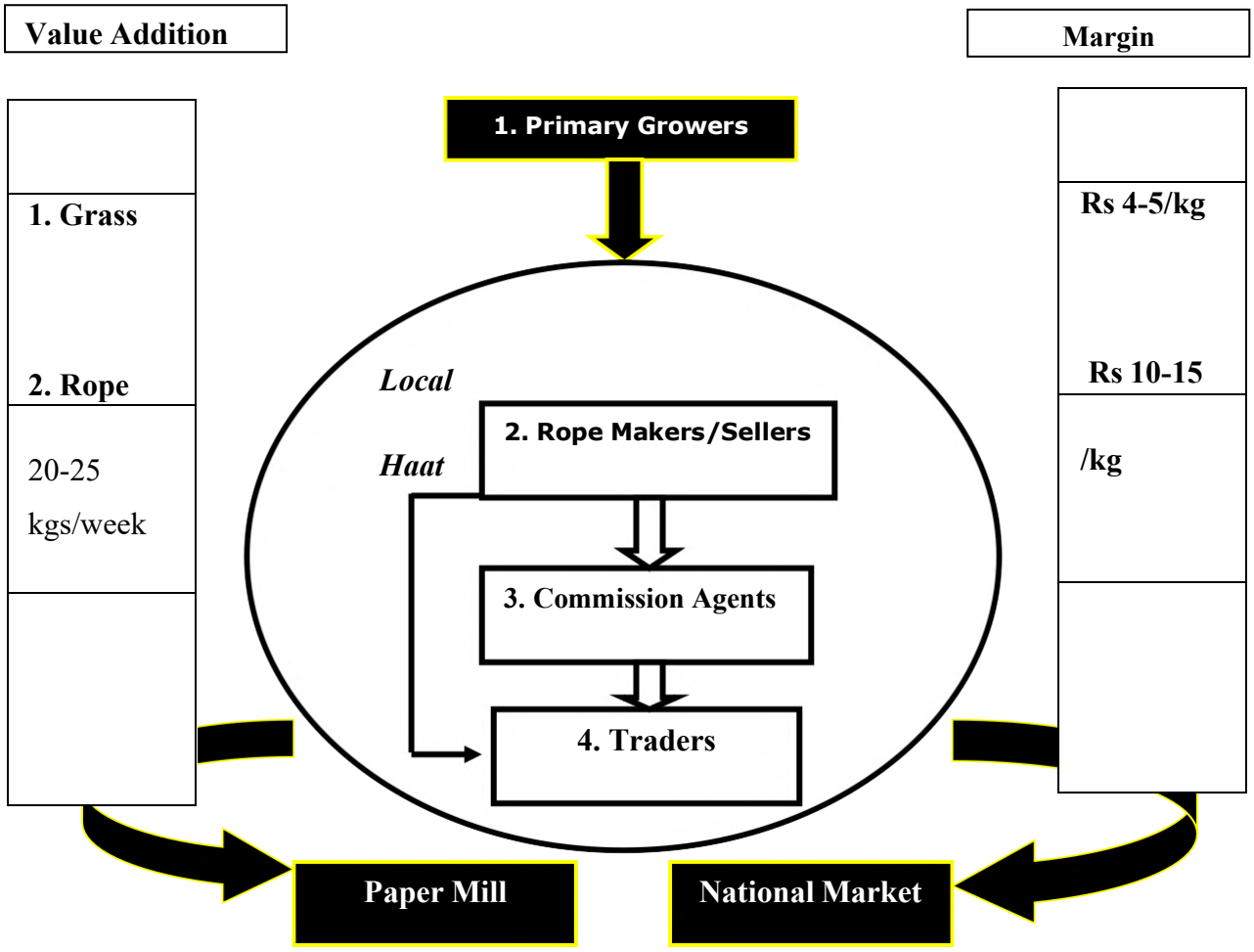
Bundling

After polishing the rope it is bundled for selling to traders in local weekly haat. This process requires skill as it should look beautiful and attractive to fetch more prices in the market.

Value Chain Analysis

The market of non-timber forest products (NTFPs) cannot be fully understood without a proper understanding of the position and behavior of actors in the value chain of NTFPs. Our analysis reveals that certain key entrepreneurs are a driving force of success throughout several NTFP value chains in the district. Where market information is scarce, e.g. where producers are distant from consumers, key entrepreneurs often govern entire value chain. The product wise value chain analysis is given below

Sabai



Presence of Stakeholders their holding Capacity in Quantity and Time

Stakeholders	Capacity	Presence/Coverage	Holding Time
Primary Growers	5-6 qty	50-60 in a village	5-6 months
Rope Sellers	20-25 kg	Same in each village	1 week
Commission Agents	No holding	15-20 per haat	1 day
Traders	25-30 tons	2-3 per block	1 week
Whole*sal*ers		15-20 (country)	1 to 3 months

Critical Functions

Primary Growers/Harvesters	**Rope Sellers**	**Commission Agents**	**Traders**
Price			
Rs. 5 (Grass)	**RS. 18 (Rope)**	**Rs. 20**	**Rs.25**
Marketing Functions of Each Stakeholder			
a)Harvesting b)Drying c) Bundling	a)Purchasing of Raw *Sabai* B)Drying c)Hand Twisting d)Wheel twisting e)Polishing f) Bundling g)Transportation to local *Haat*	a) Trading d)Accumulation Weighing e)Packing e)Transportation	a) Trading Accumulation b) Weighing c) Storage d) Transportation
Infrastructure/Technology/Communication			
Manual Bicycle	Manual Roller Twister(Ghodra) Bicycle	Capital & Transportation(Tempo)	Capital, Warehouse & Transportation(Truck) Well established Office
Limiting Factor			
-Lack of Capital -Lack of Scientific Know how	-Lack of Negotiating Skill -No Market information -Unorganized Sellers.	-Lack of Capital -No Infrastructure -No market Network -Little Market information	-No uniform policy in comparison to neighboring states

Relative Risk vs. Realization and Process Cycle Time

	Risk Taken	**Cycle Time**	**% Margin of Consumer Price**
Primary Growers	3	3-4 months	14-15%
Rope Sellers	4	5 -6 months (Raw material)	15-30%
Commission Agents	0	1 Day	5%
Traders	1	1-2 week	8-15%

6.7.8 Sal Leaf

Forest Manual reveals the story of *Sal* leaf collection in the year 1912 when a royalty of one *anna* was being levied on every *Bhara* (traditional load carried on shoulders) of *Sal* leaf that left the borders of the state. But in the year 1984, royalty on *Sal* cups and plates were abolished as per a decision of the Orissa High Court on the ground that it was no more a forest produce after being processed. Royalty, however, continued to be levied on leaf. Private parties procure *Sal* leaf from the primary collectors. Panchayat Samiti use to fix a minimum procurement price that the traders/ agents were obliged to pay to the primary collectors. However, there was no mechanism to check the malpractices in payments. The agents are powerful and it was close to a monopoly system under present system. As a result it was observed that the methods for *Sal* leaf collection was highly unsustainable as commercial exploitation led to gradual but consistent depletion of *Sal* forests in Orissa. In keeping with this view and on grounds of sustainable management of forests, *Sal* leaf was kept out of the commercially exploited category of NTFPs and was made a lease barred item in the March 2000, NTFP policy. On 4th October, 2000, restrictions on *Sal* leaf collection and trade were withdrawn locally in Baripada Forest Division where the Government Corporations (TDCC and OFDC) were asked to make procurement of *Sal* leaves through the Vana Surkshya Samitees (VSS).

The latest *Sal* leaf policy of September 2002 has put the ceiling at 2 quintals per Ha in the well-stocked forests and 1 quintal per Ha in the sparse growth area. It has also been mentioned that removal of *Sal* leaf will not be allowed from 1st January to 31st March and again from 1st June to 30th September. Restrictions have been put on removal of leafs from *Sal* saplings of less than 3 meter height. Plucking of leaf from any tree will be allowed up to 2 meters height and leaves at the top would be allowed to remain. Leaf shall not be plucked from the leading shoots and may be collected only from the branches and the non-leading shoots. Leading shoots of *Sal* sapling could be clearly visible from a distance after leaf plucking has taken place. The policy further states that, the state will fix a quantitative restriction section wise and this will be monitored by the forest staff through the transit permits. The local households cannot keep more than 5 Kg of *Sal* leaves, cups and plates. Though every thing is

mentioned in the policy but has a very little influence on ground due to mis-match between supply and demand of the product.

Sal leaf plates have been used by people during festivals, marriages, ceremonies since time immemorial in different forms as *Sal* leaves are considered to be auspicious for use. During 1965 some two to three traders started business of *Sal* cups (Donas) within Baripada Forest Division. These cups were round in shape and were stitched using bamboo sticks. This product started gaining market in the local as well as adjoining markets in Bihar and Bengal. However not many traders got involved in this business initially. A trader from Betnati introduced a Cup pressing machine in 1973. By 1975 the market of pressed cups grew and many more traders got involved in this business. By late seventies the product got popularity in other northern states like Punjab, Haryana, Gujarat and UP and different models in the machine started getting used to fulfill the need for new designs of plates. As the demand for *Sal* leaf plates increased during 1980s, the activity of *Sal* leave collection and plate making spread to other districts of Orissa like Balasore, Keonjhar, Nayagarh, Deogarh, Phulbani etc. Now there is a well established market in Betnoti (Block head quarter of Baripada Forest Division) where all the buyers as well as sellers exchange their goods.

During 80s and 90s, many new traders entered into this trade. New machines and introduction of new technology helped the traders produce different types and shapes of plates and cups. The trade of *Sal* leaves plates and cups slowly spread to other parts of Baripada Forest Division and in 90s local markets developed in Baisingha and Amardha in addition to Betnoti. During the year 2000 *Sal* leaf plates and cups also found export market and were exported through Calcutta to other European and South-Eastern countries.

Stakeholders

The main Stakeholders include primary collectors, Mobile Agents (*cycle wallahs and Khali agents*), Small processing units and traders (medium and big). Collectors and agents operate from the villages whereas the processors and traders are mainly concentrated around block headquarters.

Primary Collectors

Majority of this category are women who collect *Sal* leaves from the forest and earn their livelihoods. Their per day earning from the sale of *Sal* leaves with little value addition (Khali / Dwipatri) is around Rs12 to 15 per day. Though most of the primary collectors belong to tribal community and most of the cash income comes from NTFP collection, the dependency of Khadia tribe is more as compared to others as they collect more volume and variety of NTFPs.

Mobile Agents

There are about 300 mobile agents who gather *Dwipatree* (Twin leaves) from primary collectors. The concentration of this category is in those villages which are in close proximity to markets like Betnoti, Baisingha, Rasgovindpur, Basta and Amardha. These agents are also called as cycle wallahs as they roam around on a bicycle in the villages to procure Dwipatris. The collected *Dwipatrees* are then carried by the agents to Betnoti and are either supplied to the household processing units / processor cum traders or sold in the local *haat.*

The mobile agents start their business operation early in the morning and ends at late in the evening (12 hrs) traveling around 30-40kms of distance in a day. Most of them operate with a meager working capital of Rs.500 to 700 and earn Rs.100 to 125 in a day. They buy *Dwipatris* in cash from tribal households. Most of the agents worked as labourers in some pressing units earlier and when they accumulated some capital, they started this business by buying a bi-cycle.

Village Agents

Village agents are located in villages where they purchase *Dwipatri/khalis* on behalf of traders and charge a commission for providing space and services. They store the products in a small store house called *Phadi* and when the products are accumulated

in a critical volume the traders pick them by a truck to their processing units or warehouses.

Small Processing Units

There are large number of processors located in and around market places like Betnoti, Amardha, Rasgovindpur, Udala, and Baisingha. These units are small in size and operate with one or two pressing machines. Most of them earn their livelihood through this business where as a few of them also take it up as a source of supplementary income. The units are linked to traders to whom they sell their pressed plates and cups. They buy stitched leaves from either the mobile agents or from local *Haats* and then press it using family labour. Some times they are in contractual arrangement where they get raw material from traders and in turn they get pressing charges varying between 10 to 15 rupees depending upon the quality. They operate with a small working capital just enough to buy raw leaves. The trader supplies the packing material i.e. printed gunny bag to pack the finished product. The per day net income of a small unit (one machine two shifts) is around Rs.45 to 50.

Traders

There are about 200 registered traders in Baripada Forest Division. On the basis of the value addition they do, in terms of Processing, storage, capital investment and operational capacities, the traders can be further classified into two categories i.e. processor cum traders and big traders.

Processor cum Traders

More than 100 odd processors cum traders are involved in both trading as well as processing in Baripada Forest Division. *Dwipatris* and *Khalis* are purchased by them and processed into cups and plates by installing pressing machines. The processed material is either sold to big traders or sold in the domestic markets located in other states. These categories of traders have direct access to outside market. With 10 to 20 pressing machines in each unit, the average annual turnover of a processor cum trader is around 10 to 15 lakhs.

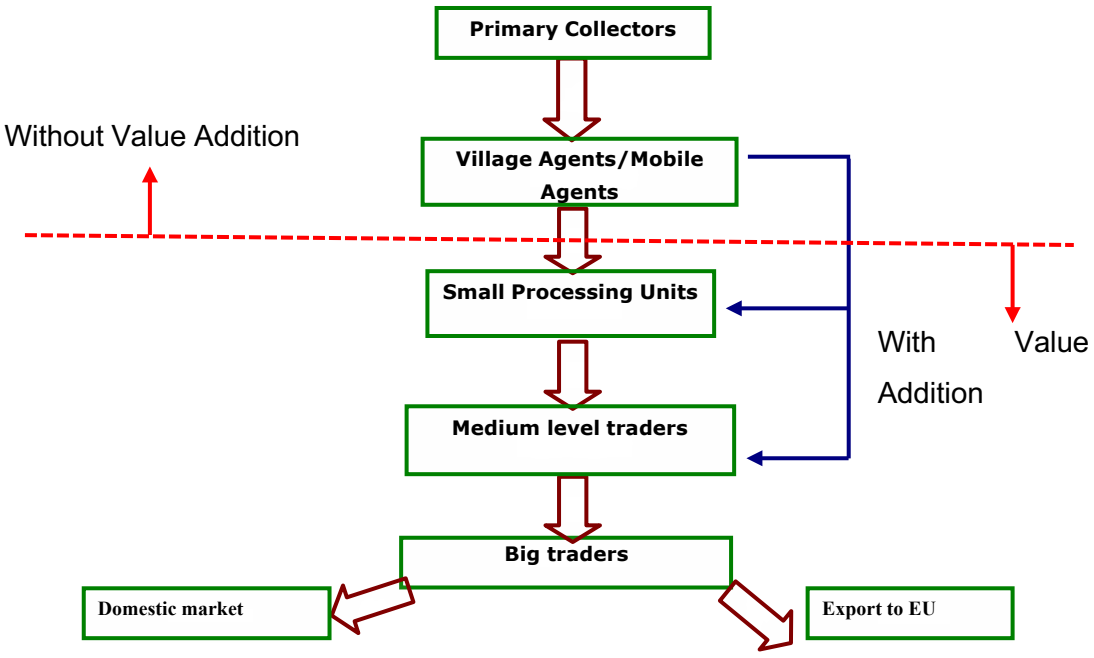
Big Traders

10 big traders, with an annual turnover from 2 crores each, have better access to outside market, market information, storage space and capital. Processed *Sal* cups and plates are purchased from household processing units, contractual processors and even from processors cum traders, and marketed. Value addition takes place at this point in terms of storage and packing.

Pressing Machine Suppliers

There are three machine suppliers operating in Betnoti and 4 in other places like Basta and Baleswar with a combined annual turnover of about Rs 1 crores. The machine suppliers take orders and supply machines to other districts also. It was noticed that not much of improvements have been made to the machine from the time it was introduced in the cluster way back in 1973. Machine suppliers are of the view that there is still a lot of scope to improve the machine in order to make it energy efficient.

Market Channel



Harvesting and Value Addition

Collection of raw leaves

The collectors of *Sal* leaves from the forest are primarily women. Collectors use 20 to

25 feet long pluckers during winter (September to January) season to pluck the leaves as leaves during this period are beyond their reach. Rest of the season the leaves are collected from the lower part of the tree and the fallen leaves from the ground. Generally twigs with 4 to 5 leaves are plucked and then the leaves are removed form the twigs. The practice is not to disturb the young leaves or buds. It takes 4 to 5 hours to collect 3000-4000 leaves form the trees and to make them into a bundle to carry home. They go to forest early in the morning and return by 10 or 11 am. . Those who make *Kahlis* have to pluck big and quality leaves on to branches of the tree using pluckers. Those who engage themselves in *Dwipart*i making mainly pick up leaves from the ground.

Local communities point out that enough *Sal* leaves are available and they need not even go deeper in to the forest and operate mainly on the fringes. It is however point out that this unsustainable practice of plucking out twigs along with leaves should be stopped. Although legally collection of leaves is allowed for 6 months, it is said to be in vogue for about 10 months. The local staff should ensure that plucking of Sal leaves should be confined to 6months only.

Drying of raw leaves

The process of drying the leaves is most important aspect of *dwipatri* and *khali* making for *Dwipatris*. The leaves collected from the forest are first kept in an open space for 3-4 hours for drying. The time should not exceed more than this as it could reduce the flexibility and quality of the product. These dried leaves are kept in open throughout the night to gain some moisture which helps in avoiding breakage while stitching. The drying place is usually located either in the

front or back of the house and is made up of mud and cow dung. Very few households can afford to have concrete drying yards. Most households face extreme difficulty in the rainy season and having no option, Sal leaf collectors resort to distress sales in this season.

The leaves plucked for *Khalis* are first stitched and then dried for 3-4 hours. These *Khalis* are kept pressed throughout the night under some heavy load so that they take a flat shape.

Stitching of leaf

Dried leaves are stitched into *Dwipatris* and the green leaves are stitched in to *Khalis. These stitched leaves will become the raw material for making leaf plates and cups by pressing. Normally* it takes 3 hrs for a primary collector to stitch 1000 Dwipatris and 7 to 8 hrs. for 500 *khalis*. There are different sizes of *khalis* available in the market but *khalis* with 11-12 inch diameter is most popular. However 16 to 18 inch *Khali* fetches maximum price in market. The standard unit of count of *khalis* used in the market is called Chakki which contains 40 *Khalis* and 25 *Chakkis* make a bundle (Chakki is a local unit of counting Khalis where 1 Bundle=25 Chakki=1000 khalis). During rainy season *khalis* are sold without drying and the prices are drastically low i.e., Rs 50/bundle as compared to normal price of Rs 75 / bundle. There are complaints of stick falling during handling / transportation and leaves coming out.

In some places like Basta, stitching is also done by machine. However traders point out that stitched leaves using thread is not accepted in the North Indian market. Some of southern states do have a requirement of these kinds of stitched plates.

Packaging

The *khalis* and *Dwipatris* are packed loosely using sabai ropes. Most of the people being illiterate, there are mistakes in counting the stitched dwipatris and khalis. Many a time the bundles contain less number of leaves as compared to what is stated.

Transportation of *Dwipatri*s and Khalis

*Dwipatri*s are generally transported by *cyclewallah* from the villages situated near the market where as from far-off villages this is done by either agents or traders. The carrying capacity of a bicycle is around 35000 *Dwipatri*s and a pickup van is around 7 lakhs. *Khalis* are usually transported by an auto rickshaw or a van depending upon the situation. These vans/ auto rickshaws are sent by the processor cum traders. Usually the traders are in regular contact with the village level agents who procure and sometimes store the produce on behalf of the traders. These traders have also made their own warehouses in the villages.

Pressing of leaves into cups and plates

Processing units use electric pressing machines to convert the stitched leaves into cups and plates. As stated earlier this processing is done either at Small pressing unit or at Contractual processor/ processor cum trader. Most of the small units process only *Donas* (Cups) whereas the plates are pressed either at contractual processor‟s place or at processor cum trader‟s place. Two sets of dwipatris are pressed together to make a cup and two sets of khalis are pressed together to make a plate. Often a thin polythene sheet (5”×5”) is used in between the two dwipatris but it is not advised to consume hot food in plates prepared out of polythene. The Dwipatris and Khalis are pressed on a hot machine which helps to give sufficient tensile strength and proper shape. The machine consumes 3 to 4 units of power for pressing one bundle of cups (2100 cups) and 2 units for a bundle of plates (1 gunny bag or 350 to 400 pressed plates). The cost of polythene is Rs 0.05 per cup or plate.

Transportation Outside Baripada Forest Division

There is no electricity in most of the forest villages. In the villages that have electricity, primary collectors can not afford to purchase and install a machine. Most units operate on illegal electrical connection, as they believe that payment of electrical dues will make the whole process unviable.

During Dec-Jan months, the price of raw material escalates without any rise in price of finished product. This causes lot of hardship to those processors who do not have capital and space to store raw materials. Most traders who store the raw material make best use of this opportunity.

Storage

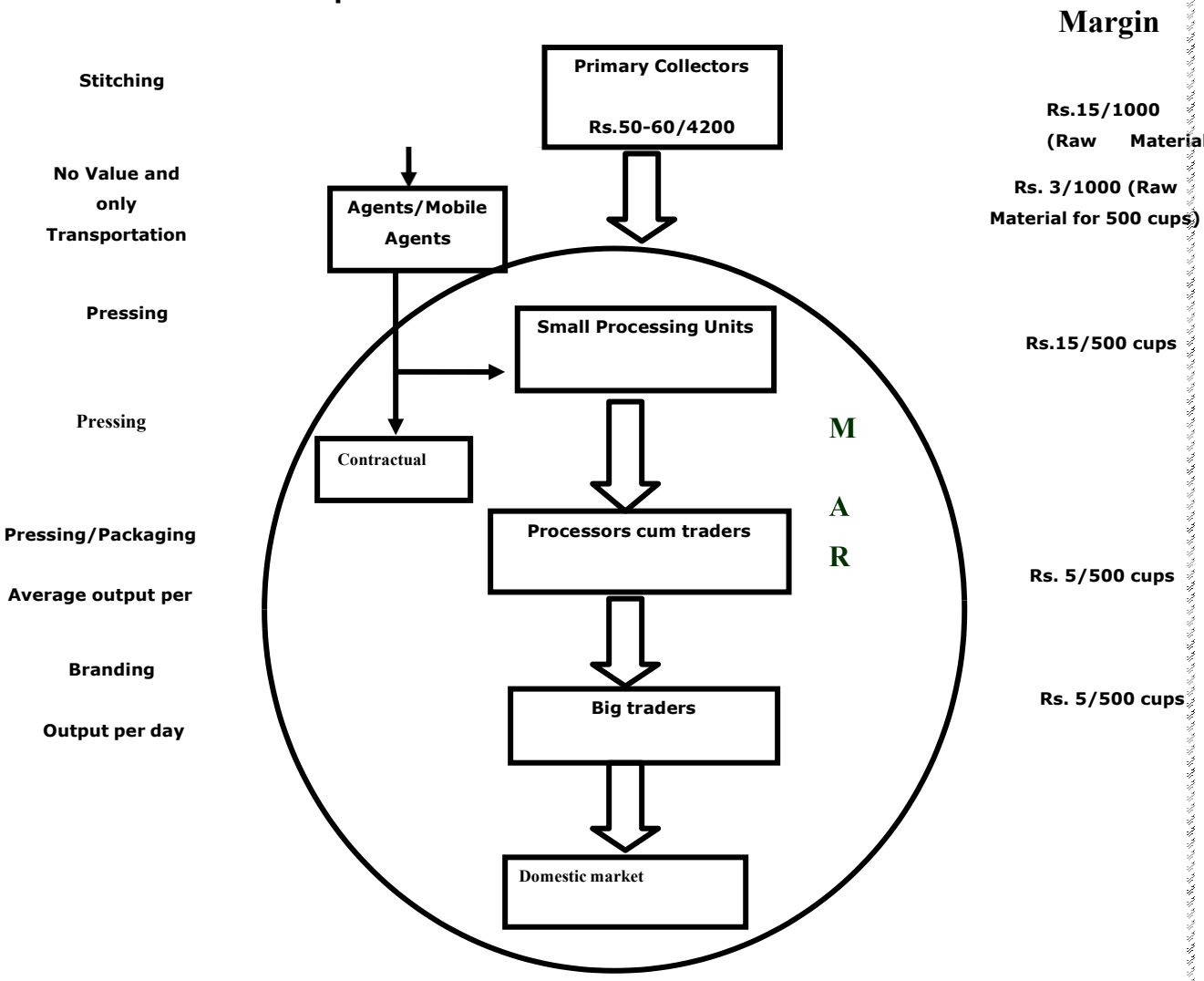
The traders purchase plates and cups from household units, contractual processors or small traders and store them in the go-downs, so that when they get an order they have sufficient stock to supply immediately. Usually stocks are maintained for 15 to 20 days in the go-downs.

Transportation

In order to reduce the transportation costs mostly return trucks are used as the mode of transportation. Transport agents play a vital role in arranging return trucks to the traders.

Value Chain Analysis (1 bundle of Cups containing 2100 cups)

Value Addition and Output



Presence of Stakeholders their holding Capacity in Quantity and Days (*Dwipatree*)

Stakeholders	Capacity	Presence/Coverage	Time
Primary Collector	1000-2000(*Dwipatree*)	50-100 in a village	1-2 days
Mobile Agents	35000(*Dwipatree*)	1-2 in each village	12 hrs
Village Agents	4-6 lakhs(*Dwipatree*)		1 week
Small Processing Units	1 lakhs(*Dwipatree*) 1 to 2 gunny bags of processed Cups	15 to 2000 in the Division	1 week
Processor cum Traders	1-2 truck loads of processed Cups	100	1-2 months
Big Traders	3-4 truck loads of processed Cups	10	1 week

Critical Functions

Collectors	*Agents*	*Small Processing unit*	*Processor cum traders*	*Big traders*
a)Collection b)drying c)Stitching of leaves	a) Collection from HHs b) Open Packing c) Transportation of Raw materials plates to processing units	a) Processing b) Sorting c) Poly Packing d)Transportation to Traders	a) Collection from processing units b) Processing (some of them) b)Sorting c) Poly Packing, Weighing, Transportation to end consumer or big trader	a) Collection from processing units c)Branding d)Packaging e) Weighing f)Transportation to wholesaler or exporters
Infrastructure/Technology/Communication				
By foot	-Cycle	Operate from own house. Pressing Machine, Mobile phone.	Operate as a small industry. Pressing machine, Cutting machine & Hired/ owned Mini truck	Operate from an established office with Warehouse facilities. Hired/ own Trucks & tempos, telephone, mobile
Limiting Factor				
	Lack of working capital	-Excess of raw material -Lack of working capital	-Lack of working capital -Less network -No infrastructure	-High risk -Lack of credit facility -No brand development in product

6.7.9 Mahua *(Madhuca indica)*

Mahua flower is one of the major non- nationalized NTFP in Baripada Forest Division, which is abundant in all forest areas. Tribals consume the flower, which is a rich source of sugar, vitamin and calcium and provides nourishment to them. *Mahua* flower has 70% sugar content and is used mostly for making liquor.

State excise laws have always been dominant on trading of *Mahua* flower in the state except for a brief period when it was nationalized. The excise department issues permits for collection and storage by charging a nominal license fees.

Mahua was nationalized long back in April 1991 to find outlets for its utilization as distilled liquor was banned in Orissa in 1990. TDCC and OFDC were entrusted to trade *Mahua* from April 1991. The corporation entered in to *Mahua* trading without any plan and market linkages subsequently they fixed the purchase price at Rs. 3 per KG in the first year. But Rs. 1 in the neighboring state of Bihar (present Jharkhand).As a result, Government agencies were saddled with *Mahua* from the neighboring state in addition to the production inside the state. But then ultimately it had to be sold in the Ranchi market. The agencies had to resort to distress sale at Rs. 0.5 to 1 a KG, while the total cost came to Rs. 5 including overheads. A substantial amount ended up as mere waste to save the government agencies storage cost. TDCC and OFDC sustained losses of Rs. 9 and Rs. 20 crores respectively. The only gainers were the agents who bought *Mahua* in Bihar and sold off in Orissa due to the price difference.

After this incidence the same situation came in where excise department became the dominant player and traders became monopolist and started exploitation of Primary Collectors where they were forced to sell their produce at very low prices. Again in March 2000 the control was transferred to *Gram Panchayats* but no significant change has been observed in the ground realities with regard to *Mahua*. Excise Department still continues to hold control over the licensing and hence it is only a very few powerful private players with big financial muscle who control the trade.

Stake Holders

Primary Collectors

Mahua collectors belong to usually economically disadvantaged class in the village, generally tribals and lower caste. They do regular collection of *Mahua* for their livelihoods for self consumption and also sell it to local shopkeeper or *Vyapari* in exchange for Salt or cash.

Village Shopkeeper/*Vyapari*

The village level trader or *Vyapari* who is quite influential is usually a village shopkeeper or some other person working for block level trader on commission basis.

Many times, shopkeeper also works as an agent for some big trader. Shopkeeper provides all essential commodities to collectors on credit which is repaid by selling collected NTFP. Whereas middlemen distributes advance money (provided by town level trader) to collectors prior to harvesting season to ensure purchase of produce. Usually they get a commission of Rs. 100 per quintal. Purchase usually takes place at very low rates without any grading due to low awareness of collectors and their urgent need for money.

Level –I Traders

These are generally agricultural/kirana/CNF agent or merchants or small businessmen who have diversified into NTFP trading. They usually appoint commission agents and also visit nearby villages for collection. They are usually located at haat /weekly market place where purchases are also done directly by traders on haat day.

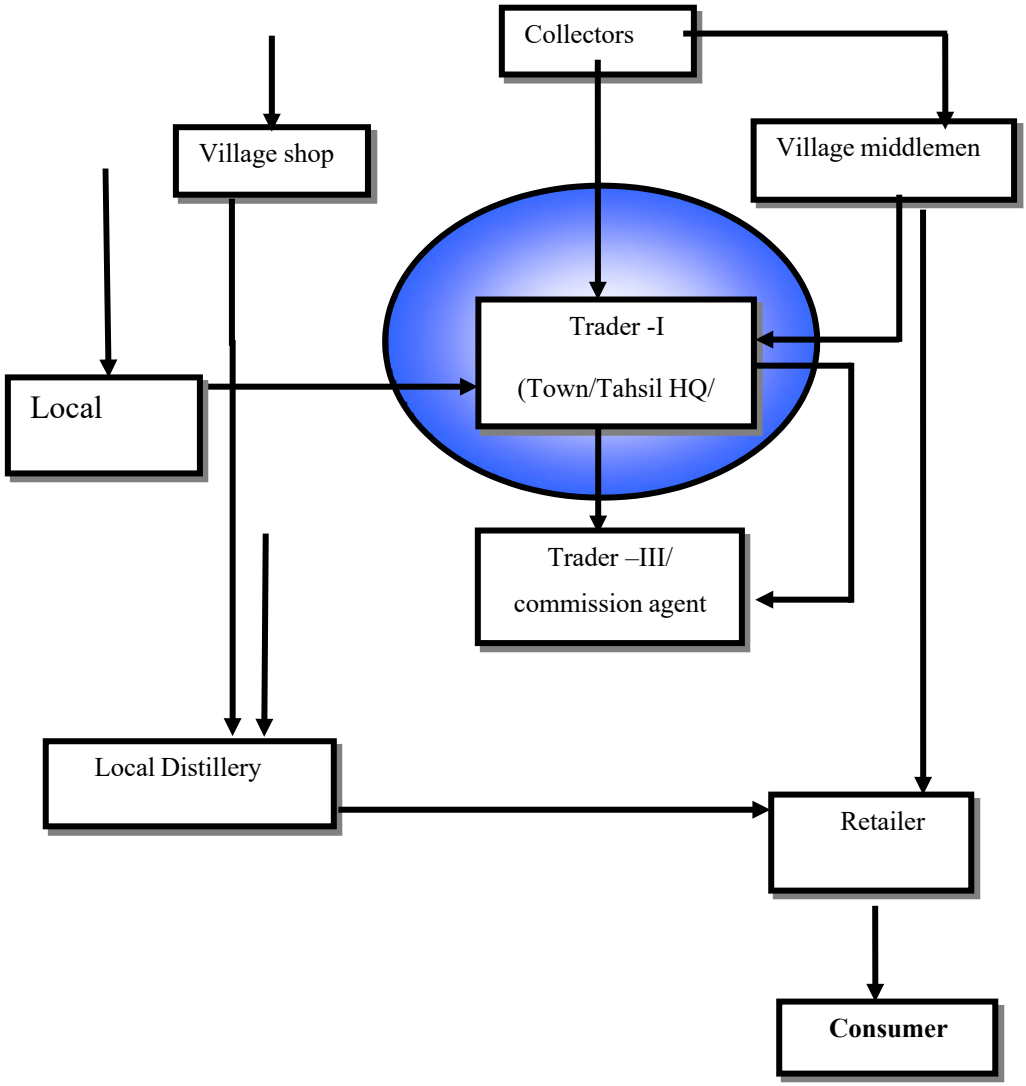
Level –II Traders

Traders at level –II are specialized merchants dealing only in NTFPs at national level in terminal markets like Ranchi, Raipur, Kolkata and Kanpur. They purchase from all major markets across the country and sell it to bulk buyers (processing units, industries), exporters and also distribute it to retailers. Purchase and selling prices of NTFPs is mainly governed by traders of these markets on the basis specific demand generated in national and international markets.

Processors/ Industries

They are either the traders or industrialists who purchase *Mahua* directly from primary collectors or any one of the intermediaries. There are some block level traders having expeller units where as there are some industrialist who operates through agents have solvent plants, the interesting part of the story is that the solvent plants pay higher price as compared to expeller units.

Market Channel (*Mahua* Flower)



Harvesting and Value Addition

Collection

Collection of *Mahua* starts from first week of March and continues up to April last. The harvesting period is said to be from the time when one basketful of flowers can be collected from a tree. All family members including children are involved in collection. Collectors leave for forests in wee hours at 4am as they have to guard the trees and return back by 11am. After collection, the ground under the trees is cleared with help of controlled fire which should be stopped. It was found that *Mahua* trees in forest are captured and guarded by villagers on first come first serve basis in every collection season. Collection period of *Mahua* flower is highest among all NTFPs

after *Sal* and sabai, which lasts for 30-35 days. There are three distinct phases in which flower drop are available to collect.

- First Phase: This stage lasts for 5-6 days. During this period the flowers have a shrunken appearance. After drying the final yield is only 25% of the total collection.
- Second Phase: It lasts for a week. The quantity of flower that drops during this period is highest. Flowers have a bold and succulent appearance. The final yield after drying is 50% of the total collection.
- Third Phase: This is the last phase of flower dropping season, which lasts for a week. This is similar to Shuru and the flower posses a shrunken appearance. The yield after drying is again 25% as in Shuru phase.

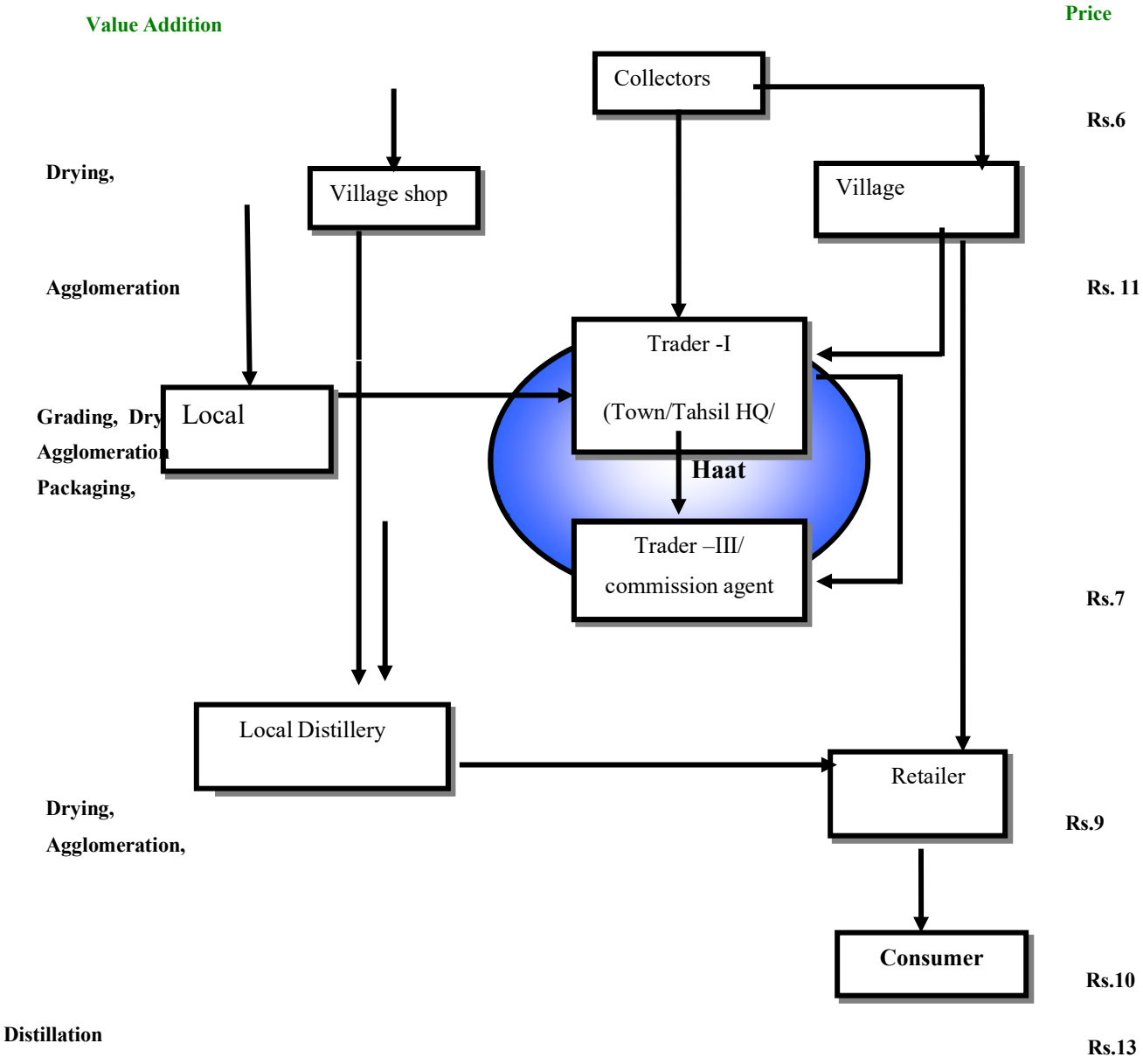
On an average 12-15 kg of *Mahua* flowers are collected per person per day. However, children are able to collect only 5-6 kgs per day. The total average collection per family during a season is about 200 kgs of dried *Mahua* flowers.

Collectors also retain a part of collected *Mahua* for their own consumption. Approximately 15-20 percent of total collection is kept for domestic consumption in earthen pots sealed to keep them away from moisture.

Storage & processing

After collection, *Mahua* flowers are spread on the ground for drying in the sun for 4 - 5 days in order to reduce their moisture content. The storage is usually done in gunny bags inside house or in open heaps. *Mahua* without moisture content is red in colour and this is considered to be of good quality. But if stored with high moisture content, the flower becomes black in colour and fetches lesser price in the market. Due to improper storage techniques, *Mahua* flowers often turn black in rainy season due to fungal infection. Because of this reason collectors usually sell *Mahua* prior to rainy season. No value addition is done at collector level except for drying.

Value Chain (*Mahua* Flower)



6.7.10 Mahua Seed

Mahua seed is obtained by breaking the shell of the fruit, which is extracted by removing pulp. The seed is then dried in sun and stored in gunny bags. It is an important oilseed for the tribes. The oil is used for cooking and lighting lamps. *Mahua* oil is also used for making soaps and the fat when properly refined can be utilized in confectionary and chocolate making.

Stake Holders

The stakeholders of *Mahua* seeds are same as *Mahua* flower.

Harvesting and Value Addition

Collection

Collection of *Mahua* seed, which is popularly known as *Tulo* or *kachda*, is done in month of May and June. Seed collection is done in small quantity in comparison to *Mahua* flower and usually children and female are involved in collection. Fruits ripen after one month of flower collection and fall of their own. Collection of *Mahua* seed continues for 15 to 20 days where they are able to collect 30 to 40 kgs per day .A small portion of seed is kept for self consumption as they extract oil from it to use as vegetable oil. Selling of *Mahua* seed is also done through middlemen as in case of *Mahua* flower.

Deseeding

After collecting the seeds from forest floor they are spread under the sun for further drying and deseeded with the help of small stones. Each seed is pressed against two small stones and kernel is taken out.

Drying

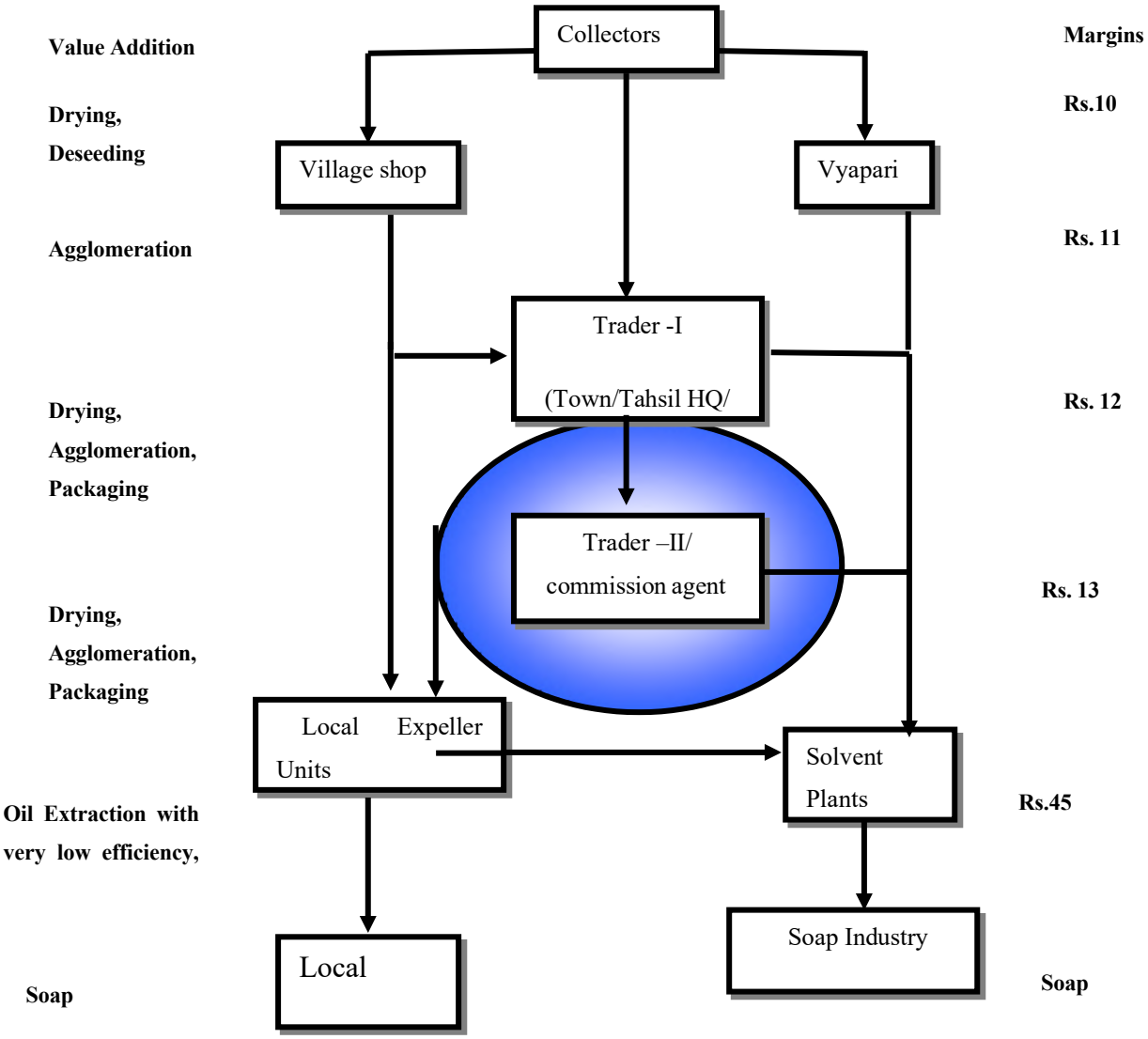
Kernels extracted from the seeds are further kept for 6 days under sun for drying and then packed in gunny bags.

Oil Extraction

Method	Oil content
Traditional-	10-12%

The dried kernel is then used for oil extraction either by expeller units or solvent plants. Though oil is also extracted locally through traditional methods but the oil content is very low where as it has been found to be very high in solvent plants. Many a time de-oiled cake of traditional and expeller units are being purchased by solvent plants for further extraction of oil.

Value Chain *Mahua* Seed



Primary Collector	*Vyapari(VP)*	*Commission Agents(CA)*	*Traders*	*Processors/ Industries*
a)Collection b)drying	a) Collection from HHs b) Gunny bag Packing c) Transportation of Raw materials to Traders	a)Transportation to Traders	a) Collection from CAs and VPs b)Sorting/Grading c) Poly Packing, Weighing, d)Cleaning f) Transportation to Processors	a) Collection from Traders b)Processing f)Retailing
Infrastructure/Technology/Communication				
By foot	-Cycle	Cycle Mobile phone.	-Godown -Capital -Market Network -Vehicle Phone/Mobile -License	-Processing Machine Market Network -Vehicle Phone/Mobile - License
Limiting Factor				
-Unorganized Collectors -Lack of holding Capacity	Lack of working capital	-Lack of working capital -Lack of Market Information	-Lack of working capital -Tedious Excise licensing System -Volatile price	-High risk -Lack of credit facility

6.7.11 Chironji (*Buchanania lanzan*)

Chironji is popularly known as *Chaar Guthli* or *achar.* The fruit is greatly valued for its kernel and is widely used as a flavoring agent in sweets, milk products and other edible items. The taste is somewhat a mix of pista and almond. Even the ripe fruit of the tree is quite delicious and is widely consumed by tribals.

Both kernel (*Chironji*) and the seeds (Chaar guthli) are traded extensively. The seeds yield edible oil, which is often used as substitute for almond oil. The price of *Chironji* fruit depends upon the percentage of seeds having the kernel as in the unripe or overripe fruits. Large and intact kernels fetch better price than broken or small ones. As the *Guthli* varies greatly in size, extracting intact kernels becomes a difficult task for collectors. Because of this reason almost all the collectors tend to sell whole fruit instead of kernel.

Stake Holders

The category of stake holders is similar to that of *Mahua* where Village shopkeeper or middlemen sell it to trader-I who sells it to trader-II in city markets (Betnoti). Trader-II supplies it to terminal markets through commission agents in Delhi, Kanpur and Agra. In addition, trader-I and II also supply *Chironji* fruits to processing units which extract kernel from it which is sold as finished product. Khari Bauli market is the larges market of *Chironji* which is situated in old Delhi near the Sadar Bazar. This is largely a wholesale market for products like spices, dry fruits along with NTFPs.

There are more than 50 traders including some commission agents in this market. Trading mostly takes place at individual level by traders.

Being the apex market in the country for majority of NTFPs, traders usually specialize in few selective NTFPs, which are procured in very large quantities from across the country. The market is very organized and distributed product-wise among traders.

Commission agents also play a key role and the process of sale through agents is as follows:

- 70% payment (including transport) to seller after inspection
- Inventory carrying of Rs 3 per bag and interest rate of 1.65% charged
- 6.5 % kept by agent as standard commission
- Rest 30% is paid after sale of the produce.

The buyers in this market usually include all major manufacturers of *ayurvedic* products (Dabur, Himani, Zandu, Baidyanath) and other bulk buyers. These traders also supply to exporters and distribute products in the retail channel.

Mal-practices lead to low price realization

Villagers sometimes also adopt wrong methods to increase the percentage of Chironji while selling. They soak Chironji in water, two to three days before they plan to sell, and dry it. Thus water content increases the weight of Chironji and larger number of fruits tend to sink and hence traders pay less price for that.

Harvesting and Value Addition

Collection

The harvesting of *Chironji* starts from the last week of April and ends in mid June. Although the fruit ripens only by mid May, collection is usually complete before that in an unripe condition (within a span of 8-10 days) due to competition among collectors to collect maximum fruit. Collectors from neighboring villages come to pluck immature *Chironji* during night hours if collectors of one village exercise some discipline by waiting for mature fruit.

Collection is usually done on daily basis. Usually all family members go for collection in the morning around 7 am and return by 3 pm. Collectors go together in group of 15-20. For collection of *Chironji* fruits, collectors clean the ground and then shake the branches. The ripe fruits fall on the ground. Fruits that do not fall off the tree by shaking, are plucked by using sticks or climbing the tree. In many cases, collectors tend to chop small branches laden with *Chironji* fruit and this has adverse affects on the growth of the tree. This practice of chopping branches should stop.

In collection season, one person is able to collect about 4-5 kgs of fruit per day. Head load of fruits is carried in baskets from the forest. Average collection per household is 40-50 kgs of dried *Chironji* fruit. Approximately 10-20% of *Chironji* is kept for domestic consumption and rest is sold.

Processing and Storage

Most of the collectors are not involved in any kind of processing except for washing and drying. The collected fruit is washed in water and dried in the sun for 5-7 days. After drying *Chironji* is stored in gunny bags or in structures called *Kothis* made inside the house. Sometimes storage is done in heaps in the open. Properly dried *Chironji* fruit can be stored for one year. But damage of produce by rats is a common occurrence in villages.

Only few collectors decorticate the fruit manually using stones or wooden sticks. The collected fleshy fruits are hammered with stoned to remove fleshy portion and then seeds are washed with water to remove the remaining fleshy pulps. The seeds so obtained are dried in the sun. The dried seeds are then subjected to hand driven

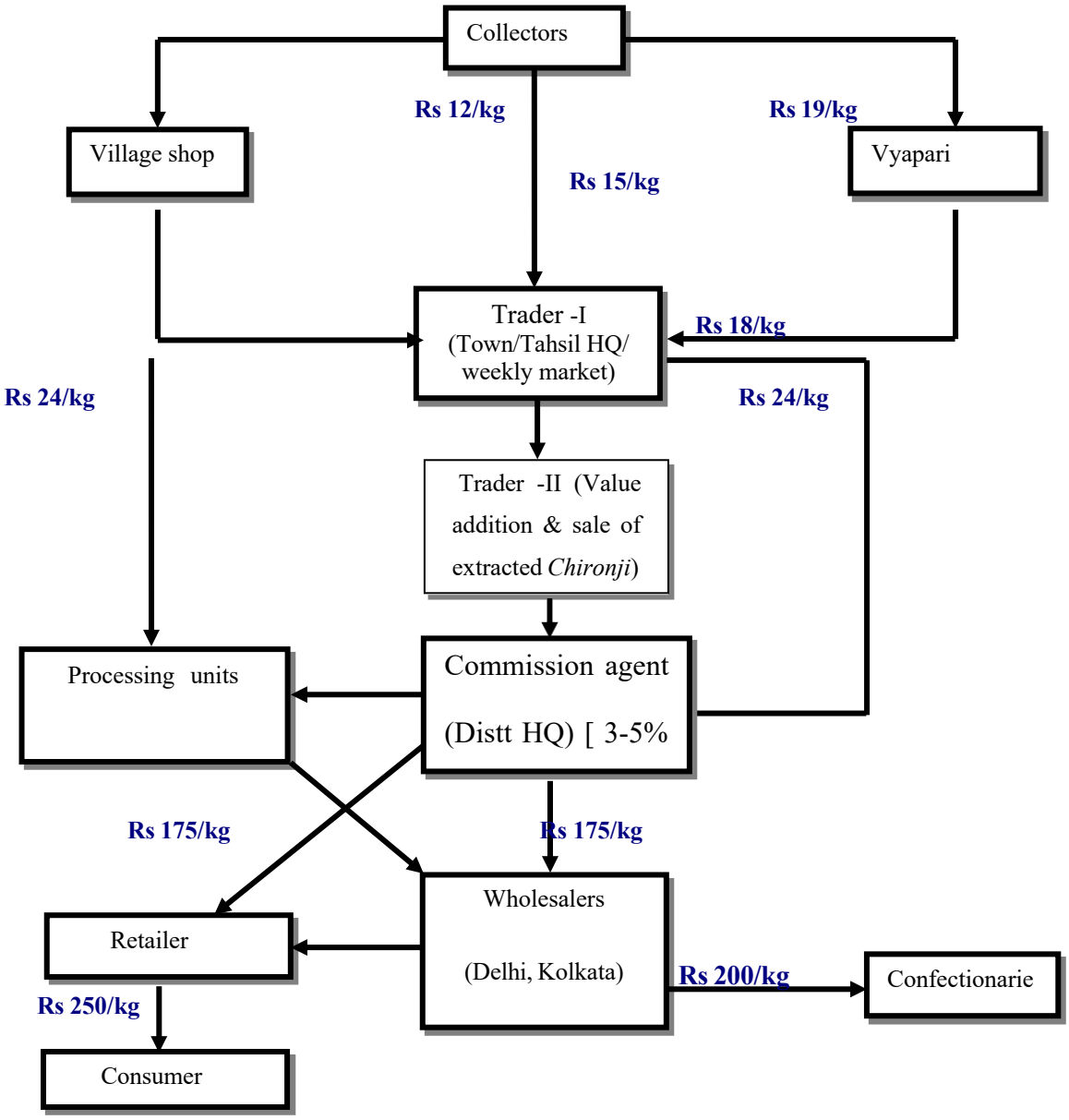
grinding to remove seed coat from kernel. After sieving the crushed seed the kernel is removed.

Quality assessment and Grading

The traders at local level, while procuring, determine the quality of the product by a traditional method. The fruit is immersed in water. Fruits which dip to the bottom are classified as of desirable quality with good kernel and those that float are rejected or classified as low quality which are procured accordingly at a lower price. Thus, its price is determined on percentage basis. If 60 out of 100 fruits dip to bottom produce is classified as 60%.

Value Chain of *Chironji*

The trading of *Chironji* is similar to other NTFPs except that grading is done for price determination by all traders. Price variation also exists between fresh fruit and dried fruit and the later fetches better price. Transaction at village level takes place through both the barter system and cash.


Collectors
Rs 12/kg
Rs 19/kg
Village shop
Vyapari
Rs 15/kg
Trader -I
(Town/Tahsil HQ/
weekly market)
Rs 18/kg
Rs 24/kg
Rs 24/kg
Trader -II (Value addition & sale of extracted *Chironji*)
Processing units
Commission agent
(Distt HQ) [3-5%
Rs 175/kg
Rs 175/kg
Wholesalers
(Delhi, Kolkata)
Retailer
Rs 200/kg
Confectionarie
Rs 250/kg
Consumer

Primary Collector	*Vyapari(VP)*	*Traders level-I and II*	*Commission Agents(CA)*	*Processors/ Industries*
a)Collection b)drying	a) Collection from HHs b) Gunny bag Packing c) Transportation of Raw materials to Traders	a)Transportation to Processors b)Packaging c)Grading d)Cleaning	a) Collection from Traders b) Transportation to Processors/Wholesalers	a) Collection from Traders/CAs b)Processing f)Transportation to Wholesalers
Infrastructure/Technology/Communication				
By foot	-Cycle	Hired Vehicle Godown Mobile phone License.	-Capital -Market Network -Vehicle Phone/Mobile	-Decorticating Machine -Market Network -Vehicle Phone/Mobile - License
Limiting Factor				
- Unorganized Collectors -Lack of holding Capacity	Lack of working capital	-Lack of working capital -Lack of Market Information	-Lack of working capital	-High risk in storage

6.7.12 Summary Findings

Although each NTFP holds significant importance from the social, ecological and economic standpoint, they are all subjected to similar constraints of resource exploitation and degradation, inefficient, exploitative and extended value chains not providing the primary producer enough shares of their efforts. Based on intensive interactions with the stakeholders and detailed value chain analysis, the major findings are summarized in the following section.

High Dependency on NTFP

The community dependency on the five NTFP commodities is very high. Their contribution to family cash income goes beyond 80% in many cases. Although these NTFP commodities contribute significantly to the livelihoods, the economic value of the efforts put into collection does not reach the primary collectors.

Lack of Value Addition at Primary Collectors level

Sale of most NTFPs is done without any processing or value addition at primary collectors‟ level and their access to end consumers is limited to the sale of produce in surrounding villages and weekly markets. A major portion of their produce is sold to the intermediaries like traders and commission agents who operate in the area. Thus, although these products reach a very large market, the market is geographically very limited as far as the primary producers are concerned. In other words, the NTFP value chains are very large and fragmented, though the role of primary producers ends at the very begging where the returns are the lowest.

1	**Main issues affecting NTFP enterprise development in Baripada Forest Division**
a)	Absence of sustainable harvesting practices
b)	Inadequate primary processing and value addition results in very low prices available to the primary producers
c)	Exploitation due to absence of transparent weighing sorting and price mechanism
d)	Inadequate credit leading to distressed sell
e)	Inadequate local infrastructure
f)	Lack of aggregation and unorganized marketing at field level

The NTFP collectors lack awareness on collection and sustainable harvesting, processing, quality control, capacity to add value and trade etc. There are no specialized/technical agencies for building community skills for sustainable NTFP collection and value addition available at the nearest community outreach.

Lack of aggregation of the produce at the primary collectors' level and Exploitative Nature of Trade

Currently there are no mechanisms/ policies to support aggregation of NTFP commodities at primary collectors‟ level. This forces the primary collector to sell the tiny amounts at very little prices to the middlemen. This also often leads to distress selling. The small size of production aggravates the problem by forcing the producers into a vicious cycle of a "small market-low production", which leads to small surpluses. The limited surplus makes them vulnerable to exploitation by

intermediaries because it continuously erodes their bargaining capacity as their need to convert small production into cash becomes more acute with time. In most cases prices of the produce, whether sold to consumers or to the intermediaries, bear no relationship to the cost of labour, input and transportation. In the case of direct sales, following factors lead to low prices at the local level:

- Due to localized nature of trade the supply of NTFP is always more than the demand
- Traders mainly control the market and dictate the prices, both during the season and off season.
- Selling of produce at a very low price by the primary collectors in the high turnover season and the purchase of the same produce by them in the off-season at a much lower price. This phenomenon is most prominent in case of *Sabai.*
- The intermediaries and local traders also exploit the primary producer in weighing, grading, sorting, and rounding off.

Major share to the intermediaries

Although the traders perform a number of market functions, they often take the major share of the value of the product, leaving the primary collector with only about one-sixth or even lower proportion of the final price.

Lack of knowledge and access to market

Located in remote areas, the primary collectors are not aware about the extended nature of NTFP value chains and don‟t have information and access to high value markets. The intermediaries, highly secretive and exploitative in nature, often take advantage of the market information to take secure high returns on NTFP commodities. Low capacities of NTFP producers and their support occupations often make it difficult to access distant high value markets. This is compounded by lack of knowledge and information on these markets.

Lack of access to credit

The forest dependent communities, typically living in remote areas, lack access to credit. The absence of credit limits any opportunities for value addition and enforces them to raw selling. One of the reasons for low price realization is lack of holding capacity or distress sell which is a common phenomenon particularly in *khadia* community who depend completely on NTFP collection for their livelihoods.

Infrastructure

The physical infrastructure in general and infrastructure for NTFP storage, processing, value addition, transportation etc. in particular is very low in most cases. This severely limits the opportunity for value addition at the local level. The unavailability/ irregular supply of electricity in many villages limits the opportunity for any processing that could be done locally. For instance, in case of *Sal* products the leaves pressing machines require regular electricity and the absence of it prevents installation/functioning of the machines.

Technology

The research analysis shows that technology remains to be one of the major bottlenecks while looking at the possibilities of value addition at primary collector‟s level. Although technologies for value addition are available and could be promoted locally however lack of infrastructure, mainly the electricity, remains a major hurdle.

Policy and regulatory environment

As forestry is under the concurrent list, different States have different laws on procurement and trade. There are high price variations, incidences of trader monopoly, lack of legal and promotional support for NTFP-based enterprises, selective restrictions on collection (nationalization of economically significant NTFP commodities), and lack of adequate investment by the government for NTFP conservation. Though ownership rights of 69 NTFPs have been transferred to PRIs but due to unawareness at their level it has become one of the major bottlenecks in NTFP management.

Fluctuating Prices of raw material and fixed price of the finished product

It has been noticed, especially in case of *Sal*, that though prices of raw material fluctuates heavily during the year, the prices of finished products remain constant.

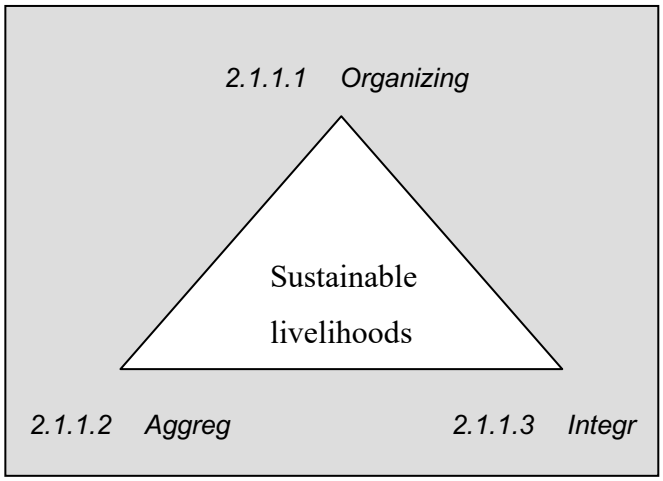
6.7.13 Proposed Solution and Model for NTFP Enterprise Development

The major factors to be addressed through NTFP enterprises are summarized as below:

- **Aggregation:** Scattered nature of availability of NTFPs in forests, their short collection period, and limited individual capacity of the primary producer; makes aggregation a necessity.
- **Community capacity building:** Lack of knowledge and technical skills on processing, grading & drying of NTFP among tribal collectors prevents them from accessing the high value markets that need strict quality measures. Hence community capacity building is a must in any NTFP enterprise recommended for the area.
- **Creation of Infrastructure and Provision of Technology:** Inadequate storage facilities resulting deterioration in quality. Creating adequate infrastructure related to transparent collection, grading, storage, value addition etc. is a must for the area.
- **Information on Markets:** Limited information on high value markets and inefficiency of markets lead to exploitation of tribal by the intermediaries. Accurate and timely information on local and high value markets is the most critical element in enterprise development and strong marketing linkages have to be part of the strategy.
- **Provision of credit:** in absence of credit, the primary collectors are subjected to distressed sell which never provides them good returns, hence sustainable credit mechanisms closely lined with the NTFP seasonality should be arranged and financial products should be developed accordingly.

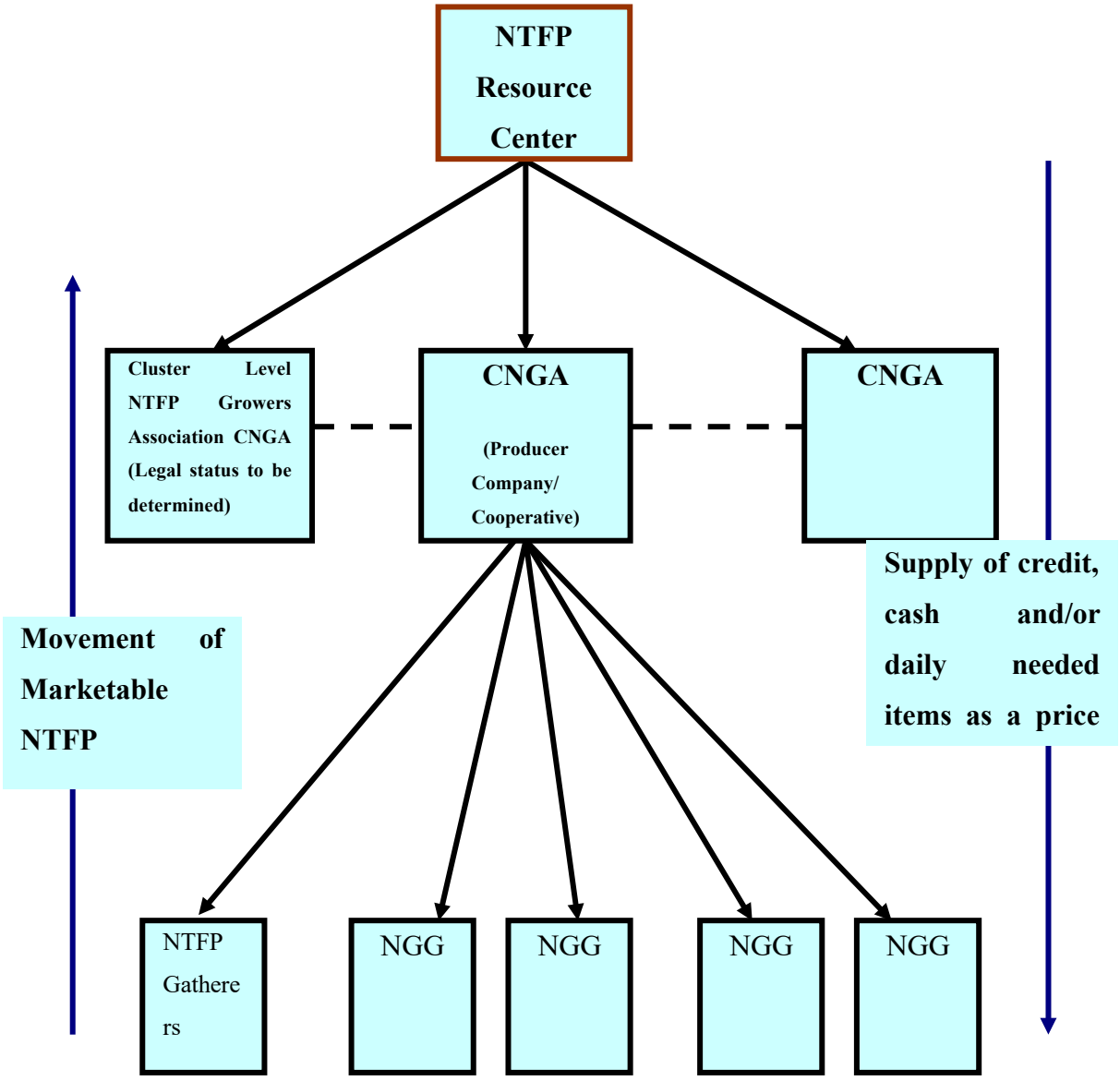
To address critical livelihoods issues related to sustainable harvesting, knowledge and technology for value addition, access to financial resources and entitlements, and most importantly information and access to high value markets, there is a need to

promote an institutional model that delivers these services. The study recommends that the core strategy should be built on three critical interventions relating to a) organizing primary collectors, b) aggregating the small surpluses, and c) integration of the primary collectors within the value chains and shifting them up the ladder towards the end consumer market.



Unless poor are organized, they find it difficult to negotiate with markets, are constrained to access inputs and credit and are also not well positioned to benefit from their entitlements. Organizing primary collectors also helps them in economies of scale while accessing inputs as well as markets. Similarly aggregation of small surpluses makes it possible for the primary collectors to look at possible linkages with bigger. Further and mainstream linkage provides primary collectors a stronger position to negotiate with the markets. Finally unless the poor begin to participate in value chains, they will not understand the true value of their produce, will not appreciate the need for value addition and will be unable to devise strategies to bring the value closer to the forests.

The above strategy would be implemented through a cluster based approach. The study has identified areas with high, medium and low NTFP concentration. The Producer groups (NTFP gatherers group) would be created and further federated into a Produce Company / Cooperative. This model would be as per the diagram below:



The study highlights that certain features of the existing value chains including lack of organized effort at field level, inefficiency in value chain and absence of strong regulatory mechanism in favor of the primary collectors needs correction.

As a part of the strategy it is therefore recommended that existing institutions should be involved in the strategic interventions related to NTFP enterprise development. As shown in the above diagram, the process should be initiated at the village level through the formation of NTFP Gatherers Groups (NGGs). Each NGG would consist of 15-20 members and the NGGs of 10-15 villages should be federated into a Cluster

Level NTFP Growers Association (CNGAs). The legal status of the CNGAs could be Producer Companies or Producer Cooperatives. The CNGAs would require technical services on a regular basis on markets, prices, trader information and negotiation etc. It is recommended that these services to be provided by the NTFP Resource Center (NRC). Initially the NRC would run through the grant support, however over a period of time (approximately 3 years or more), the producer companies should be able to pay a fee for service it receives from the NRC. The CNGA (Producer Company/Cooperative) would perform both the functions i.e., purchasing of NTFPs from NGGs and simultaneously providing them value for their produce either through cash, advance credit (mechanism and products need to be developed), and / or through supply of necessary daily consumption goods.

The Proposed Institutional Delivery Mechanisms

NTFP Gatherers Group (NGG)

These are local primary institutions for the primary collectors. Unlike Self Help Groups which are formed on the basis of economic homogeneity and neighborhood / affinity groups, the NGG will be formed on the basis of a common economic activity within the NTFP sub-sector. These would essentially be sub-structures of a proposed Cluster Level NTFP Growers Association (CNGA) / Producer Company to enable decentralization in business planning, decision making and to facilitate the ease of aggregation. Typically consisting of 10-15 producers, these institutions are formed in one village / contiguous villages, facilitating a critical „day-to-day" interaction amongst themselves. These would be unregistered entities that would facilitate the producers to have a common platform to discuss and articulate their common interests and local concerns that impinge on their production activities.

Key Deliverables

- Participate in trainings on scientific harvesting, value addition and aggregation
- Adopting sustainable harvesting and value addition practices at field level
- Develop a seasonal plan for harvesting and aggregation
- Supply the aggregated Produce to the Producer Collective (CNGA) as per agreed time and quality

- Estimate the total credit requirement for the group member and communicate the same to the Producer Collective

Cluster Level NTFP Growers Association (CNGA)/ Producer Collectives

A membership based institution owned by the producers would be promoted in a specific cluster. The Market facilitation Agency will facilitate bringing the best of the institutional structures and their legal implications those will best serve the objectives and also address the issues of governance, ownership and participation of the primary collectors. All the principles of cooperative structure will be built in the institutionalization process. As a registered institution, the company would evolve out of the producer groups and will have its own instruments of governance, with representation of the producers. Given its status as a legal entity, the Company would enter into partnerships and agreements on behalf of the member-producers to provision a variety of products and services to them. In this capacity the company would be the aggregator and provider of goods and services both from the producers and to the producers. The company, with technical inputs from NTFP Resource Center, would identify and engage business services that have a direct effect on strengthening the products produced by the member-owned enterprises.

The basic idea of the CNGA / Producer Co. approach is to enhance capacities of the primary collectors to deliver quality products that cater to the demands of wider national and international markets, and thereby increasing the benefits for the rural entrepreneurs. The Producer Co. approach is an attempt that fosters to advance decentralized production units operated by rural entrepreneurs (the first link to the value chain), receive technical inputs from the private sector and professional service providers to produce and standardize the rural products and build market linkages for enhanced incomes. The approach also provides the platform for aggregation at a focal point to achieve economies of scale.

Key Deliverables

- Promote sustainable harvesting and value addition practices within the NTFP Gatherers Groups
- Training primary collectors on sustainable harvesting, grading, sorting, primary processing etc.
- Act as a point of collection of NTFP commodities and aggregate the produce
- Provide storage facilities to the NGG
- Access market information and negotiate with traders
- Estimate the credit requirement for all the associated groups
- Establish linkages and access credit from formal financial institutions
- Link with Government Departments and receive support from Government Schemes
- Marketing of NTFP commodities

NTFP Resource Center (NRC)

The NTFP resource center will help the primary producers to link up with the markets and extension agencies (training and capacity building) as well as government programs. This will be a professional IT enabled set up, established for the Producer Collectives. The NTFP resource center will be IT enabled and will house critical data on all the producers in its catchment. It will also have all information on markets, prices, trends and forecasts. It will also have information on resource agencies, on banks and on government programs. The Producer Collectives will be linked to all relevant sites and with market sites to gather information on price fluctuations, market trends, innovations and new technologies. The NRC will also be the hub for assimilating information on the MIS. Young professionals, specializing in NTFP and marketing will man the NRC. The NRC will be the point for supporting the development of the Annual Business Plans for the Producer Collectives for transportation, aggregation of produce and market linkages.

By year four, it is expected that the Producer Collectives once the value for services is recognized, will pay a fee for services sought from the NRC.

Key Deliverables

- Act as a resource agency for all the Producer Collectives.
- Conduct market analysis and provide updated information on prices and markets to the Producer Collectives.
- Develop a database of NTFP commodities available in the area, their availability, seasonality, quantity and price variation.
- Database of producer collectives and their membership.
- Explore high value markets, interact with exporters and negotiate on behalf of the producer collectives.
- Collect information on various government schemes and assist the producer collectives receive support from these schemes.
- Estimate total credit requirement of the producer companies and accordingly develop plans for credit and establish linkages for the same.
- Provide support to CNGAs on NTFP Cleaning / Grading / Sorting, Warehousing, Packing / packaging, Linkage with transporter.
- Convergence with Government and other development programs.

The Process

It is recommended that the above proposed model to be implemented on a pilot basis at one location. After the initial round of discussions, it is recommended that the first pilot should be located at Kaptipada. The process should start at the village level by organizing the primary collectors into NTFP Gatherers Groups (NGG). However seeding commercial interest among the forest protection group would be a real challenge. The group members should be then educated and encouraged to aggregate their tiny surpluses to a critical volume that could be transported to a hub where material from other villages would also arrive. The Cluster Level Association (CNGA) would be located at this hub. Each CNGA should have catchment of 10 to 15 villages in near vicinity. The BDS will establish the entire channel for NTFPs identified during the research and portray out strategy for two way traffic i.e. selling of daily consumption items to its members besides purchasing the NTFPs. The Following sequential steps are recommended for setting up the NTFP Producer Collectives:

Sl.No.	Activities	Responsibility
1.	Identification of potential villages/clusters	Forest Department, Market Facilitation Agency
2.	Formation of NGGs	Forest Department, Market Facilitation Agency
3.	Awareness building on Aggregation and high value markets	Forest Department, Market Facilitation Agency
4.	Organizing cluster level meetings	Forest Department, Market Facilitation Agency
5	Developing cluster level business plans for first two years, Infrastructure design	Forest Department, Market Facilitation Agency
6	Organize training Programs on sustainable harvesting, sorting, grading, and primary processing	Forest Department, Market Facilitation Agency
7	Establish Market Linkages	Forest Department, Market Facilitation Agency
8.	Establish Credit Linkage	Forest Department, Market Facilitation Agency

After the pilot of first cluster hub it will be modified based on the learning of first phase and will be replicated in other areas. A NTFP resource center is proposed to provide technical services to the producer collectives. The NTFP resource center would be located at Baripada and work closely with Forest Department for facilitating convergence.

Summary Outcome for the Proposed Intervention

The proposed enterprise model promises to increase primary collectors‟ income base and market linkages. The following table broadly highlights the same for each of the identified NTFP and describes the increase in income due to enterprise related development.

NTFP	Proposed Intervention Capsules	Cost Involved	Per capita Income enhancement
Sal Leaf	Installation of pressing machines Promotion of sustainable harvesting practices Creation of village level institution and converting them in to revenue model Introducing technologies like Steam driven machine, Biomass machine, Auto-cut regulators. Paper and *Sal* leaves mixed products. Building strong linkage with North Orissa Electricity State Corporation (NESCO) for creating infrastructure in the village. Sensitizing and training financial institution to flow required credit in the project area. Market linkages	Cost of one Machine Rs.3000	Rs.25 per day
Sabai Rope	Storing Raw materials Collective production Promoting Sabai handicraft through skill training Introducing technologies like Roller twister and Sabai rope making machines Collective Marketing Market linkage	Rent of Warehouse	Rs. 55/day
Mahua	Collective Marketing Grading of produce at field level Proper drying and cleaning and scientific storage Storage of produce during low price and selling it when prices are high. Market linkage.	No cost involved except storage	Rs. 6/kg
Chironji	Installing Decorticating machine Collective marketing Market linkage	Rs. 50,000/machine	Rs.30/kg

Block wise List of NTFP Availability

Block	NTFPs
Baripada	Sal, Sabai, Mahua,Swano,Mushroom,Chironji,Tamarind
Betnoti	Sal, Sabai, Mahua,Swano,Mushroom
Muruda	Sal,Sabai, Mahua,Tamarind,Kuchila,Chironji,Tamarind
Rasgovind Pur	Sal, Mahua, Chironji,Sabi Rope
Suliapada	Sal, Sabai,Mahua,Chironji,Mushroom
Kuliana	Sal, Mahua,Sabai,Mushroom,Tamarind
Syamakhunta	Sal, Sabai,Chironji,Mahua,Mushroom,Harra,Tamarind
Gopbandhu Nagar	Sal, Mahaua
Khunta	Sal,Sabai,Mahua,Chironji,Honey
Udala	Sal,Sabai,Mahua,Tamarind
Kaptipada	Sal, Mahua,Chironji,Resin,Lak,Honey,Kusum,Tamarind
Saraskana	Sal, Mahua,Chironji,Mushroom,Tamarind
Bangiriposi	Sal,Mahu,Chironji,Harida,Baheda,Anwla,Honey,Jhuna,Mushroom, Tendu,Jhadu,Tamarind
Badsahi	Sal,Sabai,Mahua

NTFP Concentration

Sal Leaf Cup Project Profile

Assumptions

- There are 10 groups of 10 members (total of 100 members) in one village
- 10 machines are installed in each village
- Cost of one machine is 3000/-
- Each machine produces two gunny bags of cups i.e. 4200 cups per day
- Each day 20 labours are required @ 2 labour per day per machine
- Each machine takes 4 hours to process one gunny bag of cups
- Two leaves is converted into Dwipatris and future two Dwiparis are used to make leaf cap

Sal leaf Cup project profile		1 Cycle (1 Month)		
Particulars	**Unit**	**Quantity**	**Days**	**No. of leaves**
No. of village	No	1		1
No. of families	No	100		100
No. of women working	No	100		100
No. of Sal leaves collected in month	No	200,000	24	48,00,000
Making of twin leaves	No			24,00,000
Making of leaf cup in a machine	No	4200	24	12,00,000
Gunny Bags	Number			571

Cost of production	Unit	Quantity	Rate Rs.	Amount (Rs)
Total Cost of Sal leaves	No	1000	15	15,000
Labor charges (Family Labour)	Man-days	480	20	9,600
Electricity charges	Units	10	400	4,000
Packaging cost	Bundles	571	5	2,855
Total				31,455
Revenue				
Sal leaf plates	Bundle	571	115	65665
Total				65665
Cost of Production				31455
Gross Profit				34210
Income Per month per person				342
Income Per day per person				15
Number of persons getting additional income				20
Total fixed capital				30,000
Total working capital				31455

Sabai Rope Project Profile

Assumption

- There are 1000 members of 10 groups in 1 village
- Each family makes 120 Kgs of rope in a month
- Cost of one Sabai grass is Rs 4/-
- Selling price of Rope is Rs.15/-

Sabai Rope project profile		1 Cycle (1 Month)		
Particulars	**Unit**	**Quantity**	**Days**	**Total**
No. of village	No	1		1
No. of families	No	100		100
No. of women working	No	100		100
Quantity of Sabai Rope production in month	Kg	120	24	12000
Manpower required	No	2	24	48
Cost of production	Unit	Quantity	Rate (`)	Amount (`)
Total Cost of Sabai Grass	Kgs	12000	4	48000
Total				48000
Revenue				
Sabai Rope	Bundle	12000 Kgs	15	180000
Total				180000
Cash Flow				
Total Revenue				180000
Cost of Production				48000
Gross Profit				132000
Income (Per month per person)				1320
Income Per day				55

7. CHAPTER – VII

JFM (OVER LAPPING) WORKING CIRCLE

7.1 Introduction

Management of forests jointly through forest department and villagers is an effective tool for protection and conservation of forests. Equal sharing of responsibilities and rights is the key of Joint Forest Management. This Division is pioneer in the field of JFM. 402 VSS are operating within Baripada Forest Division and protecting 37436.55 ha. of vegetation out of which 78 VSS are protecting 7656.44 ha. of vegetation out side plan area (Enclosed as **Appendix – XXXVI**). Balance 324 VSS are protecting 29780.11 ha. of notified forest area coming under working plan area. Further 127 VFC are protecting 588.314 ha. of notified village forests within plan area. Hence 451 JFM committees protecting 30368.424 ha. of forest area within 219 Forest Blocks have been included under JFM (O) Working Circle.

7.2 General Constitution of Working Circle

An area of 30368.424 ha (as per JFM area of Baripada Forest Division) has been allotted to this Working Circle. The areas coming under newly constituted VSS and areas under Community Forest Rights under Forest Rights Act, 2006 will also be included in this Working Circle. The plantation and other activities under National Afforestation Programmes taken up in the forest areas will be protected by different Van Surakhya Samiti. Micro Plan for each Vana Surakhya Samiti will be prepared. Separate prescription for those areas is necessary for protection and interim yield.

Range wise forest area alloted to JFM (O) Working Circle

Range	No. of VSS Constituted within Division	No. of VSS Constituted within Working Plan Area	No. of VFC Constituted under SFS.	No. of Forest Block	Area allotted to JFM (O) WC in Ha
Pithabata	42	29	5	11	2709.83
Dukura	35	26	8	20	1700.518
R.G. Pur	37	33	8	19	4347.294
Udala	31	27	22	34	2607.488
Betnoti	94	92	34	70	9242.62
Deuli	112	93	6	14	7500.514
Kaptipada	33	19	3	7	1673.712
Bangiriposi	18	5	41	44	586.448
Division Total	**402**	**324**	**127**	**219**	**30368.424**

7.3 General Characteristics of Vegetation

The area included under JFM Overlapping Working Circle includes the areas protected by VSS, the forests under all working circle is coming under this working circle. It includes plantation, natural forests and some blank areas after felling of plantation.

7.4 Felling Series, Cutting Sections and JFM Areas

JFM Overlapping Working Circle includes the areas protected by VSS, the forests under Improvement Working Circle and plantation working circle. So felling series applicable to these working circles will be carried out.

7.5 Block, Compartments and JFM Areas (marked on GIS based Maps)

Area Allotted

This Working Circle covers only the areas assigned to Vana Surakhya Samiti for protection. After recognition of Community Forest Rights under Forest Rights Act, 2006, new areas will come under this circle. In 219 Forest blocks JFM committees have been constituted for protection 30368.424 Ha. of Forest land within plan area.

Range wise Forest Block Area allotted under JFM (O) Working Circle

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
PITHABATA	1	Bhagabat Chandrapur R.F.	806.280	795.480	795.480
	2	Budhikhamari R.F.	863.100	856.620	625.000
	3	Hatikote R.F.	556.840	553.720	495.000
	4	Lulung-Purunapani R.F.	223.310	223.310	79.400
	5	Manchabandha R.F.	1020.920	1013.960	644.000
	6	Asanabani P.R..F	57.030	57.030	57.030
	7	Goplapur V.F.	4.000	4.000	4.000
	8	Srirampur V.F.	3.140	3.140	3.140
	9	Gadadharapur V.F.	0.840	0.840	0.840
	10	Baunsda V.F.	0.940	0.940	0.940
	11	Dumuria V.F.	5.000	5.000	5.000
		Sub-total	**3541.400**	**3514.040**	**2709.830**

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
DUKURA	1	Badsahi R.F.	340.740	340.700	340.700
	2	Bidhyadharpur R.F.	238.760	238.760	238.760
	3	Chakradharpur R.F.	141.310	141.310	82.400
	4	Chengua-Mangalpur R.F.	79.640	79.640	75.000
	5	Deulia R.F.	241.670	241.670	100.000
	6	Itamundia R.F.	111.370	111.370	110.000
	7	Kanpura R.F.	533.850	532.960	320.000
	8	Purunapani R.F.	42.730	42.730	42.730
	9	Belpal R.F.	110.600	110.600	73.900
	10	Dukura R.F.	162.750	162.750	150.000
	11	Khanua R.F.	113.680	113.680	80.000
	12	Kerko R.F.	110.070	110.070	40.000
	13	Manatri V.F.	6.400	6.400	6.400
	14	Bhupad V.F.	5.000	5.000	5.000
	15	Manatri V.F.	3.480	3.480	3.480
	16	Rangahidi V.F.	4.588	4.588	4.588
	17	Ranibandha V.F.	3.440	3.440	3.440
	18	Khanua V.F.	6.000	6.000	6.000
	19	Basipitha V.F.	10.000	10.000	10.000
	20	Basipitha V.F.	8.120	8.120	8.120
		Sub-total	**2274.198**	**2273.268**	**1700.518**
R.G.PUR	1	Amarda R.F.	1512.200	1511.552	1045.000
	2	Betnasia R.F.	110.230	110.230	110.000
	3	Baghajharan R.F.	147.950	145.550	145.550
	4	Baladia R.F.	95.830	95.830	95.830
	5	Chitrada R.F.	422.640	409.840	350.000
	6	Jamsole R.F.	434.300	219.050	162.280
	7	Moroda R.F.	1479.140	1464.290	1464.290
	8	Nalagaja R.F.	260.290	260.290	260.290
	9	Nunchatia R.F.	148.270	148.270	148.270
	10	Sarumula R.F.	330.220	329.840	325.000
	11	Sukhilakhali R.F.	231.310	230.560	200.000
	12	Chikitamatia V.F.	10.000	10.000	10.000
	13	Sarajharan V.F.	7.344	7.344	7.344
	14	Pharajpur V.F.	5.000	5.000	5.000
	15	Duarsuni V.F.	5.000	5.000	5.000
	16	Nahiasoli V.F.	2.940	2.940	2.940
	17	Jhatiada V.F.	5.000	5.000	5.000
	18	Nalagaja V.F.	2.000	2.000	2.000
	19	Chandanpur V.F.	3.500	3.500	3.500
		Sub-total	**5213.164**	**4966.086**	**4347.294**

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
UDALA	1	Belakuti R.F.	223.380	223.380	223.380
	2	Bhandagaon R.F.	122.210	122.210	122.210
	3	Dhaundia R.F.	524.790	523.990	380.200
	4	Dimgadia R.F.	6.960	6.960	6.960
	5	Dugdha R.F.	35.290	35.290	35.290
	6	Khunta R.F.	427.990	423.400	200.000
	7	Kuamara R.F.	229.530	229.530	229.530
	8	Marsigaon R.F.	263.320	263.320	100.000
	9	Nahara R.F.	161.870	161.870	161.870
	10	Nuapada R.F.	324.380	324.380	324.380
	11	Phuljhari R.F.	315.650	315.650	218.300
	12	Udala R.F.	533.930	533.930	500.000
	13	Purunabaripada mankadakenda V.F.	0.648	0.648	0.648
	14	Kusunia Patpur V.F.	0.320	0.320	0.320
	15	Bhalimunduli V.F.	3.900	3.900	3.900
	16	Salabani V.F.	2.960	2.960	2.960
	17	Sialia V.F.	2.880	2.880	2.880
	18	Raghunathpur V.F.	4.660	4.660	4.660
	19	Jamudiha V.F.	2.000	2.000	2.000
	20	Nuagaon V.F.	13.324	13.324	13.324
	21	Bahanada V.F.	1.300	1.300	1.300
	22	Jalda V.F.	1.124	1.124	1.124
	23	Murari V.F.	0.992	0.992	0.992
	24	Gohira V.F.	5.000	5.000	5.000
	25	Jogibandha V.F.	2.000	2.000	2.000
	26	Jajpur`V.F.	14.884	14.884	14.884
	27	Kochiladiha V.F.	15.000	15.000	15.000
	28	Khunta V.F.	10.000	10.000	10.000
	29	Khunta V.F.	3.756	3.756	3.756
	30	Khunta V.F.	0.096	0.096	0.096
	31	Khunta V.F.	6.148	6.148	6.148
	32	Khunta V.F.	0.400	0.400	0.400
	33	Khunta V.F.	12.600	12.600	12.600
	34	Sridamchandrapur V.F.	1.376	1.376	1.376
		Sub-total	**3274.668**	**3269.278**	**2607.488**
BETNOTI	1	Asanbani R.F.	810.170	804.670	804.670
	2	Badampur R.F.	952.290	952.251	940.000
	3	Badguma R.F.	28.970	28.970	28.970
	4	Baisinga R.F.	108.440	108.312	50.000
	5	Bartana R.F.	194.890	194.890	190.000
	6	Beldiha R.F.	41.600	41.600	41.600

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
BETNOTI	7	Chhatnna R.F.	393.510	391.460	100.000
	8	Daldali R.F.	71.220	65.220	65.220
	9	Dalki R.F.	827.970	827.970	800.000
	10	Dumapada R.F.	224.350	219.550	219.550
	11	Durgapur R.F.	961.840	957.540	957.540
	12	Gad-deulia R.F.	58.730	58.730	58.730
	13	Gandigadha R.F.	1085.180	1066.381	960.000
	14	Garudabasa R.F.	71.870	71.870	71.870
	15	Haripur R.F.	41.280	40.940	40.940
	16	Hatijhuri R.F.	109.110	109.110	100.000
	17	Jagannathpur R.F.	452.590	451.240	250.000
	18	Jugal R.F.	305.290	304.790	300.000
	19	Ketakisole R.F.	39.330	39.330	39.330
	20	Khadikapada R.F.	75.110	75.110	75.110
	21	Khiripada R.F.	420.540	419.960	419.960
	22	Krushnachandrapur R.F.	1272.070	1252.910	350.000
	23	Kochilakhunta R.F.	259.320	259.320	250.000
	24	Machhapada R.F.	62.810	62.810	62.810
	25	Mamtapal R.F.	222.730	222.730	100.000
	26	Merda R.F.	495.820	495.820	400.000
	27	Mohanpur R.F.	35.130	35.130	35.130
	28	Phuljhari R.F.	217.420	217.420	217.420
	29	Purunia R.F.	442.300	440.950	200.000
	30	Raikama R.F.	191.340	181.340	80.000
	31	Rautra R.F.	119.460	119.160	119.160
	32	Bharadasole R.F.	50.670	50.670	50.670
	33	Bhalukchua R.F.	199.430	199.430	199.000
	34	Tikayatpur R.F.	160.960	160.090	50.000
	35	Patpur RF	141.480	140.880	140.880
	36	Bhalia P.R.F.	340.160	340.160	300.000
	37	Kathapal V.F.	0.240	0.240	0.240
	38	Chakulia V.F.	3.000	3.000	3.000
	39	Karatpata V.F.	0.780	0.780	0.780
	40	Chakulia V.F.	4.000	4.000	4.000
	41	Analagadia (Matidahi) V.F.	3.060	3.060	3.060
	42	Jhinkiria V.F.	1.600	1.600	1.600
	43	Singida Munduli V.F.	3.320	3.320	3.320
	44	Athabahia V.F.	1.700	1.700	1.700
	45	Mendhamundia V.F.	2.100	2.100	2.100
	46	Anbagadia V.F.	12.664	12.664	12.664
	47	Kalana	5.000	5.000	5.000

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
BETNOTI	48	Rautrapur V.F.	5.000	5.000	5.000
	49	Kalana V.F.	10.000	10.000	10.000
	50	Tulajhuri V.F.	8.000	8.000	8.000
	51	Asukanda V.F.	3.300	3.300	3.300
	52	Angaria V.F.	0.560	0.560	0.560
	53	Tikayatpur V.F.	0.800	0.800	0.800
	54	Purunia V.F.	10.000	10.000	10.000
	55	Purunia V.F.	10.000	10.000	10.000
	56	Purunia V.F.	3.880	3.880	3.880
	57	Purunia V.F.	6.560	6.560	6.560
	58	Balaka V.F.	2.000	2.000	2.000
	59	Raghupur V.F.	10.000	10.000	10.000
	60	Raghupur V.F.	7.000	7.000	7.000
	61	Raghupur V.F.	9.600	9.600	9.600
	62	Raghupur V.F.	3.000	3.000	3.000
	63	Raghupur V.F.	5.684	5.684	5.684
	64	Raghupur V.F.	11.232	11.232	11.232
	65	Raghupur V.F.	7.000	7.000	7.000
	66	Gadigaon V.F.	9.644	9.644	9.644
	67	Gadadeuli V.F.	0.840	0.840	0.840
	68	Gadadeuli V.F.	7.296	7.296	7.296
	69	Nuagaon V.F.	3.200	3.200	3.200
	70	Buguhuda V.F.	2.000	2.000	2.000
		Sub-total	**11659.440**	**11582.774**	**9242.620**
DEULI	1	Andhari R.F.	731.630	731.630	216.550
	2	Chandua R.F.	3073.120	3064.280	1383.650
	3	Deuli R.F.	2379.260	2378.060	2378.060
	4	Kuliana R.F.	1203.680	1198.880	960.000
	5	Suliapada R.F.	2889.560	2881.560	2000.000
	6	Badsole P.R.F.	227.030	217.030	217.030
	7	Tangasole P.R.F.	236.800	231.680	231.680
	8	Kaliasole P.R.F.	320.160	320.160	100.000
	9	Dhalu Suliapada V.F.	1.060	1.060	1.060
	10	Kasia V.F.	1.740	1.740	1.740
	11	Handibhanga V.F.	2.468	2.468	2.468
	12	Anlakuda V.F.	6.000	6.000	6.000
	13	Sankhunta V.F.	2.000	2.000	2.000
	14	Jalda V.F.	0.276	0.276	0.276
		Sub-total	**11074.784**	**11036.824**	**7500.514**
KAPTIPADA	1	Asanabani R.F.	262.560	262.560	262.560
	2	Nachhipur R.F.	229.000	229.000	100.000
	3	Notto R.F.	7707.080	7707.080	1215.000

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
KAPTIPADA	4	Sukhuapata Hill P.F.	92.320	91.990	92.320
	5	Kaladahi V.F.	1.500	1.500	1.500
	6	Pedagadia V.F.	0.220	0.220	0.220
	7	Khaladi V.F.	2.112	2.112	2.112
		Sub-total	**8294.792**	**8294.462**	**1673.712**
BANGRIPOSI	1	Dighi R.F.	515.940	515.940	110.000
	2	Rangahudi R.F.	86.670	86.670	86.670
	3	Thakurani R.F.	497.020	497.020	200.000
	4	Manbhanj V.F.	3.940	3.940	3.940
	5	Baghajhampa V.F.	8.000	8.000	8.000
	6	Jarkani V.F.	7.000	7.000	7.000
	7	Nata V.F.	7.000	7.000	7.000
	8	Birsingh V.F.	0.600	0.600	0.600
	9	Nohanatia V.F.	4.000	4.000	4.000
	10	Pahadpur V.F.	9.000	9.000	9.000
	11	Heenachandrapur V.F.	9.000	9.000	9.000
	12	Heenachandrapur V.F.	5.000	5.000	5.000
	13	Jaivilla V.F.	0.532	0.532	0.532
	14	Sindurgoura V.F.	0.260	0.260	0.260
	15	Handibhanga V.F.	2.468	2.468	2.468
	16	Bagbuda V.F.	4.000	4.000	4.000
	17	Pokhariadiha V.F.	8.000	8.000	8.000
	18	Govindpur V.F.	8.000	8.000	8.000
	19	Bedhakudar V.F.	10.000	10.000	10.000
	20	Gopinathpur V.F.	1.424	1.424	1.424
	21	Pahadpur V.F.	1.500	1.500	1.500
	22	Brundabanchandrapur V.F.	1.846	1.846	1.846
	23	Brundabanchandrapur V.F.	4.500	4.500	4.500
	24	Brundabanchandrapur V.F.	0.720	0.720	0.720
	25	Kuabuda V.F.	12.000	12.000	12.000
	26	Kuabuda V.F.	5.000	5.000	5.000
	27	Kuabuda V.F.	8.000	8.000	8.000
	28	Kuabuda V.F.	10.608	10.608	10.608
	29	Kuabuda V.F.	5.000	5.000	5.000
	30	Pokharia V.F.	6.208	6.208	6.208
	31	Pokharia V.F.	4.000	4.000	4.000
	32	Pokharia V.F.	10.000	10.000	10.000
	33	Pokharia V.F.	4.000	4.000	4.000
	34	Pokharia V.F.	1.608	1.608	1.608
	35	Pokharia V.F.	0.788	0.788	0.788
	36	Pokharia V.F.	6.000	6.000	6.000

Name of Range	Sl. No.	Name of RF/ PRF /PF/ VF	Area in ha.	Plan Area after Forest Diversion	JFM (O) WC
BANGRIPOSI	37	Pokharia V.F.	3.000	3.000	3.000
	38	Pokharia V.F.	2.108	2.108	2.108
	39	Joka V.F.	8.000	8.000	8.000
	40	Jharpokharia V.F.	0.540	0.540	0.540
	41	Jharpokharia V.F.	2.000	2.000	2.000
	42	Bagbuda V.F.	0.400	0.400	0.400
	43	Bagbuda V.F.	0.640	0.640	0.640
	44	Banakati V.F.	3.088	3.088	3.088
		Sub-total	**1289.408**	**1289.408**	**586.448**
G. Total		**219 Forest Blocks**	***46621.854***	***46226.140***	***30368.424***

A note on consultation of RCCF- Baripada with local forum, JFM committee, village panchayats and Forest Development Agencies (FDA) about expectation of people on management of forests.

Proceedings of meeting held on 28.08.2015 with Vana Surakshya Samiti (VSS), PRI members, Forest Development Agency (FDA) members etc. under Chairmanship of Field Director, Similipal Tiger Reserve-cum-Regional Chief Conservator of Forests, Baripada. On 28.08.2015, the Director, Similipal Tiger Reserve-cum-Regional Chief Conservator of Forests, Baripada convened a meeting with local forum, JFM Committee village Panchayats and members of Forest Development Agency (FDA) for consultation regarding expectation of people for preparation of next Working Plan and accommodation of the same with technical feasibility of sustainable management. Other DFOs of the circle also joined with the RCCF. The members present in the meeting proposed the following points to be included in the up-coming Working Plan from 2016-17 to 2025-26.

1. Demarcation of Boundary in case of RF/ PRF/ PF/ VF with posting of pillars.

2. Plantation at gaps in case of degraded forests with Aided Natural Regeneration (ANR mode) with indigenous species like Sal, Piasal, Asan, Gambhari, Sisam etc.

3. For better protection for biotic interference, the plantation should be covered by fence.

4. Eviction of illegal encroachments from forest land.

5. Protection activities of forest staff with the help of local people should be strengthened. There should be VSS meetings at regular intervals to win the confidence of the local people.

6. In case of old and matured plantations with Acacia, Eucalyptus etc. species done by erstwhile Social Forestry Programme that should be harvested where the local people would be benefited and subsequently, areas should be covered by fresh plantation with indigenous species preferably.

7. Soil Conservation, water harvesting measures, should be undertaken in the prompt manner.

8. Priority should be given to the VSS members in a village for collection of Minor Forest Produce (NTFP), proper policy should be maintained by Govt., so that local villagers will get their proper price out of selling NTFP and the concept of local middle man would be eliminated.

9. Forest fire should be checked and there will be no place for poaching activities. The so called "Akhanda Shikar" should be discouraged from all quarters by engaging them in sporting activities. The newly introduced Ama Jangala Yojana (AJY) by OFSDP was welcomed by the gathering and they assured to provide all co-operations for the success of AJY.

10. Forestry issues should be discussed in the Gram-panchayats and Panchayat Samiti Level meeting regularly.

11. Plantation programme through Forest Development Agency (FDA), should be encouraged among the JFM members and there should be enough Entry Point Activities (EPA) by which the local people would be benefited.

These recommendations have been accepted in this Working Plan.

7.6 Special Objectives of Management

Special objectives of management of this working circle are as follows.

- To restock the degraded forests through community participation.
- To ensure protection, regeneration and management of forests through participatory approach.
- To make people and Forest Department equal partner in management of forest.
- Conflict resolution in protecting forests.
- Demarcation of JFM/ CFM area.
- Artificial regeneration to restock blank patches inside forests.
- Soil and moisture conservation for raising ground water table.
- Alternative income to JFM/ CFM members through income generating activities.
- To develop VSS as grass root organization for management of natural resource.

7.6.1 Analysis of Crop

The forests assigned to VSS are plantations and natural forests. Because of proper care the vegetation is healthy and increasing in bio-mass. The percentage of natural forests is about 60% of total area under JFM Overlapping Working Circle and about 40% area is under plantation.

7.6.2 Silvicultural System

JFM Overlapping Working Circle overlaps with Rehabilitation Working Circle, Improvement Working Circle and Plantation Working Circle. Silvicultural systems prescribed to these working circles will be applicable. The micro-plan of VSS should be up-dated in line with prescriptions of this working plan.

7.6.3 Rotation Period

No rotation period is prescribed in this working circle.

7.6.4 Harvestable Diameters

No felling is prescribed in this working circle.

7.6.5 Reducing Factors and Reduced Areas

The area of this working circle is increasing with addition of VSS/ CFM committees.

7.6.6 Felling Cycle

No felling is prescribed in this working circle.

7.6.7 Division into Periods and Allotment to Periodic Blocks (PB)

No periodic block is prescribed in this working circle.

7.6.8 Calculation of the Yield

After harvest of the produce in JFM Overlapping Working Circle area, VSS/ CFM will get their share as per JFM Resolution, 2011, Para-11.

7.6.9 Table of Felling

No felling is prescribed in this working circle except as prescribed under PWC.

7.6.10 Method of Execution of VSS.

Demarcation of VSS Area

Demarcation of area assigned to VSS is very important task. The demarcation of area is to be done with pillar posting. It helps to give a specific identity to the VSS and to motivate them to protect and to avoid dispute between the villages. A uniform system may be adopted over the entire division while demarcating the VSS area. The village forests of erstwhile Social Forestry Project needs special thrust as village forests have remained unattended since 2003. 2 feet tall RCC pillars with cross section 6″× 6″ may be posted.

Preparation of Micro-plan

Micro-plan should be prepared for each VSS irrespective of whether money for implementation is available or not. The micro-plan should be prepared keeping in view the overall prescription of the concerned Working Circle. Prescription like prescribed exploitable girth class of different species of the final harvest, specific

marketing rules, limiting the final yield with due emphasis on conservation measures and biotic pressure etc. should be followed while preparing the micro-plan. The yield in the area assigned to the VSS should be calculated with due consideration to safeguard against erosion, illicit feeling and other biotic pressure. The plantation along with Soil and Moisture Conservation measures are to be undertaken and effort should be taken to obtain funds from different sources and while preparing the Micro-plans, PRA exercise are to be followed. Other tools like GIS and MIS can also be taken in to account. The detail process has been provided in the JFM Resolution - 2011 para-10. The same should be followed. In case of village forest, the management plan shall be prepared as per Rule 11 of the Odisha Village Forest Rule, 1985 (as amended vide F.F. and A.H. Deptt. Notification No. 27109 dt.- 17.11.1989).

Plantation & Choice of Species.

In many of the VSS assigned area due to protection by villagers Bamboo, and other species have attended harvestable growth. After harvesting, the area may be re-afforested. The choice of species may be carefully decided to suit the soil condition.

Whenever plantation exist in VSS allotted area, these plantation should be thinned and pruned as per requirements (Prescription under Plantation Working Circle may be the guiding principle). Sweeping of floor of the plantations should be avoided since it affects the cycling of soil nutrients. Grazing and fire protection should be provided to all plantations. In natural vegetation area where crop is approaching established stage regulated grazing may be allowed after discussion in the VSS. These prescriptions should serve as a guideline while preparing the micro-plan in these areas.

Incentive schemes for the VSS

The following incentive based activities shall be introduced under the Joint Forest Management (JFM) in order to increase villager‟s participation.

(i) Entry Point Activities (E.P.A) in other words is called community Development Works (CDW) which includes small community infrastructures such as water tanks, rural roads / community halls as desired by the villagers which attract people‟s attention for trust building with forest staff to the forest development activities. Forest / water conservation related activities as well as

non-forest activities can also be selected for CDW based on the needs of each VSS. CDW shall be selected based on the Rapid Rural Appraisal (RRA)/ Participatory Rural Appraisal (PRA) and incorporated in the Micro Plan prepared by the VSS. The JFM Committee is required to collect user‟s fee for the assets provided by the CDW. EPAs are part of the community mobilization process taken up in the respective villages at the initial stage of project implementation. EPA will be selected in a well facilitated participatory manner.

(ii) Income Generation Activities (I.G.A.) shall be identified at the micro planning stage. However, the local NGOs shall be required to provide inputs with regards to the marketable potential of the goods to undertake the IGAs by Self Help Groups (SHG) existing within a VSS. It is confirmed that IGA are not restricted in the forest related activities but any potential IGA activities are to be encouraged based on the agricultural, horticultural, fishery, poultry and MFP etc. produces are concerned. The value addition in the produces may be encouraged with handholding, capacity building and market linkage supports provided by the NGOs. Each Self Help Groups (SHG) may be provided with Revolving Fund supports from JFM Committee on loan basis to undertake the Income Generation Activities. Prior to beginning of IGAs a market research will be undertaken by the group of specialists from specialized market research organization. It will look at a macro level market environment as well as field level situations in close collaboration with the NGOs assigned to the community. A final shortlist of potential options of project areas based IGAs for forest dependents and other poor communities will be assessed through the market research study for implementation to the IGAs. IGA will be implemented by the Self Help Groups through the help of Revolving Fund loans provided to the JFM Committee.

(iii) The Basic Livelihood Improvement activities: Under such component, the fulfillment of basic human needs to make the local people capable for participating in JFM activities are to be prioritized during the micro planning process in the community. The provision of incentives to the local people towards the information dissemination on environmental protection and basic

livelihood improvement activities. The following activities may be facilitated in the community on priority basis.

a) Medical & Health camps in convergence with the Govt. PHC / Hospitals.

b) Prevention and Control of vector & Water Borne Diseases.

c) Reproductive and Child Health Care through providing seeds to VSS for kitchen garden.

d) Non Formal Education Centers in the VSS for drop outs to school going.

e) Promotion of Fuel Efficient Devices in convergence with OREDA.

f) Incentives to get cooking gas connections to each household to make VSS a smokeless village.

(iv) Capacity Building Programmes: To enable VSS to manage the respective JFM areas, organization and forests a standard JFM management Manual in Odia will be prepared , different training modules also to be prepared by the consultant agencies for imparting trainings to the JFM Committee in the following thematic areas.

a) Maintenance and submission of records, reports and bills to forest departments at VSS level.

b) Financial management, budgeting and book keeping.

c) Duties and responsibilities of the General Body and Executive Body.

d) Conflict resolution mechanism.

e) Forest protection and management arrangements.

f) Sustainable harvesting and equitable sharing of different forest products.

g) Beneficiary management within the community.

h) Exposure trips/ exchange visits.

(v) VFDF (Village Forest Development Fund): A financial establishment is essential for the VSS activities to be sustainable. Provisions of budget for EPA, revolving Fund for Income Generation Activities and basic livelihood Improvement Activities should be made under the Forest Department for implementation of a scheme. VSS will contribute to a Village Forest

Development Fund by raising money from user fees for the asset created under EPA, penalty for illegal actions, a portion of usufruct sharing, interest from bank savings and sales for the forest products. The budget provided by the Forest Department for EPA, IGA & Livelihood Improvement activities should be utilized only for the original designed objectives of a scheme while VFDF could be flexibly used according to the needs of the VSS. Provision of Corpus fund may also be arranged under a scheme for strengthening of the JFM, VFDF. It suggested that at least 50% of the savings of the VFDF should be allocated for maintenance of the forest area after completion of the scheme.

(vi) Formulation of Micro Planning: A Micro Planning is a comprehensive document to guide the VSS in pursuing all forest management for its JFM area, community development and institutional development and other intervention under a scheme design. The VSS will be responsible for formulation of their Micro Plan which will be assisted by the contracted NGOs/ Experts and the Forest Division concerned. PRA for resource assessment for analysis will be conducted for this purpose. Micro planning is vital for any JFM Committee for ensuring their participation at different levels of implementation of a scheme.

(vii) Engagement of specialized agencies for input support to JFM

1. For Micro Planning Preparation – Local NGOs
2. For capacity building of JFMC – Local NGOs
3. For IGAs – Specialized IGA Support Agencies

(viii) Training camps for VSS members.

The JFM resolution-2011, the role of Forest department has been defined. The role includes

- To assist in capacity building of VSS members on different aspects of forest management, planning, silviculture, nursery technology, forest laws, accounting book keeping, micro-enterprise development, value addition and processing of NTFPs etc.

- To provide technical help to the VSS in preparation and implementation of the Micro plan/annual work programme.

To fulfill the responsibility in this aspect, it is recommended that the DFO, may arrange training camps for 2/3 days duration for VSS members where plantations/ Rehabilitation and harvesting operation is likely to be taken during the same year/coming year. It may be made an annual feature and included in the Work schedule of the Division.

Usufruct sharing Mechanism:

The Joint Forest Management Resolution 2011 para 11 elaborately deals with usufruct sharing. The para is reproduced for immediate reference.

Usufruct sharing:

(i) The VSS shall be entitled to the usufructuary benefits from the assigned forests as under

(a) Usufruct like fallen leaves, fodder grasses, thatch grass, broom grass, fencing materials, brushwood, fallen lops, tops and twigs to be used as fuel shall be available to the members free of cost.

(b) All intermediate yields in the shape of small wood, poles, firewood etc as may be obtained as a result of silvicultural operations and bamboo harvested in VSS assigned area shall be made available to the VSS members in a manner as may be decided by EC. If sold at a price, the funds so obtained shall be deposited in the VSS account.

(c) In case of Kendu leaves and specified forest produce other than bamboo, if any, the VSS will have the right to collect the same from the assigned forest but these items will be disposed of as per the prevailing provisions of Government and practices.

(d) While maintaining the forest cover in perpetuity, if any major harvest or final felling occurs in the assigned forest, the same shall be taken up by the Forest Department as per the prescription of the Working Plan / duly approved micro-plan.

In case of natural calamities, harvesting of wind-fallen trees shall be treated as final harvest. Priority will be given to the members of the VSS for salvaging and harvesting work. Valuation of the produce so obtained shall be done and information shared with the VSS and the produce will be sold / disposed of by the forest department or by agents of the Forest department. The VSS will receive 50% share of the sale price after deduction of proportionate harvesting cost and this will be deposited in the "VSS account". The VSS may also opt for 50% of the forest produce so harvested if it is for their *bona fied* domestic use and they agree to pay the proportionate cost of harvesting.

(e) In case of village woodlots created and maintained by the VSS on non-forest land, all usufructs including interim and rotational harvests shall go to the VSS. In case of village forests, managed by VFC the sharing of forest produce will be regulated as per **Rule 9 of the Odisha Village Forest Rules, 1985**.

(f) In the event of a natural calamity occurring in the village there may be a demand for house building materials and other forest produce from the assigned forest. In such cases, the VSS may go for harvesting the required quantity of timber or other forest produce as a deviation to the Micro-Plan, with due approval of the Divisional Forest Officer concerned.

(ii) The EC shall be responsible for the distribution of the usufructuary benefits equitable among the members of the VSS. Need of the group or community, who do not have any livelihood support other than depending on the forests, should be specially considered.

(iii) In case where member / a group of members of the VSS play a major role in the collection of intelligence, detection and seizure of illegal forest produce in transit, the concerned VSS shall be entitled to the prescribed percentage of the sale price of the forest produce as per Rule 4 (3) of the Orissa Rewards for Detection of Forest Offences Rules, 2004. Such amount shall be deposited by the DFO in the "VSS account" after disposal of the seized produce following due procedure of law.

In case of Village Forest created during Social Forestry Project, the sharing mechanism will be as per Rule-9 of the Village Forest Rule, 1985.

Community Forest Management

Community forest management has given much privilege and responsibility to the forest dwellers and fringe villagers under Forest Right Act, 2006. Community rights for collection of minor forest produces, use of traditional water source grazing ground are settled under spirit of acts made there in. For sustainable management, orientation and capacity building trainings are imparted to the villagers that they can meet their requirement in a long term basis on a healthy manner. The people who don‟t contribute to forest protection will not get any benefit under FR Act.

Fringe Forest Management

The forest fringe areas are different than that of the inner areas so far its forest growth is concerned. Fringe areas are under heavy biotic pressure as it is close to the habitation. The dependency of villagers for firewood, fodder and Minor Forest Produce is considerable high than that is the core area. As there is no alternative source of energy villagers has to depend for their fuel wood which is required for their cooking. NTFPs are the major source of their income for their livelihood and food security. Directly or indirectly the people of the forest fringe villages are more or less responsible for forest fire. In order to reduce dependency on forest, alternative livelihood options are being created through Ama Jungle Yojana (AJY) a new concept of the department. At present 75 nos. of VSS are taken under the above scheme spreading over five Ranges of this Division.

Management of Perennial Sources of Water in Forest

The conservation of forest has direct bearing on preservation and conservation of water sources. Due to depletion of forest the sub-soil water table along with the ground water has suffered a lot. JFM/ CFM committees need to manage the forest in the catchment areas with special attention in order to improve the water regimes and natural regeneration. Provision should be made in the JFM micro plan for sustainable management of the catchment areas as well as inland water bodies and the peoples living around it.

Soil and Water Conservation

Apart from the silvicultural operation, it is also important that JFM committees should take step for soil and water conservation as it plays an important role in depletion of forest. Rapid run off of rain water causes soil erosion and forms gullies and rills. Heavy rain washes out the top soil, the most fertile one causing siltation on river bed. In order to combat the above situation soil conservation measure like gully plugging through check dam, vegetative spur, are to be taken up through JFM management intervention.

7.6.11 Subsidiary Silvicultural Operations Cleaning and Thinning

Subsidiary Silvicultural Operations Cleaning and Thinning as applicable under IWC, RWC and PWC will be taken up in respective areas.

7.6.12 Regenaration

Artificial regeneration will be taken up in blank areas and aided natural regeneration will be taken up in gaps of natural forests.

7.6.13 Associated Regulations and Measures

Bio-diversity Management Committee

Bio-diversity is the variety of living organism with genetic differences between them. Bio-diversity underlies all the eco-system process that makes life possible and it crucial to ecological stability of our planet. As per Section 41 of the Biological Diversity Act, Bio-diversity management committees are to be established at local level. It is required for formulation of strategies for conservation and maintenance of biodiversity. People‟s Bio-diversity Register is a document, prepared by the Bio-diversity management committee, which contains comprehensive information on locally available Bio-resources of the area/ village.

Joint Forest Management

The Vana Surakhya Samiti / Community Forest Rights holder protecting the forest will enjoy usufructuary benefits provided they discharge their duties and responsibilities as laid down in the Govt. Resolution / Act. The VSS members / CFR holders will not get the benefits from forest unless they actively protect the forest and wildlife. Further duties and responsibilities in the task of regeneration and protection

of the forests should be intimated by DFO through Range Officer to the executive body of Samiti / Committee / CFR groups from time to time. The executive committee of VSS / CFR group will be responsible for distribution of the usufructs equally among the members, each household being treated as one member. If a particular household has not discharged the duties and responsibilities assigned to him, the executive committee may lessen or do away with its share through resolution.

Usufruct like leaves, fodder, grasses, thatch grasses, broom grasses, thorny fencing materials, brush wood and fallen lops/ tops/ twigs used as fuel-wood shall be available to the members, free of cost. Other usufructs like kendu leaves can be collected by the members, but these will have to be delivered to the Departmental agency / lessee against payment of prescribed wages for the collection and delivery. All intermediate yields in shape of leaves, small wood, poles, fire wood etc. as may be obtained in silvicultural operations will be equitably distributed among the members by the executive committee of VSS/ CFR.

Timber and poles as may be obtained from a major harvest or final felling shall be shared between the Forest Department and the Vana Surakhya Samiti in equal shares. The executive committee on behalf of the Samiti will have the option either to distribute the said 50% of the total produce among the members of the Samiti in equal shares or to request the Forest Department to dispose of the same and make the net sale-proceeds available to the VSS for distribution among the members.

Audit & accounting of VSS Account

The accounting procedure for VSS has been well defined in the JFM Resolution. The Secretary of the VSS (Forester or Forest Guard) shall make a point to up-date the account.

8. CHAPTER – VIII

TREE OUTSIDE FOREST AREA

8.1 Introduction:

Trees outside Forests (ToF) are located on the lands other than the forests(RF/ PRF/ PF/ VF/ Revenue Forest/ DLC Forest), including agricultural lands (e.g. agro-forestry systems, farm forestry, industrial plantations, hedgerows, woodlots, Cashew Plantations), Govt. Plantations on Non-Forest areas (FDA Plantations, CAMPA Plantations, Avenue Plantations, Parks, Urban Plantations), Jahiras and trees on private land, built-up areas such as settlements, Private Bamboo Plantations, private Acacia / Eucalyptus / Teak Plantations and bare lands available for tree plantations. As a matter of practice, private people take up tree planting in their own land which has proved profitable in comparison to agriculture. Species like Eucalyptus and Acacia which are more suitable and fast growing in the area are planted in the wasteland, water logged areas, back yards, fallow field. Orchards of Cashew nuts (*Annacardium occidentale*) have been planted through various schemes in private fields of Baripada Forest Division and the coverage area by cashew plants is on increasing trend. It provides a good source of economic production for community as well as individuals who have raised cashew in their own land. So there is a need to describe and comprehend the dynamics of trees and shrubs on rural and urban land, and their interaction with forest ecosystem. This will lead to a better understanding of off-forest tree management of forests as natural resources.

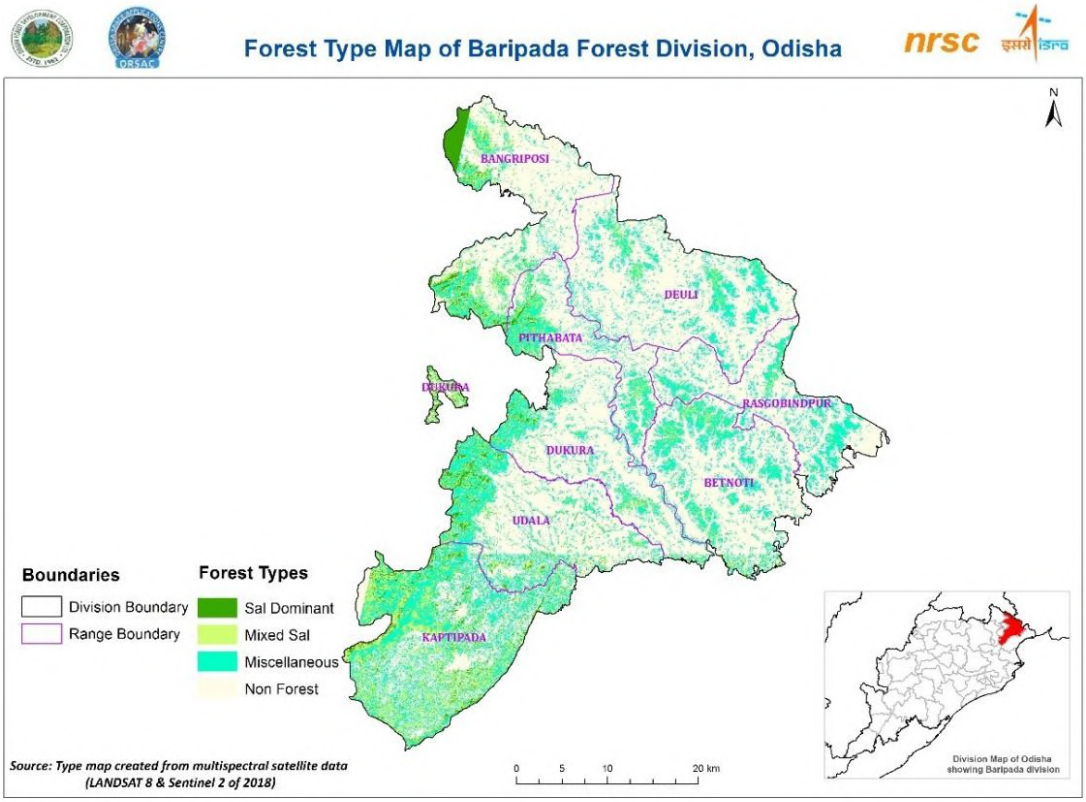
8.2 General Constitution of Working Circle

Commercial forest tree planting in private land is more profitable in comparison to agriculture. Species like Teak, Bamboo, Acacia, Eucalyptus, Jack Fruit, Jamun & Mango are mainly planted in back yards, field bunds, fallow uplands, wastelands. Based on plot description and enumeration for areas outside forests, assessment was done with respect to present scenario and their potential for tree outside forests as part of sustainable land use management at landscape level within Baripada Forest

Division. The focus of forestry outside forest area is on production forestry, revitalization of rural economy and expanding economic opportunities through innovations. Seedlings have been raised in different decentralized nurseries of the Division and distributed among the people for raising of forest trees on their own land. The outside forest can be assessed by super imposing the recent Forest Cover Map on the digitized topo sheet. The area and density of this outside forest can be assessed through satellite data. Total geographical area of Baripada Forest Division 426313 ha out of which forest area under working plan are 50038.72 ha. The diverted forest area and un-classed forest constitute 450.014 ha. Revenue forests as per DLC are 29064.48 ha. Hence the balance vegetation of 5805.78 ha is spread over total non-forest area of 346479.276 ha, which constitutes non-forest Govt. land and private land.

8.3 General Characteristics of Vegetation

The forest area under tree cover outside forest is in various stages of degradation. This area is under continuous pressure for removal of Timber, pole crops and firewood by the local inhabitants. Proper protection of the area against grazing and fire could not be ensured for which the existing crops and the site condition have deteriorated further and the rate of soil erosion has accelerated. Forest type map of Baripada Forest Division prepared by NRSC is given below.



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Map 17: Forest Types in Baripada Forest Division

Composition

Tree outside forest area consists mostly of hardy species. The soil is highly eroded and susceptible to sheet and gully erosion. In some patches the top soil has been washed away and transformed into hard murrom soil and rocky surface. The area is dominated by miscellaneous vegetation like Mango, Jackfruit, Bamboo, Amla, Jamu, Kurei, Dhaura, Sal, Teak, Neem, Bel etc.

Distribution

Common village woodlots in non-forest Govt. land like Gochar, Smasan, Anabadi, Hills, lands under lease, Mango groves, Canal bank plantations etc. are full of tree vegetation. In private lands also Bamboo plantations, Eucalyptus plantations, Acacia plantations, Mango plantations and trees in private lands are available. The uplands, where no crop can be cultivated are usually planted with long duration tree crops. All these constitute tree outside forests.

Density

The crown density of the crops standing over the area varies from 0.1 to 0.4. The variation of density is due to felling of trees and various climatic & edaphic factors as well as the fertility of the area.

Growing Stock

The crop standing over the area is open and consists mostly of inferior hardy species. In habitation areas luxuriant growth of teak, bamboo, acacia, eucalyptus, jack fruit, Jamun & mango are observed. Avenue plantations have been taken up along the high ways & other roads by forest department. Trees in agricultural lands (e.g. agro-forestry systems, farm forestry, industrial plantations, hedgerows, woodlots, Cashew Plantations), Govt. Plantations on Non-Forest areas (FDA Plantations, CAMPA Plantations, Avenue Plantations, Parks, Urban Plantations) and Private Bamboo Plantations, private Acacia / Eucalyptus / Teak Plantations constitute the growing stock of ToF.

8.4 Felling Series, Cutting Sections and JFM Areas

Tree outside Forest Area is the area outside forest blocks, revenue forests and DLC forests. So, there is no felling series/cutting section. This is the area assigned for commercial forestry which will be felled as per species planted and rotation period.

8.5 Blocks, Compartments and JFM Areas

Tree outside Forest Area is the area outside forest blocks, revenue forests and DLC forests. So, there is no block allotted to this working circle. Tree outside Forest area includes planted vegetation/ natural forests outside legal forest area. Therefore all vegetation outside RF, PRF, PF, VF, Revenue Forest and DLC Forest are called Tree outside Forest area. In Baripada Forest Division, ToF is 5805.78 ha.

Tree outside Forest Area

Name of Division	Geographical Area (in ha)	Total Forest Area (in ha)	Forest Area under Working Plan (in ha)	Diverted Forest Area & UCF (in ha)	Revenue Forest (in ha)	DLC Forest (in Ha.)	Total non-Forest area (in ha)	Tree Outside Forest area (in ha)
Baripada Forest Division	426313	87100	50038.72	450.014	29064.48	1741.01	345018.78	5805.78

Tree outside Working Plan Area

Name of Range	Revenue Forests in ha.	DLC Forest in Ha.	Tree outside forest area in ha.	Tree Outside Working plan area in ha. (2+3+4)
1	2	3	4	5
Pithabata	2206.588			
Dukura	948.846			
Deuli	3194.118			
Bangiriposi	2020.081			
Udala	2182.094	**1741.01**	**5805.780**	**36611.277**
Kaptipada	13872.99			
Rasgovindpur	1344.229			
Betnoti	3295.541			
Total	**29064.487**			

8.6 Special Objectives of Management of ToF Area

- To educate people to regenerate the degraded forest by appropriate silvicultural operation(weeding, prevention of grazing and protection from fire) and protection measures for the principal species to achieve quick apical growth with active participation of the people.
- To restock the degraded forests through community participation.
- To educate people to restock the barren area by artificial regeneration.
- To educate people to extend soil and moisture conservation measure in a watershed approach to enrich the micro-edaphic condition for making the forests more productive in the near future.
- To educate people to protect the area and minimize its further degradation.
- To educate people to supply available dry firewood, congusted poles and timber from dead trees in a systematic manner for use by the local people and there by discouraging illicit felling.
- To educate people to remove the miscellaneous thorny bushes for the growth of principal and secondary species.
- To educate people to encourage natural regeneration through fire protection by involving local communities.
- To educate people to create favourable condition for the habitat and multiplication of the Wild Life.

- To educate people to remove exploitable trees in non-forest areas following approved procedure.
- To encourage formation of JFM / CFM / Forest Management Committees for scientific management of ToF in Govt. land.

8.6.1 Analysis of the Crop

The planted species available in this non-forest area have been classified basing on their timber, fire wood, fruit, oil and other yielding value. The classification of trees is given in the table below. Important commercial species can be planted when there is established market to utilize the timber/ leaves/ twigs in industries. The list of ToF plantations is enclosed in **Appendix – V.**

Principal species	Secondary species	Guest species	Commercial species
Bija, Karanja, Asan, Sisoo and Jamu.	Harida, Gambhari, Bahada Bada chakunda, Semuli, Khair and Siris.	Mango, Bela, Tamarind, Mahula, Kochila, Sunari and Neem.	Eucalyptus, Acacia, Teak, Bamboo etc.

8.6.2 Silvicultural System

The silvicultural system to be adopted is Rehabilitation and restocking through artificial regeneration.

8.6.3 Rotation Period

Rotation period depends upon trees planted.

8.6.4 Havestable Diameters

Havestable Diameters depends upon trees planted

Species	Exploitable Diameter (in cm)	Remarks
Acacia auriculiformis	90	
Azadirachta indica	180	
Gmelina arborea	120	
Anacardium occidentale	After fruit bearing	Tree will not be felled as long as fruiting continues.
Fruit trees	After fruit bearing	

8.6.5 Reducing Factors and Reduced Areas

The objective is not harvesting of timber. Hence no reducing factor has been defined.

8.6.6 Treatment Cycle

A treatment cycle of 10 years is prescribed for this working circle.

8.6.7 Division into Periods and Allotment to Periodic Blocks (PB)

Periodic block is not prescribed in this working circle.

8.6.8 Calculation of Yield

No yield is calculated as no harvesting is prescribed. Only in case of cyclone or illicit felling the trees are removed.

8.6.9 Table of Felling

Only in case of cyclone or illicit felling the trees are removed and table of felling is prepared.

8.6.10 Method of Executing Felling

The dead and up-rooted trees to be marked and felled.

8.6.11 Subsidiary Silvicultural Operations Cleaning and Thinning

Cleaning after cyclone damage, thinning in congested areas and artificial regeneration is prescribed.

Climber Menace

At present approximately 1% of existing trees are affected by climber in areas away from habitation. Climber is not a major problem for Trees outside Forest.

Weed Growth

Unwanted plants are common in the ground flora. During rainy season vast numbers of weeds grow in the plantation floor of ToF. Weeds tend to interfere with the growth of trees of favoured species. Annual weeds die during the month of February. Dry weeds invite forest fire, which partly burns regenerations and saplings. Hence

weeding at least once in a year in the month of October is advised before application of manure.

Grass Invasion

Different grasses are seen in patches on the forest floor. Grasses grow faster in small gap or in open space, which causes heavy grazing. Recruits are either suppressed by grasses or damaged by grazing.

8.6.12 Regeneration

Status of Regeneration

The tree outside forest area does not have sufficient regeneration. The renewal of forest crop purely depends on nature. The young shoots are affected due to frequent grazing. Therefore artificial regeneration is the Primary method adopted to regenerate the crop.

Artificial Regeneration

The renewal of ToF crop is done through planting of seedling / Twig / Rhizomes or through sowing of seeds. Gaps are noticed in almost all ToF areas. It is advised that the Forest Department /with the local people plant the permanent gaps through artificial regeneration.

Nursery

Seedlings can be distributed at a concessional cost through temporary/ permanent/ central nurseries.

Treatment Map

When the plantation is facilitated by Forest Department, a treatment map shall be prepared along with a statement showing estimates of financial requirement and calendar of operations. This job shall be done by an officer not below the rank of a Forest Ranger and checked by an Assistant Conservator of Forests. This work shall be completed by the end of the October of the year proceeding to the year of plantation.

Planting

Planting shall be taken up immediately after onset of monsoon and completed by second week of July. The number of plants per hectare to be planted will be decided by the DFO. Required dosage of insecticides and fertilizers shall be applied after weeding during planting process.

Plantation Journal

When the plantation is facilitated by Forest Department, a separate plantation journal shall be maintained at Range level. The form prescribed in Orissa Forest Plantation Manual-1977 will be followed. The observation of the Inspecting Officer will be written in form No. 4 prescribed in the Manual.

Research Needs

There is necessity of Research on cultivation of tree species in a row / in double row and compatibility of cultivating agricultural crops between two rows of tree crops.

Special Grant

Under exceptional circumstances, this Division may receive special grants for development of infrastructures, improvement of Jahira, plantation under diversion of forest land etc. beyond the financial forecast during the Plan period. In any circumstances, plantations generated through utilization of special fund will not be exploited for petty felling.

Deviation

All prescriptions prescribed in ToF shall be followed, so that any deviation with reference to harvesting of the forest produce will not arise. Due to unavoidable circumstances if it is necessary to harvest the forest produces out of the prescriptions then the Head of the Forest Division shall order for such harvest based on sufficient reasons.

Control Form

When the plantation is raised by Forest Department it is prescribed to maintain 03 numbers of control forms during each Working Plan year, which start from 1st July to 30th June.

Fuel wood

The fuel wood produced in ToF may be shared with the local people protecting the forest by constituting VSS/ CFM. In case there is no VSS/ CFM, OFDC Ltd. may be asked to take delivery of the fuel wood and the royalty can be deposited with department owning the land. At present OFDC Ltd. retail sale depot for fuel wood is located at Salbani and Udala. It is proposed to have sale depot in each Range to meet the demand of local people. When the local people of this area will not be able to pay the rate fixed by OFDC Ltd. for firewood, the OFDC Ltd. should supply fuel wood at a concessional rate to the local people.

Matured Eucalyptus, Acacia and other fuel wood plantations in ToF, which have reached harvestable age and are fit for exploitation, may be worked as per approved procedure.

Bamboos

Natural bamboo is not available in forests of Baripada Forest Division. Bamboo plantations have been raised by local people with assistance of Forest Department and OBDA at various locations in private land. Bamboo is cultivated in private holding in a large scale. *Bambusa tulda*, *Bambusa vulgaris* and *Bambusa nutans* have been declared as permit free species. Procedure for harvest of bamboo will be explained to the owners of bamboo plantations for scientific harvest.

8.6.13 Associated Regulations and Measure

Method of Executing Usufructuary Benefits to Vana Surakhya Samiti:

In Tree outside Forests, when the Vana Surakhya Samiti/ Community Forest Rights holder are protecting the forest in non-forest Govt. land, they will enjoy usufructuary benefits provided they discharge their duties and responsibilities as laid down in the Scheme. The VSS members/ CFR holders will not get the benefits from ToF unless they actively protect the forest and wildlife. Further duties and responsibilities in the task of regeneration and protection of the forests should be intimated by DFO through Range Officer to the executive body of Samiti/ Committee/ CFR groups from time to time. The executive committee of VSS/ CFR group will be responsible for distribution of the usufructs equally among the members, each household being treated as one member. If a particular household has not discharged the duties and

responsibilities assigned to him, the executive committee may lessen or do away with its share through resolution.

Usufruct like leaves, fodder, grasses, thatch grasses, broom grasses, thorny fencing materials, brush-wood and fallen lops/ tops/ twigs used as fuel-wood shall be available to the members, free of cost. Other usufructs like kendu leaves can be collected by the members, but these will have to be delivered to the Departmental agency / lessee against payment of prescribed wages for the collection and delivery. All intermediate yields in shape of leaves, small wood, poles, fire wood etc. as may be obtained in silvicultural operations will be equitably distributed among the members by the executive committee.

Timber and poles as may be obtained from a major harvest or final felling shall be shared between the Forest Department and the Vana Surakhya Samiti in equal shares. The executive committee on behalf of the Samiti will have the option either to distribute the said 50 per cent of the total produce among the members of the Samiti in equal shares or to request the Forest Department to dispose of the same and make the net sale-proceeds available for distribution among the members.

9. CHAPTER – IX

FARM FORESTRY

9.1 Introduction

The National Forest Policy and the Forest (Conservation) Act, 1980 has reflected the provision relating to (1) ban on clear felling (2) environmental considerations to replace the revenue considerations (3) the needs of the forest dwellers and rural poor to be the first charge of forest produce (4) shifting the burden of producing industrial wood from forest (5) no forest be exploited without approved working plan, and (6) checking indiscriminate de-reservation and diversion of forest lands for non-forestry purposes.

The principal aim of the forest policy is to ensure environmental stability and maintenance of the ecological balance for sustenance of all life forms, human and plants.

9.2 General Constitution of Working Circle

ToF areas including private farm land are the areas proposed for raising commercial forestry plantations. The geographical area of Baripada Forest Division is 426313 ha. The forest area in Baripada Forest Division is 87100 ha. Non- forest Govt. lands and private lands are to be planted with tree crops in high demand with higher market value.

9.3 General Characteristics of Vegetation

This working circle consists of barren non forest Govt. land where the villagers can raise commercial plantations for their use / marketing. In high land agricultural fields where there is no irrigation and negligible profit is obtained through traditional crops, commercial forestry plantations can be taken up to increase income of the farmers. The existing vegetation has no significant value.

9.4 Felling Series, Cutting Sections and JFM Areas

As the area is outside forests, felling will be carried out as per rotation of the crop and market demand.

9.5 Blocks, Compartment and JFM Areas

As the area is outside forests, there is no block or compartment in this working circle.

9.6 Special Objectives of Managment

The objective of management of commercial forestry plantations is given in the table below.

Sl. No.	Objective
1	To protect the existing commercial forestry plantations,from illicit felling, encroachments, fire, grazing and shifting cultivation.
2	To improve the productivity of the land through raising commercial plantation in private lands and to increase income of the farmer.
3	To promote afforestation of commercial species with market demand, in blank, barren and waste private lands with the active participation of the local people.
4	To check land degradation and to regenerate degraded lands as well as vegetative cover and augment the production of fuel wood, fodder and forest produce, especially for community and industrial use by involving village community / local people on the programme such as tree planting, agro-forestry, silvi-pasture development, horticulture and soil moisture conservation.
5	The working plan aims at conservation and improvement of commercial forestry plantations by effective protection and silvicultural practices. This provides employment, sustenance and income to tribal and other communities.
6	To conserve commercial plantations by providing incentives to individuals with awareness and training for effective participation of people.
7	To encourage planting of trees on private lands like farm bunds, fallow lands, or non-forest lands and unused agricultural lands, in order to develop self-reliant sustainable timber, fodder and fuel wood production system along with commercial forestry plantations.
8	To promote and maintain watershed models in order to improve adequate soil cover in the forest area, which will safeguard against soil erosion and rapid run off by rain water by adopting soil and water conservation measures.

9.6.1 Analysis of the Crop

The existing agricultural crop in farmers land are mostly annual crops. Agricultural crops are affected by drought, flood, cyclone and other natural calamities for which farmer gets lower profit. The high lands not suitable for agriculture can be spared for commercial plantations.

9.6.2 Silvicultural System

Agroforestry, Farm Forestry, Pure Plantations can be taken up under commercial forestry scheme. A few model schemes have been given towards end of this chapter. Farm forestry with support of forest department and industrial unit will help the farmers in raising tree plantation.

Farm Forestry scheme under Commercial Forestry

1. Tripartite agreement among farmer, industry and local Forester for purchase of forest produces by the industry with minimum support price. The farmer will have option to sale the produces to agency giving highest price. Industry may provide loan assistance to the farmer till first intermediate harvest.
2. Selection of best quality of planting material to be supplied to farmers, free of cost by December.
3. Pitting, through the farmer and owner of the land out of fund deposited by Forest Department through NEFT.
4. Planting, through the farmer and owner of the land out of Govt. fund deposited through NEFT to the account of owner of the land.
5. Application of fertilizer and pesticide during planting and one month after planting through the farmer and owner of the land out of fund deposited through NEFT.
6. Maintenance of plantation like weeding and fencing will be taken up by the farmer out of his / her own fund.
7. Intermediate Harvesting time and schedule should be fixed in tripartite agreement.
8. The second year and subsequent weeding, application of fertilizer and pesticide will be taken up by the farmer.
9. The industry will facilitate the harvesting and transportation of forest products to the industry. The industry will recover the loan and interest out of first intermediate harvest.
10. The entire benefit out of the plantation (excluding loan and interest) will go to the farmer.

Shifting the burden of producing industrial wood from forest

As per National Forest Policy and the Forest (Conservation) Act, we can‟t raise commercial plantations for industrial use in forest land. So it is recommended that 1000 ha of private land in each Range of Baripada Forest Division should be planted annually with commercial species like Eucalyptus, Acacia, Teak, Bamboo etc. which has high demand in local industries like Emami Paper Mills Ltd., Remuna, Balasore, J.K. Paper Mills, J.K. Pur, Raygada. Commercial plantation in private land is proposed as thrust area in this working plan. MoU can be signed by farmers and representative of industrial units like Emami Paper Mills Ltd., Titagarh Paper Mills Ltd. etc. to raise commercial plantations in farmer‟s field through Forest Department with buy-back arrangement by industrial units.

9.6.3 Rotation Period

Rotation period depends upon trees planted. In coppice Eucalyptus crop a felling cycle of 4-5 years can be adopted and in non-coppice Acacia crops 15 years felling cycle may be adopted.

9.6.4 Havestable Diameters

Havestable Diameters depends upon trees planted

Species	Exploitable Diameter (in cm)	Remarks
Acacia auriculiformis	90	Tree will not be felled when commercially required.
Azadirachta indica	180	
Gmelina arborea	120	
Anacardium occidentale	After ceasation of fruiting	
Fruit trees	After ceasation of fruiting	

9.6.5 Reducing Factors and Reduced Areas

Harvesting of timber will be as commercially required. Hence no reducing factor has been defined.

9.6.6 Felling Cycle

A treatment cycle of 10 years is prescribed for this working circle.

9.6.7 Division into Periods and Allotment to Periodic Blocks (PB)

Periodic block is not prescribed in this working circle.

9.6.8 Calculation of Yield

Yield is calculated as per species planted. The formula for yield calculation for Acacia & Eucalyptus is given in respective sub-chapter.

9.6.9 Table of Felling

Table of felling is prepared by farmer or community before felling.

9.6.10 Method of Execution of Felling

Demarcation of area followed bymarking and removal of trees are to be followed by the farmer.

9.6.11 Subsidiary Silvicultural Operations Cleaning and Thinning

Cleaning, thinning and replanting is prescribed for the farmer.

9.6.12 Regeneration

Artificial Regeneration

The renewal of commercial crop is done through planting of seedling/ Twig/ Rhizomes or through sowing of seeds. Gaps are noticed in almost all ToF areas. It is advised that the Forest Department/ with the local people plant the permanent gaps through artificial regeneration.

Nursery

Seedlings can be distributed at a concessional cost through temporary/ permanent/ central nurseries.

Treatment Map

When the plantation is facilitated by Forest Department, a treatment map shall be prepared along with a statement showing estimates of financial requirement and calendar of operations.

Planting

Planting shall be taken up immediately after onset of monsoon and completed by second week of July. The number of plants per hectare to be planted will be decided by the DFO. Required dosage of insecticides and fertilizers shall be applied after weeding during planting process.

Research Needs

There is necessity of Research on cultivation of tree species in a row/ in double row and compatibility of cultivating agricultural crops between two rows of tree crops.

9.6.13 Associated Regulations and Measure

The Odisha Timber and Other Forest Produce Transit Rules, 1980 will be followed while removing and transporting trees requiring transit permit.

SUB-CHAPTER – 9.7

EUCALYPTUS PLANTATION IN FARMER'S FIELD FOR PULPWOOD

Eucalyptus belongs to the family *Myrtaceae*. The species can withstand extreme temperatures and rainfall. It is a best suited tree species for the areas which receive rainfall from 250 to 600 mm but at the same time it can also grow well in high rainfall areas which receive rainfall as high as 1250 mm. The altitudinal range is 30- 600 mtr. This species occurs on a variety of soil types from red or black soils to sandy alluvial soils. It can also grow well in salt affected areas, except calcareous soils.

Seed and Nursery Techniques: Generally flowering is initiated along with rainy season. Flowering intensity is variable and unpredictable from year to year. Maturation time is about 3- 4 months. *E. camaldulensis* takes three years from planting for the production of the first seed crop. Eucalyptus species have a mixed-mating breeding system with preferential out crossing. Although they are commonly self-compatible, self-pollination generally results in a reduction in capsule production, seed yield and seedling vigour.

Maturing fruit will turn from green to brownish-red with prominent ridges on the top when the fruits ripe. It produces heavy seed crop every 2-3 years. Generally after maturation, capsules do not open immediately. Capsule opening is a slow process which takes 2-3 months period when present in the tree. However, once they are collected from the tree, seeds dehisce on shade drying in 2-3 days. Seed can be distinguished from chaff as the seeds are bigger and yellow-brown in colour while chaff will be small and elongated. Seeds weigh approximately 700 seeds per gram. They can be stored for more than 10 years if they are placed in hermetic containers at a temperature of 3 to 5°C and a moisture content of 5.5 to 10 percent. Seeds stored at 25°C had a germination rate of 91% after 5 years, and 87% after 10 years. Germination is epigeal. Normally, the seeds show high germination percentage (more than 90%) without any pre-treatment. Rapid and complete germination is achieved under moist, warm (32°C) conditions in the presence of light. Seeds are eaten by ants hence need to be protected.

For all Eucalyptus, the texture of the medium of germination must be fine. A fertile mixture of soil with sand in a proportion of 1:1 may be used. Seed should be sown under shade on a free-draining and sterilized medium and covered very sparingly with inert material (e.g. sand). Seeds must be sown deep enough to prevent uncovering when watered, but they must not be too embedded. The germination period for this method ranges from 4 to 5 days. Smoke treatment has been found to improve germination. The seedlings are lifted from the mother bed when they are 5 to 7 cm in height and transplanted in poly bags or root trainers. Alternatively, seeds can also be planted directly into bags when the germination is good.

Shade cover is needed after transplanting for about six weeks. Growth is fast under tropical conditions and plants could reach plantable size (30 cm tall) in four to five months. Seedlings require periodic watering in the first stages of development. Common mistakes in propagation are over-watering and associated disease problems, over-shading and allowing the germinant to become too large for easy transplanting leading to malformed tap roots or root curling in the pots. To prevent damping off, cupric fungicides should be applied. About 1-2 lakhs seedlings can be obtained from one kg of seed in nurseries.

Cultivation Practices: Selection of the correct planting material for a particular planting site is of paramount importance. There is variation in growth of clones across locations. A few clones are suitable for deep soil and few others are suitable for saline and gravelly soils. Hence choice of clone for a particular locality is the first and foremost issue for the success of a planting programme. Weeding and burning of underbrush are recommended before planting. The ability of the species to compete with weeds is poor. In high rainfall areas, frequent weeding (2-3 times) is required until closure of canopy (2-3 years). Inadequate weed control may lead to complete failure of the planting.

Spacing and cropping systems are very variable, pulpwood plantations are made with a spacing of 3×2 m (1667 stems per ha). Wider spacing of 4×2 m (1250 stems per ha) or 4×4 m (625 stems per ha) are recommended for plywood. For energy plantations, a spacing of 2×2m is recommended. For paired row plantation, the spacing of 1mtr ×1mtr is followed within row andthere is a gap of 5mtr between two paired row. In

India, Eucalyptus is managed through clear-felling system followed by coppice rotation for two times. After three rotations, the below ground biomass is taken out and replanted with seedlings.

Coppice-with-standards is recommended to supply a range of wood products. A thinning of 700 stems per ha at half rotation age provided posts, poles and fuel wood, leaving the better trees to grow-on to 10 years for products like plywood and sawn timber. Rotation lengths vary depending on the end use. For pulpwood depending on the soil fertility and availability of water, the rotation can fixed from 5 to 6 years for small-sized pulpwood. Under wide spacing, trees are also grown for timber at a rotation of 8-10 years.

Application of 100g of NPK (3:2:1) fertilizer to each tree at the time of planting to assist establishment of growth is common practice. Crown die-back during dry-season as a result of boron deficiency is prevalent and must be corrected. A dosage of 10-20 gm of Borax per tree may be applied depending on soil type.

E. camaldulensis is usually grown on a short rotation and clear felled at an age that maximizes production of logs of optimum size for a particular end use. This is usually small-diameter material suitable for pulpwood, mining timber or fuel wood. This species coppices well for three times. The season of felling affects coppice regeneration. Felling during the dry season delays sprouting and increases the risk of the stump mortality. Felling by saw gives a cleanly-cut stump with minimum bark damage. Reduction of the number of coppice shoots on stool is a very important and time consuming operation in coppice management.

Agroforestry Practices: *E. camaldulensis* in plantation has a relatively narrow crown and pendulous leaves which allow light to the forest floor. This permit weeds growth initially up to two years but can be turned to advantage with intercrops. A wide range of crops like groundnut, chilli, onion, leguminous plants, etc. can be grown. A spacing of 5m×2m is recommended for intercropping for one year under normal planting spacing and three years under wide spacing of 5m×2m. Paired row method of planting with 5m species between row and 1m between plants is also practiced. Wider spacing between rows facilities mechanical cultivation for weed control as well.

Insect and disease problems and control measures: In the nursery, Eucalyptus seedlings are susceptible to diverse fungi causing damping-off, collar rot and leaf diseases. Attention to nursery hygiene and care not to over-water are preferable to chemical controls. Insects (e.g. termites and aphids) and rodents may be troublesome, and both physical and chemical control measures may be needed. Termites affect planted seedlings and young trees and must be chemically controlled.

Eucalyptus is severely attacked by an invasive gall insect (*Leptocybe invasa*) which lead to formation of gall like structure in the midrib and petiole and young stem. The problem is severe in young seedlings and coppice shoots. Leaf and root diseases are common where the species is planted off-site or where inappropriate provenances are used. Stem cankers and leaf diseases proliferate where rainfall and humidity are much higher than normally encountered in the natural habitat.

(**Reference:** ICFRE, 2019. Productivity Enhancement in Forestry Plantations. ICFRE User Manual – 01. Indian Council of Forestry Research and Education, Dehradun, India.)

SUB-CHAPTER – 9.8

Acacia auriculiformis

PLANTATION IN FARMER'S FIELD FOR SMALL TIMBER

Acacia auriculiformis popularly known as Akashmoni or Australian wattle belongs to family Fabaceae (Leguminosae) subfamily Mimosoideae, is an evergreen, tall straight tree with dull-green, thin crown and smooth white bark. It reaches a height of 9-11m, rarely up to 15m in about 30 years. It is a native of North Australia and Queensland; but frequently planted in various parts of India as an exotic suitable for introduction in dry regions. It has been successfully raised recently in Odisha. The place of tree leaves is taken by phyllodes which consist of the leaf stalk modified into a flattened blade. This species has been found useful for paper making. It is reasonably good firewood and can also be used for making cheap furniture.

It is a light demander species. It is an evergreen tree retaining considerable foliage during the year. It is not browsed by the cattle. Dispersal of seed is by wind.

Seedling production - Sowing of seed is done in containers such as polythene bags. Propagation is also done by direct sowing of seed in bed or plantation sites, and through root suckers.

Seed collection and storage: The tree seeds profusely every year. Ripened seed is collected from the tree from February to March by lopping. Pods turn from brown to black on ripening. They are spread in the sun for 5-9 days; they open out to release seeds. Seeds are separated by hands. If stored in air tight bottles, tins, earthenware, pots, in cool dry place, the seeds can retain their viability to a large degree up to 2 years. The seeds are liable to attack by ants.

The seeds weight 30800 to 42000 per kilogram. The germination capacity is quite high i.e. 50% to 95%.

Pre-treatment of seeds: It should be soaked in cold water for 24-36 hours before sowing. Sometimes the seeds are also treated by immersing in boiling water taken off the fire and left to cool and soak for 12 hours.

Nursery techniques: Seeds can be sown either in nursery beds or in containers. Containerized plants (generally polythene bag plants) give better results. Mixture of local soil and cow dung in the ratio of 3:1 is used as a potting media. Seeds are sown in nursery in the Month of March in nursery bed at a spacing of 5cm×5cm under shade. As seeds are liable to be attacked by ants, a light spray of kerosene oil is helpful. Overhead shade should be given during germination period, which should be removed after germination is completed. A thatch barrier of one side of the bed is generally given to cut off direct hot winds. Germination starts in 15-21 days and completes within 30 days in favourable localities. The seedlings are planted out in the field in June-July with the monsoon when the stock should have average height of 30cm.

This species has comparatively high resistance against oxygen deficiency and may be useful for planting in swampy ground and stiff soils. It is also a promising species for sterile soil in coastal area.

(**Reference:** ICFRE, 2019. Modern Nursery Techniques, ICFRE Manual. Indian Council of Forestry Research and Education, Dehradun, India.)

SUB-CHAPTER – 9.9

TEAK PLANTATION IN FARMER'S FIELD FOR TIMBER

Tectona grandis is the most important timber tree belonging to the family Lamiaceae. It is native to South and South East Asia particularly India, Thailand, Myanmar and Laos. Teak is also naturalized and cultivated in many South and Central American and African countries.

Teak is versatile type of wood and has the physical properties of high strength, flexibility during woodworking, high resistance to rot and weather elements and low shrinkage ratio. The wood is used for ship and boat building, wood flooring, wood paneling, carving, furniture, veneer, windows frames and indoor and outdoor structural beams. The teak wood has been used for decking, deck houses, rails, bulwarks, hatches, weather doors and planking. Varieties of teak have versatile utilization based on grains and colour of the wood. The large teak trees from Western Ghats region are used for structural needs like ship and boat building, construction and bridge building. Teak grown in Central India is known for colour, texture and grains and preferred for making furniture and aesthetic articles. Teak wood from Godavari valley has ornamental figuring and used for making furniture and cabinet.

Cultivation:

a. Growth Requirements

Soil: Teak grows well in alluvial soils, fairly moist, warm, tropical climate with pH ranging from 6.5 to 7.5. Teak showed poor growth and form on dry sandy soil, shallow or hard pan soil, acidic, laterite, black cotton and waterlogged soils. It fails to grow in the soil with pH below 6.5.

Climate: Teak plant prefers humid, moist, warm tropical climate. It is a light demanding species and requires relatively high intensity light. It is grown from an altitude of 1200 MSL with 800-2500mm rainfall regime and also grown in very moist areas with the annual rainfall of over 3500mm. It can withstand extremes of temperature (13-44°C), but more profuse growth observed between 13-27°C.

b. Seed Propagation

The time of seed collection in teak is normally between November and January. In spite of profuse flowering, teak is known for very poor fruit set due to various factors. The size of the fruits also varies with the population and 1100 to 2800 fruits weighed in one kg of fruits. Forty year old teak trees can produce 3-4 kg of fruits. Teak fruits contain four locules, generally filled with 1-2 seeds. Teak seeds can be stored up to 2 years at 12% moisture level in proper storage condition. Storage at 0-3°C can maintain viability up to 5 years.

Seed germination in teak is greatly affected due to dormancy and pre-treatment of seeds by alternate wetting and drying for a week will improves germination. The seeds must be kept in gunny bag and in running water for 12 hours and subsequently the seeds are sundried for 12 hours. This procedure has to be repeated for a period of one week. The germination also affected by the size of seeds and always bigger size seeds have better germination than the smaller size seeds. Higher germination percentages of 30-50% were recorded in moist teak whereas lower levels were recorded in 05-10%.

Nursery Management:

Seeds are sown in the raised nursery beds with the size of 10×1×30 m prepared with mixing of sand, soil and manure. The bed should be fully exposed in the open sun light. Seeds were sown in nursery beds at 1 to 1.5 cm depth. The nursery beds have to be watered regularly and covered with coconut leaf or paddy straw. Seeds germination starts 15 days after sowing and continues up to 50 days. For preparation of stumps seedlings can be maintained for 8-10 months or transferred to poly bags 60 days after sowing.

Preparation of Stumps:

The teak stumps are prepared by cutting one year old healthy seedlings uprooted from the nursery. In the seedlings 15-20 cm root portion and 2.5 cm shoot portion with more than one cm thickness are used for preparation of stumps. The quality teak stumps are produced from the seeds collected from identified best seed sources such

as seed production areas and seedling/clonal seed orchards as well as vigorous culling of inferior ones in the nursery which ensures enhanced yield of teak in plantations.

Establishing Plantations:

Establishment of a teak plantation is a long-term activity and hence it needs proper planning. Well drained land with moderate slope (5%) should be selected for establishment of teak plantation. Generally planting should be done before onset of monsoon. Rectangular or line planting system can be followed for establishing teak plantation. The spacing of teak plantations depends upon soil type, soil depth and climatic conditions. The land should be ploughed thoroughly with tractor drawn rotavator twice. Aligning and staking should be done for digging of pits. Pits of 60×60×60 cm size are dug out in a spacing of 2×2m (or) 3×3 m and 2 m intervals are maintained in case of bund planting. The pits are dug out a month prior to planting and kept open for at least a month for disinfestation by solar radiation. The pits can be drenched with 0.15% Carbendazim and 0.2% of Chloropyriphos 4–5 ml/pit. Pits are filled with dugout earth and remaining half of the pits can be filled with farm yard manure 2 kg, Neem cake 500g, Calcium sulphate 100g and Trichoderma 25g. Watering is done to allow the soils to settle down. Well-developed cuttings or one year old teak stumps or 150 days old poly bag seedlings should be used for planting in the centre of the pits. The teak plants should be irrigated immediately after planting.

Agroforestry:

It is one of the most important and preferred tree species largely planted by the farmers in different planting systems such as block planting, bund planting and paired row system of planting along with different agriculture and horticulture crops. It is planted in different models, combinations as well-as in different placements.

Agroforestry Model	Details of System
Agri-silvi-horticulture	Teak/ Acacia + Maize/ Bajara/ Pulses/ Turmeric/ Ginger/ Chilli/ Tomato/ Pineapple.
Agro-silviculture	Teak + Maize / Ragi / Turmeric / Pulses

Nutrient Management:

Though teak grows well in fertile soil, its productivity and wood quality can be enhanced by adequate supply of nutrients. The balanced nutrition is essential for the young trees up to the age of 10 years for better growth and optimum wood production. Application of fertilizers varies with soil type and planting density. Calcium is very much essential for better growth and development. Fertilizer should be applied in ring basin formed 1.5 m away from main trunk.

Year	Fertilizer	Organic Manures (Kg)	Dolomite (g)
I	050 (15 : 15: 15)	1	50
II	100 (15 : 15: 15)	2	50
III	150 (15 : 15: 15)	3	100
IV	200 (15 : 15: 15)	4	100

Application of water soluble fertilizer through drip irrigation system will improves availability of nutrients and their uptakes, application is restricted to wetted area where root activity is most intensive, loss of nutrients by leaching is minimized, soil compacting is prevented, weed population is reduced and labour and fertilizer cost is minimized.

Weed Management:

It is an important operation in teak plantation development. Rainfall and regular irrigation will encourage weed growth in teak plantation that will compete with trees for water, light and soil nutrients. In addition, weeds can also act as host for pest and disease which is seriously damaging growth and development of teak plantations. Mulching with black polythene sheet or organic mulches such as sawdust, banana trash, paddy husk, sugarcane trash etc. may be used for soil moisture conservation and weed control. Mulching will save 20-25 % water requirement and control 20 % weed populations. Manual weeding may be carried out 3 times in the first year, 2 times in second year and subsequently one time in every year. Application of post emergence herbicide Glyphosate will help in managing the weed population.

Pruning:

Teak pruning commences in the third year after planting. Branches and twigs from the lower half of the tree should be completely removed. Pruning more than 50% shoots can affect the growth and development of teak trees. Pruning should be completed in early rainy season and avoid pruning during rainy season. Branches should be removed during early growth stages. If pruning is delayed, removal of large shoots will result in knot defects in the wood and also make trees vulnerable for pest and disease infestation. Immediately after pruning the cut ends are treated with the 2% copper oxychloride paste.

Thinning:

The teak plantations are initially raised in close spacing and early thinning is needed for reducing competition for light, water and nutrients. The complete removal of stressed, unhealthy and slow-growing trees will support better growth and formation of good stem form in the remaining trees. The trees harvested during thinning can be sold for midterm income generation. Any thinned teak trees more than 10 cm diameter can be used for scaffolding in construction and also used as fire wood. Thinning of teak plantation is depending on the spacing, soil quality and rainfall. Generally under good growing condition and close spacing, two mechanical and three silvicultural thinning‟s being practiced by different forest departments and forest development corporations. The interval of thinning cycle is at age 05, 10, 15, 20, and 30 years after planting for 60 year rotation in Kerala and at ages 05, 8, 16, and 20 for 40 year rotation in Maharashtra are being practiced. After final thinning 150 to 170 trees per hectare are to be maintained.

(**Reference:** ICFRE, 2019. Productivity Enhancement in Forestry Plantations. ICFRE User Manual – 01. Indian Council of Forestry Research and Education, Dehradun, India.)

10. CHAPTER – X

REDUCE EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (REDD+)

10.1 Introduction:

REDD stands for reducing emissions from deforestation and forest degradation. REDD+ (Plus) includes forest conservation, sustainable management of forests and enhancement of carbon stocks, and has been adopted by the United Nations Framework Convention on Climate Change (UNFCCC) as a tool for climate change mitigation. Deforestation happens when forests are cleared and such land is put to other than forest land use. Forest degradation implies a gradual depletion of forests driven by demand for biomass and disturbances like fire and soil erosion, which, result in dwindling carbon density and ultimately leading to complete loss of forests. Implementation of REDD+, therefore requires efforts/mechanisms to measure forest carbon, interventions and payments to local people in addition to alternative activities such as fodder development to avoid lopping of tree branches, efficient cooking energy devices, etc.

Reducing emissions from deforestation and forest degradation (REDD+) is a mechanism developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC). It creates a financial value for the carbon stored in forests by offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. Developing countries would receive results-based payments for results-based actions. REDD+ goes beyond simply deforestation and forest degradation and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks. Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD+) was first negotiated under the United Nations Framework Convention on Climate Change (UNFCCC) in 2005, with the objective of mitigating climate change through reducing net emissions of greenhouse gases through enhanced forest management in developing countries.

As an approach under the multi-lateral climate change agreement, REDD+ is essentially a vehicle to encourage developing countries to reduce emissions and enhance removals of greenhouse gases through a variety of forest management options, and to provide technical and financial support for these efforts. A set of requirements has been elaborated to ensure that REDD+ programs contain key elements and that reports from Parties are consistent and comparable and that their content are open to review and in function of the objectives of the Convention.

Decision 1/CP 16 requests all developing countries aiming to undertake REDD+ to develop the following elements:

- (a) A national strategy or action plan;
- (b) A national forest reference emission level and/or forest reference level or, if appropriate, as an interim measure, subnational forest reference emission levels and/or forest reference levels
- (c) A robust and transparent national forest monitoring system for the monitoring and reporting on REDD+ activities, with, if appropriate, subnational monitoring and reporting as an interim measure
- (d) A system for providing information on how the social and environmental safeguards (included in an appendix to the decision) are being addressed and respected throughout the implementation of REDD+

REDD+ focuses on reducing emission from deforestation in developing countries, foster conservation and sustainable management of forest and enhancement of forest carbon stock. Deforestation and forest degradation are second leading cause of global warming, responsible for about 15% of global greenhouse gas emissions, which makes depletion of forests which leads to climate change. In some countries like Brazil & Indonesia deforestation and forest degradation is the main source of greenhouse gas emissions.

Eighty percent of Earth‟s above ground terrestrial carbon and forty percent of below ground terrestrial carbon comes from forests. So it is the most cost effective method to reduce emission by reducing deforestation and forest degradation. Greenhouse gas

emission and concentration with increasing atmospheric temperature can be effectively tackled by reducing deforestation and forest degradation.

Afforestation activities remove carbon from atmosphere very slowly but deforestation causes large changes in carbon stock over a short period of time. In addition to mitigating climate change stopping forest degradation and supporting sustainable forest management, reduce flooding, control soil erosion, reduce siltation of river bed/ reservoirs, preserves the bio-diversity and supports local culture. As forests provide so many services to the society and environment, it should not be cut for revenue/ less important development projects.

Country commitments to mitigate climate change is integral part of 2030 agenda for sustainable management with its 17 global goals that country had adopted to guide development efforts. The REDD+ mechanism contributes directly to achieve sustainable development goals, including those which address poverty reduction, health and well-being, hunger alleviation and improving institutions.

10.2 REDD + Implementation:

FAO‟s support to countries is based on technical expertise in assessing the drivers of deforestation & forest degradation and finding opportunities for forest carbon conservation, management & enhancement. FAO also helps countries design and implement REDD+ mitigation actions, which offer both carbon and non-carbon benefits, taking advantage of cross-sectoral expertise and building on existing experience. FAO works to strengthen collaboration with other initiatives and helps to promote public-private partnerships to scale up investments on REDD+ implementation.

10.3 UNFCCC & Paris Agreement:

The 21st session of the conference of the parties (COP 21) of the United Nations Framework Convention on Climate Change (UNFCCC) was held in Paris during 2015. 195 countries negotiated and adopted the Paris agreement, with include objectives to peak greenhouse gas emissions as soon as possible, to limit the global average temperature increase above pre-industrial levels well below to 2ºC and pursue efforts to limit the increase to 1.5ºC. The Paris Agreement, which entered into force

on 4th November, 2016, requires Parties to put forward their best efforts through "Nationally Determined Contributions" (NDCs). These NDCs represent targets and actions for the post-2020 period. India rectified its contribution on 2nd October, 2016.

10.4 India's NDC Commitments:

India‟s commitments for NDCs are

- To reduce the emission intensity of its GDP by 30-35% from 2005 level by 2030.
- To achieve about 4% cumulative electric power installed capacity from non-fossil fuel based energy sources by 2030 with the help of transfer of technology and low cost International Finance including from Green Climate Fund (GCF).
- To increase an additional carbon sink of 2.5-3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030.
- To better adapt to climate change by enhancing investment in developmental programmes related to climate change, agriculture, water resources, Himalayan region, Improvement, costal region improvement, health and disaster management.

India announces its INDC pledges to cut emission intensity of its GDP by 33-35% by 2030. All countries are required to submit voluntary climate action plan as contribution. These will form part of the outcome of Paris Climate Summit. India‟s INDC is fair and its renewable energy and forestry targets are ambitious, says CSE. Ahead of the UN Conference of Parties on Climate Change, scheduled in December, 2015 in Paris, India submitted its intended NDC (INDC) to the Secretariate of UNFCCC. In its INDC, India has pledged to improve the emission intensity of its GDP by 30-35% from 2005 level by 2030. It has also pledged to increase the share of non-fossil fuel based electricity to 40% by 2030. It was agreed to enhance its forest cover which will absorb 2.5 to 3 billion tonnes of CO_2 by 2030. India has accepted that climate change is exerting large scale impact on different sectors of its economy for which it is agreed to enhance investment in vulnerable sectors. India has reiterated need for International Finance and technology support to meet its climate goals. India intimated that there is need of $ 2.5 trillion (at 2014-15 price) to meet its climate

change actions. India intends to create an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 through creation of new forests by 2030.

India‟s Pipe line projects on REDD+

- National Solar Mission.
- Green Energy Corridor.
- Swachh Bharat.
- Smart Cities.
- Paramparagat Krishi Vikash Yojana.
- Soil Health Card Scheme.
- Pradhan Mantri Krishi Shinchayee Yojana.
- National Mission for Clean Ganga

Indicative Work Plan to Combat Climate Change

- Adopting healthy and sustainable life style to fight climate change.
- Raising funds and adopting new technology for climate change projects.
- Additional focus on agriculture, water resources, costal region, health and disaster management.
- Limiting number of durables/ car per house hold.
- Reduction in wastage of food.
- Focus on renewable energy and energy efficiency.
- Enhance dependency on non-fossil fuel based energy.

10.5 Measures Recommended on Forestry Sector to Combat Climate Change:

In forestry sector to combat climate change the following activities are suggested.

- To reduce the emissions intensity of its GDP by 33-35% from 2005 levels by 2030.
- To achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).

- To create an additional carbon sink of 2.5 to 3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030.
- To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources.
- Reduce felling of trees followed by enhancing the planation activities. Providing natural resource based employment to the forest dependent communities to overcome the problem of unsustainable harvest which would help in the conservation of forests and enhancement in the carbon stocks.
- Enhance creation of renewable energy.
- Enhance use of solar/ wind energy.
- Reduce dependence on fire wood, promotion of Pradhan Mantri Ujjwala Yojana through convergence mode involving VSS/ VFC/ CFM committees etc.
- Reduce generation of solid waste by reducing consumerism.
- Conserve water body and improve efficiency in use of water.
- Promote urban forestry and roof top gardening.
- Adopt soil and moisture conservation measures.

11. CHAPTER – XI

MISCELLANEOUS REGULATIONS AND MEASURES

11.1 Introduction

This chapter concerns the whole Division and includes mostly all those prescriptions, regulations and recommendations which are not made earlier in the main Working Circles. Thus, the prescriptions made here would be applicable to all the forest blocks (unless and until specified other wise) included in the revision. Some of the important subjects for which regulations have already been prescribed are also re-iterated here for the sake of emphasis.

Miscellaneous regulations and measures are applicable for all forest areas outside working plan in Baripada Forest Division. Forest Blocks not covered under any Working Circle of this revised working plan. Revenue Forests in Pithabata Range (2206.588 ha), Dukura Range (948.846 ha), Deuli Range (3194.118ha), Bangiriposi Range (2020.081 ha), Udala Range (2182.094 ha), Kaptipada Range (13872.990 ha), Rasgobindpur Range (1344.229 ha) and Betnoti Range (3295.541 ha). DLC Forest of 1741.01 ha. has been included in DLC report. So Forest (Conservation) Act, 1980 is applicable to all these Revenue Forests and DLC Forest. Tree Outside Forests (in non-forest Govt. land and in private land) spreads over 5805.78 ha in Baripada Forest Division. In this chapter all regulation has been prescribed for the forest area included in revenue record and DLC Forest list. This area is not allotted to any Working Circle in this Plan. Trees of various age groups are available but the number of exploitable trees is less. Most of the area is under heavy pressure of illicit felling throughout the year. The local people are cutting poles, which is locally called „Balha" for construction of their thatched house and firewood. Coppice and damaged shoots are also seen in these areas. The soil is highly eroded and thereby less fertile.

Generalized guidelines for maintainance of all Forests in Baripada Forest Division are given below.

11.2 Petty Fellings:

Petty fellings in any Forest areas included in this Working circle is not recommended. During cyclone, if some trees are uprooted they will be salvaged departmentally following administrative instruction issued by the Principal Chief Conservator of Forests and HoFF.

11.3 New Forest Road or New Constructions in Forest Land:

For development of Forest and wildlife, if it is felt necessary to create new Forest road or construct cement house, permission from appropriate authority should be obtained. In case of non-forest use of Forest land, within Working Plan area, forest diversion proposals can be submitted to competent authority for necessary permission.

11.4 Lopping

The local people are regularly lopping the trees of different species to use as leaf fodder for their domestic animals. Repeated lopping year after year weakens the tree and it becomes prone to many diseases. In course of time, such trees die leaving behind no regeneration to take their place. Lopping is discouraged. Any regulation for lopping is not prescribed.

11.5 Climber Cutting

Climbers are a menace not only in the young regeneration area but also in the forest crops as they seriously affect the growth of young plants and trees. Climber cutting shall be done at the time of marking of the annual coupe. Thin climbers will be cut at one place on the ground level where as thick one shall be cut at two places (one near the base and other at a height of 1.5 mt). In case climber will be heavy after the main felling in the annual coupe area, the Divisional Forest Officer will prepare a special estimate for climber cutting in the worked out coupes.

11.6 Soil and Water Conservation Measure

The area allotted to this Working Circle varies from gently slope to steep slope. The local people are collecting stones for construction of their houses. Sometime

contractors are also collecting stones for construction of roads, building and other contracts works. Construction of check dams at an interval of 02 km in the Semi-perennial nalas is prescribed for water conservation. Gullies should be checked by construction of small check dams and if required staggered trenches should be dug at regular interval to conserve moisture.

11.7 Regular Exploitation and Disposal

Non-Timber Forest Produce

The old system of exploitation and marketing by the T.D.C.C. Co, Ltd, O.F.D.C. Ltd. may be evaluated for giving reasonable price to the collectors of NTFP. Such NTFP marketing through Govt. agencies will give maximum price to the rural poor.

Irregular Exploitation

Irregular felling of green trees from any category of forest blocks must not be permitted in view of increasing trend in illicit felling throughout the Division and salvaging of huge quantity of timber and fire wood. If there is absolutely necessary for departmental developmental works, permission shall be sought for from competent authorities after giving full justification for seeking felling orders of green trees.

Requirement of timber for departmental works should be met from U.D. Case timbers, supply of timbers for public utility, victims of natural calamities and free and concessional grants shall be met from village forests, un-demarcated protected forest blocks and D.P.F. blocks. Codal provisions and executive instructions issued from higher authorities shall be strictly adhered to while issuing orders for supply of timbers.

Irregular exploitation of green trees at the request of tenants in private plots of any category shall be met after observing the codal provisions and executive instructions for this purpose. The timber felled from the private land may be purchased by O.F.D.C. Ltd. . D.F.O. shall allow felling of green trees from the private land as per provision prescribed under Odisha Timber and other forest produce Transit Rules, 1980.

The cleaning and thinning operations should be taken up departmentally. Forest produce obtained from cleaning and thinning operations should be stacked outside the forest area departmentally for disposal. These may be handed over to OFDC Ltd, or Vana Surakhya Samitis after stacking.

The exploitation of dry as well as dead trees which are fallen and not standing shall be carried out systematically specifying area, period, and quantum of production along with man-days generated for different category of rural population.

Forest Consolidation

The consolidation of forests has been grossly neglected. In fact, no further RF blocks could be notified during the outgoing plan. Thus, the consolidation requires due priority by way of phased programme to be drawn and pursued vigorously by the DFO with Forest Settlement Officer for final notification of all such blocks as RF for better and intensive forest management.

System of Sale and Disposal of Forest Produce

All the annual coupes due for working shall continue to be worked out by Orissa Forest Development Corporation Ltd. However, all silvicultural operations including thinning; cleaning and pruning must be done departmentally. The disposal of NTFPs shall be as per the Government policy in vogue.

Since regular seizure of the forest produce, particularly timber is being done, the same shall be promptly disposed off not only to restrict its quality deterioration but also to fetch revenue for the State.

Similarly, timber and firewood from dead, dry, wind fallen trees, and from leftover materials of illicitly felled trees, shall be salvaged departmentally. However, to carry out these operations, the Range Officer shall submit a plan of operation to appropriate authority indicating location, anticipated quality of timber and firewood available, reasons for availability and funds required for extraction etc. Salvaged materials may be handed over to M/S OFDC Ltd. for sale as per the Government instructions in vogue.

Maintenance of Forest Block Boundaries

The boundaries of various forest blocks are poorly maintained due to a variety of reasons including paucity of funds. This has given scope for encroachment. Most of the boundary pillars were found missing. The numbers of boundary pillars also could not be ascertained in many other cases. Hence, boundary pillars are required to be periodically repaired and numbered. Boundary lines are also required to be cleared and properly maintained. Details of block boundaries, e.g., length of forest boundary, number of pillars, pillar to pillar bearings and distances, and a record of maintenance of boundaries shall be meticulously maintained.

Every forester shall submit quarterly certificate of having inspected the boundaries of all the blocks within their respective jurisdictions to the Range Officers concerned, for transmission of the same to the Divisional Forest Officer on 1st January, 1st April, 1st July and 1st October every year. Similarly every forest guard should submit a monthly certificate of verification of boundaries of all forest blocks under his charge and it should be reflected in his tour diary.

Since gradually all the toposheets and maps are being digitized for development of soft ware for use of GIS technology and remote sensing photo imageries in the forest management, there is need for GPS (Geographical Positioning System) reading of all the boundary pillars.

Forest Fire Management

The following fire protection measures are suggested:-

- Annual fire line clearance in fire sensitive areas, coupled with controlled burning shall be done under the personal supervision of forester. Moreover, old fire lines, forest roads, boundary lines, village ring shall be kept clean by taking up control burning in strips on both sides of it.
- The Orissa Forest (Fire protection) Rules, 1979 and the fire protection measures provided in the O.F.D. code shall be followed in these forests.

- ❖ All Range Officers shall maintain annual fire maps on 1:25,000 scales of their respective ranges showing incidence of fire, in order to enable them to take advance fire protection measures in fire prone areas.
- ❖ Public awareness campaign should be launched in winters to educate people not to resort to burning of ground flora to collect NTFP including kenduleaf. Besides, VSSs shall be involved in the task of fire protection including extinguishing the fire. Incentives should be announced to both public (including VSSs) and staff to protect the forests from fire. Funds for this purpose should be provided in budget.
- ❖ Imparting training to forest staff and workers on modern forest fire management. Better communication facilities like wireless sets, vehicles etc. will be of great help to combat the menace.
- ❖ Emphasis should be given to plant fire resistant species in the fire prone areas.

The assessment of loss due to forest fire like loss of natural regeneration, loss of timber value in the standing trees, loss of humus and wild life and changes in soil structure and nutrient status have not been quantitatively assessed. Suitable model should be developed to quantify the loss because of fire per hectare.

Grazing and Fodder Management

Due to heavy cattle population pressure in the division, adequate regeneration is not coming up in the forest areas as expected. For better fodder availability, following measures may be adopted:-

- ❖ People may be motivated with the help of veterinary department, to minimize the number of unproductive cattle. They should rather go for better quality cattle and stall-feeding.

- ❖ Plantations of fast growing fodder species and development of silvipasture plots in the selected high-density cattle areas be taken up.

Acacia nilotica (Babul), Albizzia lebbek (Siris), Gliricidia maculata (Gliricidia), Sesbania aegyptiaca (Agasti), Leucaena leucocephala (Subabul), Albizzia procera (Tentra), Grewia oppositifolia are some suitable fodder tree species. Similarly,

Dichanthium annulatum, Cenchrus ciliaris (Anjan), Andropogon ascinodis, Themeda arundinacea, Setaria pumila, Eleusine indica are some suitable fodder grasses for the Division.

To minimize damage caused by indiscriminate grazing and browsing, following measures shall be adopted:-

- Grazing will be allowed strictly basing on the carrying capacity of the area. Goats and Sheep should not be allowed inside the forest areas.
- Lopping of trees for fodder is to be discouraged.
- Grazing should not be allowed in over-grazed areas, regenerating areas and where cleaning have been carried out.
- All plantations shall remain closed for grazing for a period of 5 years including the year of planting. No grazing should be allowed in areas where bamboos are raised under plantations.
- The grazing year shall be from 1st July to following 30th June. All grazing permits shall expire on 30th June.

To control the damage caused by indiscriminate grazing of forests, the Government has framed the Orissa Forest (Grazing of Cattle) Rules 1980, but the implementation of these rules at the field level is becoming very difficult due to local conditions and lack of adequate staff and materials. On the other hand, cattle population is increasing day by day as the human population expands, which further aggravates the situation. Hence, proper implementation of grazing rules should be ensured including realization of grazing fee.

Maintenance of Records

Control Forms: Standard control forms will be used and maintained as per Rule 132 of the O.F.D. Code and the Code of Working Plan Procedure besides directions from higher authorities**.** In Baripada Forest Division, maintenance of control forms and records has been highly unsatisfactory.

Fire Maps: They shall be maintained as per Rule 283 (22) of the Orissa Forest Department Code. The record should be submitted annually in code Form No. 39, along with fire map to the Conservator of Forests. Burnt area shall be shown on a trace copy of compartment map and details shall be given in respective compartment history form.

Compartment Histories: The compartment histories have been very badly neglected and in most cases, those could not even be traced out despite all possible efforts, making collection of reliable data for revision of the plan extremely difficult. Entries in the compartment histories should be completed by Range Officer before 30th of June every year and sent to the Divisional Forest Officer for onward transmission to the Conservator of Forests for perusal within 31st July. During office inspection, maintenance of compartment histories shall be checked.

Plantation Journals: Journals will be maintained for the plantations raised in the Division showing details of operations and their cost, in the forms prescribed in Orissa Forest Plantation Manual 1977.

Plantation Register: A plantation register shall be maintained at the Division level giving details of every plantation carried out like year of plantation, location, area, species planted and agency which planted. Entries should be made in this register at the end of every year. A unique index number will be assigned to individual plantation, and a separate serial shall be adopted for each Block and some pages will be assigned to it in the register to have room for later entries. This register should not show any detail of operations, which will be shown in the plantation journals. The plantation register should be maintained as prescribed under Plantation manual 1977. Maps of the plantations with all details will also be kept in the plantation register.

Register of Forest Blocks: Maintenance of this register needs much care and immediate attention. Since different types of forests have been included in the current plan, there shall be separate pages earmarked for each category of forest. The said register should preferably contain the original notification (or an attested copy thereof) declaring the forest blocks under a particular category. Accurate maps of the block delineating the boundaries and showing the position of the boundary pillars as they exist on the ground and other details like boundary lengths, number of pillars,

their coordinates etc should also be kept as part of this register. DFO shall keep on trying to obtain copies of reservation notifications and original maps etc.

Improvement and Development of Buildings and Wells

There is a shortage of accommodations, particularly for the field staff. Still construction of quarters needs to be taken up in a sustained manner. The existing old buildings, rest houses and wells are also required to be repaired /renovated in a sustained and equitable manner. These are capital assets of the Division and are therefore, required to be carefully maintained and their value and utility need be augmented. New forest rest houses as proposed need to be constructed for better field visit by superior staff and use of elephant squad.

Electrification of all the buildings in remote Beats and Sections, where such facilities are available, should be taken up. A phased programme may be drawn for construction of residential and office buildings for all the staff during the currency of the plan period.

Fuelwood Management

The firewood is legally supplied by the OFDC Ltd only. This supply is very limited and delivered by the Forest Department for sale through OFDC Ltd retail sale Depots. However, the production is hardly any match to the assessed requirement; it is not even 1% of the total requirement. Though some other sources like LPG, Agricultural Waste, Kerosene are also available & used as a cooking fuel, the firewood continues to be the major cooking fuel putting tremendous pressure on the forests of the Division. Keeping in view the limited availability of alternative fuels, the removal of firewood cannot be stopped completely as this domestic energy is an essential daily requirement of majority of populace of the Division.

To reduce the heavy pressure on the existing forests, following measures may be adopted:-

- Extensive plantations of short rotation fuel wood species should be raised on community & other barren lands.
- Encouragement of Agro Forestry and Farm Forestry in large scale.

- ❖ Motivation of people through formation of VSS to regenerate degraded patches of forests to meet their fuel-wood requirement, instead of depending on existing forests.

- ❖ Distribution of fuel-efficient smokeless chullahs (It can reduce consumption by 30 %) to all the villagers at concessional rates to reduce the consumption of fuel wood. Even, optimal utilization of firewood shall be ensured without wasteful burning

- ❖ Use of firewood in commercial establishments like hotels; restaurants; Brick kiln etc shall be strictly prohibited

Acacia nilotica (Babul), *Cassia siamea* (Chakunda), *Azadirachta indica* (Neem), *Acacia auriculiformis*, *Albizzia lebbek* (Siris), *Albizzia procera* (Tentra), *Terminalia arjuna* (Arjun), *Acacia leucophloea* (Gohira), *Syzygium cumini* (Jamu) and Eucalyptus are some of the important fuel wood species recommended for fuel wood plantations.

Monitoring of Old Plantations

Old plantations shall be monitored from time to time with regard to survival percentage, growth characteristics, injuries to the crop and other indicators. Observation of monitoring and inspection shall be reported in the journals.

Joint Forest Management (JFM)

The National Forest Policy of 1988 envisages people‟s involvement in the development and protection of forest and asks for creating a massive people‟s movement with equal involvement of women, so that the forest communities could identify themselves with the development and protection of forests from which they derive benefits. Moreover, the rights and concessions from forests should primarily be for the *bona fide* use of the communities living in and around forest areas, specially the tribals. The Policy further prescribes that enjoyment of rights and concessions should be subject to carrying capacities of forests and availability of adequate quantities of relevant forest products without jeopardising regeneration of forests.

The State Government have already issued resolutions to this effect. The DFO in right earnest of the things shall implement the provisions of JFM for protection and regeneration of degraded Forest areas and to meet the local demands of firewood, small timber and other *bona fide* requirements during the plan period. In fact, successful JFM solves the problem of fuel, fodder and small timber requirements to a great extent and also helps in soil and moisture conservation .It even increases the income of local people through increased collection of NTFPs. To top it all, the JFM activities improve and increase the forest cover with consequential betterment of the micro climate as well.

Though there are over 402 numbers of VSSs constituted in the Division as per the Government resolutions on JFM, the majority of these VSSs are in need of revival. In fact, the concept of JFM vis-à-vis its success basically lies in constant dialogue with the stakeholders. Hence, the staffs shall ensure regular interaction with all the villagers. Moreover, the memorandum of understanding (MOU) signed in the course of formation shall be honoured since trust and commitment is the key to success or failure of JFM. Thus, there shall even be clear cut guidelines prepared /approved for benefit sharing as well.

To ensure the above aspects, one Micro plan shall be prepared for every VSS adopting the „Participatory Rural Appraisal" technique (PRA). Before the preparation of Micro-Plan, the forest assigned to the VSS shall be surveyed and demarcated. Pillars should be posted to avoid any future area-dispute among different Samities (Committees). A map to the scale will be prepared by the field staff and enclosed with the micro plan. Different activities like plantation, soil conservation measures, silvicultural operations like tending and cultural operations, disposal of the cleaning materials, water harvesting structures, pastures etc. shall be discussed in detail along with financial outlay in the micro plan. Even, sharing mechanism shall also be clearly spelt out. However, the provisions of this micro plan shall be in conformity with the overall prescriptions of this working plan

Management of Village Forests

There are 127 numbers of village forests in the Division with total village forest area being 588.314 hectares. The plantations in these village forests have been raised under

erstwhile Social Forestry Project and constituted as Village Forests under the provisions of the Orissa Village Forest Rules 1985. These plantations vis-à-vis village forests shall be managed in accordance with management plan prepared under the provisions of the aforesaid Rules 1985.

Encroachment

It has been the consensus among one and all that increasing population is putting enormous pressure on forests and as a result, forests are being regularly destroyed for agriculture and homestead purpose besides other non-forestry purposes. In fact, encroachments are rather a rule than an exception in the Division. This situation has further been aggravated for lack of clear land details and proper maintenance of boundaries, coupled with absence of regular inspection by the field staff.

Resurvey; demarcation and construction / repair of boundary pillars according to provisions of Rule 168 and 169 of O.F.D. Code, 1979 is absolutely necessary to check this growing problem. The cases of encroachment shall be firmly dealt with. The prosecution cases filed in the court should be pursued vigorously. There should be periodical review and monitoring of the encroachment cases at the DFO level. The probability of further encroachments shall be minimized with the continuous monitoring in the field.

Illicit Felling and Prosecution

Illicit felling of trees is a regular phenomenon. In fact, this is one of the many forms of biotic interferences which have drastically altered the forest composition in the Division. Illicit felling and smuggling continues to be almost a daily feature. As has been estimated, the recovery of the illicitly felled timber is just about 5% of the total removal.

Though illicit felling and removal continues to play a negative role on the overall wellbeing of the forests of the Division, the protection measures have not at all been commensurate with the requirement. In fact, this aspect seems to have been neglected over the years as can be seen from the quantum and quality of forest cases detected & registered in the Division. Most of the forest cases registered so far are compoundable (CC) in nature Some cases which are filed in the court end up in acquittal for lack of

contest/technical faults like non submission of authenticated copies of the notification of the forest areas. All these lacunas and short comings are taken advantage of by the smugglers to their benefit.

Thus, to improve the position with regard to checking of illicit felling and smuggling, some measures are suggested as detailed below :-

- There shall be anti-smuggling squad formed at the Range level by engaging the FGs/Foresters on rotation basis by withdrawing them from their respective fields within the Range. Similarly, there shall be a mobile squad at the Divisional level as well

- All the check gates shall be strengthened and the staff at the gates shall not be posted for more than a year. Similarly, in theft prone and problematic beats/sections, the staff shall be rotated on yearly basis.

- The Beat Forest guard and Foresters shall regularly inspect their jurisdictional forest areas besides block boundary inspection

- The concept of group patrolling by two-three adjoining beat forest guards shall be introduced in more theft prone areas.

- The forest cases detected shall be firmly dealt without remaining pending at the FG/Forester/Range Officer level

- There shall be at least half yearly detail beat inspection including stump verification in different forest blocks of the beat by the Range officer.

- The performance of the FG/ Forester with regard to quantum & quality of forest cases shall be reviewed on monthly basis and the details reported to the DFO for his information

- There shall be regular review of the forest offence cases by the DFO himself on monthly basis at the Divisional level besides detail review in the field even during his routine inspections. The outcome of such reviews shall invariably find place even in his monthly tour diaries.

The forest cases detected shall not be as a matter of routine, compounded. More over, proper investigation shall be done to convert the UD cases to PR cases so that the accused are brought to the books. Further, the PR cases shall be submitted in time duly following the procedure stipulated in the Orissa Forest Offence (Detection, Enquiry & Disposal) Rules‟1980. The PR cases filed in the court shall be regularly pursued through the Public Prosecutor/Assistant Public Prosecutors. More over, the technical issues and bottlenecks may be brought for discussion/redressal in the Senior Officers‟ Meeting at the District level where even DFO is also one of the active members.

Communication System and Mobility

Presently VHF system is not functioning properly in the Division and needs to be replaced. Though now telephone/ mobile service has already reached most of the interior forest areas.

Since fast communication is vital for transmitting information and also for deployment as well as re-enforcement in the emergency cases, there shall be VHF system in position with fixed stations at the Divisional office and all the Range HQs and important sections

Human Resources Development

Following suggestions may be considered for improving efficiency at the field level

- Proper training and regular refresher courses for the field executives.
- Regular in-house discussion to update knowledge of the field staff. Important relevant rulings of different Courts should be discussed & changes brought about in Forest Act and Rules in recent years should be brought to their notice. New techniques of plantation, nursery raising etc be demonstrated to the field staff.
- Supply of firearms to all Range Officers, Section foresters and Guards and impart arms training to them.

- ❖ Frequent raids and surprise checks should be conducted in the smuggling prone areas.

- ❖ Awards should be given to the field staff for exemplary work in the protection activities.

- ❖ Malkhanas to keep seized produce should be available in all smuggling prone areas.

Some of the administrative changes as stipulated below may also be considered by the authorities concerned

- ❖ Power of Executive Magistrate be given to the ACFs and DFOs for eviction operations and forest raids/search

Intermediate Revision and Cost Norm

If there may any necessity of intermediate revision during the currency of the plan, necessary proposal may be submitted after consultation with the Regional Chief Conservator of Forests & Conservator of Forests (Working Plan) for necessary approval of competent authority.

11.8 Public Awareness and Education

Success of any programme depends on public awreness and education. Regular public awareness camps have to be organized for VSS members/ Eco-Club Members/ Environment enthusiasts on the occasion of International/ National/ State Level Days. Steps should be taken for exposure visits of VSS members to best VSS forests to see the activities taken up by the VSS. Important days are

a. World Wetlands Day (2nd February)
b. World Forestry Day (21st March)
c. Earth Day (22nd April)
d. World Enviroment Day (5th June)
e. Vanamahotsava Week (1st – 7th July)
f. World Day to Combat Desertification (WDCD) (17th June)
g. World Elephant Day (12th August)
h. Wildlife Week (2nd – 8th October)

12. CHAPTER – XII
WATER RESOURCE MANAGEMENT

12.1 Introduction

Water is one the most important resource to be managed. In preamble of National Working Plan Code – 2014, it is mentioned that, the concept of sustainability in forest management thus implies not only sustainability of productive functions but also environmental functions (soil and water conservation, carbon sequestration etc.).

The forests are also sources of water (surface, sub-surface and ground water). Over exploitation of the ground water resources results in declining ground water levels; there is an urgent need to augment the ground water resources through suitable management interventions. It is desirable to have forest management practices dovetailed with the principles of watershed based development approach especially in the source areas of water. Such areas should have restrictions on tree felling but there should be operations to improve the water regimes and natural regeneration. As such, special provisions should be made in the working plan to sustain water resources and livelihood issues of the people living in and around natural inland water sources. Duration of water flow in the selected seasonal streams as mentioned in National Working Plan Code – 2014 could say more accurate result about the water flow out from forest.

The global population is growing fast, and estimates show that with current practices, the world will face a 40% shortfall between forecast demand and available supply of water by 2030. Furthermore, chronic water scarcity, hydrological uncertainty, and extreme weather events (floods and droughts) are perceived as some of the biggest threats to global prosperity and stability. To strengthen water security against this backdrop of increasing demand, water scarcity, growing uncertainty, greater extremes, and fragmentation challenges, institutional strengthening, information management, and (natural and man-made) infrastructure development. Information systems are needed for resource monitoring, decision making under uncertainty, systems analyses and hydro-meteorological forecast & warning. Investments in

innovative technologies for enhancing productivity, conserving and protecting resources, recycling storm water, recycling wastewater and developing non-conventional water sources should be explored in addition to seeking opportunities for enhanced water storage, including aquifer recharge and recovery. Ensuring the rapid dissemination and appropriate adaptation or application of these advances will be a key to strengthening global water security (The World Bank, 2017). Water Resources Management (WRM) is the process of planning, developing, and managing water resources, in terms of both water quantity and quality, across all water uses. It includes the institutions, infrastructure, incentives, and information systems that support and guide water management. Water resources management seeks to harness the benefits of water by ensuring there is sufficient water of adequate quality for drinking water and sanitation services, food production, energy generation, inland water transport, and water-based recreational, as well as sustaining healthy water-dependent ecosystems and protecting the aesthetic and spiritual values of lakes, rivers, and estuaries. Water resource management also entails managing water-related risks, including floods, drought, and contamination. The complexity of relationships between water and households, economies, and ecosystems, requires integrated management that accounts for the synergies and tradeoffs of water's great number uses and values.

12.2 Integrated Water Resources Management (IWRM)

Integrated Water Resources Management (IWRM) has been defined by the Technical Committee of the Global Water Partnership (GWP) as "a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems."

IWRM is based on the three principles: social equity, economic efficiency and environmental sustainability. Considering these principles means answering the following questions:

- How will my decision/ action affect access for other users to water or the benefits from its use?

- Will my decision/ action result in the „most efficient use of the available financial & water resources?

- How will my decision/ action affect the functioning of natural systems?

12.3 **Social Equity** means ensuring equal access for all users (particularly marginalized and poorer user groups) to an adequate quantity and quality of water necessary to sustain human well-being.

12.4 **Economic Efficiency** means bringing the greatest benefit to the greatest number of users possible with the available financial and water resources. This requires that the most economically efficient option is selected. The economic value is not only about price – it should consider current and future social and environmental costs and benefits.

12.5 **Ecological Sustainability** requires that aquatic ecosystems are acknowledged as users and that adequate allocation is made to sustain their natural functioning. Achieving this criterion also requires that land uses and developments that negatively impact these systems are avoided or limited.

IWRM aims to create sustainable water security within the present constraints and to improve the conditions in the catchment basin.

12.6 **Political Will and Commitment:** Political will at all level can help unite all stakeholders and move the process forward. It is especially needed if the resulting plan or arrangement would create or require changes in legal and institutional structures, or if controversies and conflicts among stakeholders exist.

12.7 **Basin Management Plan and Clear Vision:** Water resources development coordinated among various sectors and users is facilitated by the preparation of a master plan that reflects the individual sector plans and offers the most effective and efficient utilization of the resource.

12.8 **Participation and Coordination Mechanisms, Fostering Information-Sharing and Exchange:** The identification of key stakeholders can be facilitated through interviews and meetings. Stakeholder involvement can be defined appropriately for local conditions and improved gradually. Initial sharing of general basin-wise data and information, and further sharing of more specific information, will assist the self-sustaining system.

12.9 **Capacity Development:** Capacity development and training priorities should be expressed at all levels, including that of decentralized local government. Participants who may be adversely impacted and/or socially marginalized may be stimulated to participate within a consensus-building strategy.

12.10 **Well-defined Flexible and Enforceable Legal Frameworks and Regulation:** It is necessary to assemble and review the full range of existing laws and regulations that apply to water-related activities and determine how existing legislation adapts or can be better adapted to accommodate sustainability and integration with regard to water resources management.

12.11 **Water Allocation Plans:** As water is a shared resource, water rights should be flexible in terms of allocation in order to accommodate changes. Preparing a master plan that reflects individual sector plans facilitates the coordination among various sectors and advocates the most appropriate utilization of a basin‟s resource.

12.12 **Adequate Investment, Financial Stability and Sustainable Cost Recovery:** Coordination for IWRM implementation needs financial sustainability – such as the promotion of cost recovery and must consider long-term management. Various combinations and roles of international financing and donors such as government grants, public resources, user charges and taxes, donor funds, basin environmental trust funds can be considered as funding options.

12.13 **Good Knowledge of the Natural Resources Present in the Basin:** Adequate knowledge and information on the water resources inventory and human resources of the basin is desirable. Including scientists as water resource managers can help maintain and accrue sound knowledge of the natural resources.

12.14 **Comprehensive Monitoring and Evaluation:** Monitoring and evaluation are essential for ensuring that the current management of water resources is properly implemented and to identify the needs for adjusting management strategies. Upgrading new technologies is vital for effective performance both of local and central water management.

13. CHAPTER – XIII

CLIMATE CHANGE

13.1 Introduction

Preamble of National Working Plan Code– 2014 says, climate change phenomenon seriously affects and alters the distribution, type, composition, quality and mitigation potential of forests of the country especially in the realm of anthropogenic stressors. Climate is an active factor in the physical environment of all living things. Climate change and variability are impacting forest ecosystem processes and functioning. Response time of forest ecosystems to disturbances ranges from a very short duration to decades and even centuries, depending on the condition of the system and the type, intensity and duration of the external stimuli. The actual state of forest ecosystem largely depends on processes and practices of the past. Therefore, forests are extremely complex to understand their functioning. Climate change further magnifies those complexities and adds more uncertainties. Forests are linked to climate change in three ways –

i) They are source of greenhouse gas (GHG) emissions
ii) They offer mitigation opportunities to stabilize GHG concentrations
iii) They are impacted by climate change.

Impacts of climate change on forest ecosystem are getting manifested as species range shifts, changing biodiversity, physiological changes in plant life cycles, forest growth pattern of species, changing boundaries of ecosystems and other biotic and abiotic responses/ stresses. There are evidences of increase in the frequency and severity of forest fires, changing water regimes and expanding forest insect infestation. Since forest ecosystems operate on large temporal scales, long observational studies are necessary to identify the key changes. Accordingly grid based sampling is designed to provide relevant information to cover the characteristic time scales.

Forests and wood products can effectively reduce the process of climate change in several ways. Growing trees absorb carbon dioxide from the atmosphere and store the carbon so efficiently that about half the dry weight of a tree is carbon. This carbon remains locked up in the form of wood and wood products. Sustainably grown and

harvested wood (and other biomass) also provides a renewable alternative to fossil fuels and enhance carbon storage.

Impact of climate change and other stressors including existing forest management may also be adequately highlighted so as to take suitable adaptive and corrective measure for conservation and biodiversity development. Endangered species included in Red Data Book of BSI and IUCN Red Data Book should not be sacrificed due to ignorance during forestry operations.

Climate change is one of the most critical global challenges of our times. Recent events have emphatically demonstrated our growing vulnerability to climate change. Climate change impacts will range from affecting agriculture – further endangering food security – to sea-level rise and the accelerated erosion of coastal zones, increasing intensity of natural disasters, species extinction, and the spread of vector-borne diseases.

13.2 United Nations Legal Instruments

- United Nations Framework Convention on Climate Change: In 1992, its "Earth Summit" produced the United Nations Framework Convention on Climate Change (UNFCCC) as a first step in addressing the climate change problem. Today, it has near-universal membership. The 197 countries that have ratified the Convention are Parties to the Convention.
- Kyoto Protocol: By 1995, countries launched negotiations to strengthen the global response to climate change, and, two years later, adopted the Kyoto Protocol. The Kyoto Protocol legally binds developed country Parties to emission reduction targets. The Protocol‟s first commitment period started in 2008 and ended in 2012. The second commitment period began on 1 January 2013 and will end in 2020. There are now 197 Parties to the Convention and 192 Parties to the Kyoto Protocol.
- Paris Agreement: At the 21st Conference of the Parties in Paris in 2015, Parties to the UNFCCC reached a landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future. The Paris Agreement builds upon the Convention and for the first time brings all nations into a common cause to

undertake ambitious efforts to combat climate change and adapt to its effects with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.

13.3 National Action Plan on Climate Change

The Government of India formulated national plan on water, renewable energy, energy efficiency agriculture and others, bundled with additional ones into a set of eight missions under the National Action Plan on Climate Change. The Action Plan was released on 30th June 2008 to address the future policies and programs for the climate mitigation and adaptation. The plan was drafted to emphasize the overriding priority of maintaining high economic growth rate to raise living standards. The plan "identifies measures that promote our development objectives while also yielding co-benefits for tackling climate change effectively."

The action plan outlines a number of steps to simultaneously advance India's development and climate change-related objectives. The National Action Plan on Climate Change (NAPCC) encompasses a range of measures. It focuses on eight missions, which are as follows:

- National Solar Mission: The NAPCC aims to promote the development and use of solar energy for power generation and other uses, with the ultimate objective of making solar competitive with fossil-based energy options. It also includes the establishment of a solar research center, increased international collaboration on technology development, strengthening of domestic manufacturing capacity, and increased government funding and international support.

- National Mission for Enhanced Energy Efficiency: The NAPCC recommends mandating specific energy consumption decreases in large energy-consuming industries, with a system for companies to trade energy-saving certificates, financing for public–private partnerships to reduce energy consumption through demand-side management programs in the municipal, buildings, agricultural sectors and energy incentives including reduced taxes on energy-efficient appliances.

- National Mission on Sustainable Habitat: The NAPCC also aims at promoting energy efficiency as a core component of urban planning by extending the existing Energy Conservation Building Code, strengthening the enforcement of automotive fuel economy standards, using pricing measures to encourage the purchase of efficient vehicles and incentives for the use of public transportation. The NAPCC also emphasizes on waste management and recycling.

- National Water Mission: The NAPCC sets a goal of a 20% improvement in water use efficiency through pricing and other measures to deal with water scarcity as a result of climate change.

- National Mission for Sustaining the Himalayan Ecosystem: This particular mission sets the goal to prevent melting of the Himalayan glaciers and to protect biodiversity in the Himalayan region.

- Green India Mission: The NAPCC also aims at afforestation of 6 million hectares of degraded forest lands and expanding forest cover from 23 to 33% of India's territory.

- National Mission for Sustainable Agriculture: The NAPCC aims to support climate adaptation in agriculture through the development of climate-resilient crops, expansion of weather insurance mechanisms, and agricultural practices.

- National Mission on Strategic Knowledge for Climate Change: To gain a better understanding of climate science, impacts, and challenges, the plan envisions a new Climate Science Research Fund, improved climate modeling, and increased international collaboration. It also encourages private sector initiatives to develop adaptation and mitigation technologies through venture capital funds.

Baripada Forest Division receives average rainfall of 1400 mm to 1800 mm. Maximum rainfall is received during rainy season from July to October. The parameters like rainfall, temperature, humidity, wind, cloud and sunlight play a deciding role in shaping the climate of Baripada Forest Division. In addition to the proximity of the sea elevation, direction of the prevailing winds and configuration of

the ground also affects the local climate. The climate of this Division is Warm and humid. It is by and large good except the hazard of Malaria. Three distinct seasons are felt in this Division, these are the following.

* Summer season - Mid February to Mid-June.
* Rainy season - Mid June to October
* Winter season - November to Mid-February

With receding of monsoon, the temperature increases during the day while decreases at the night. The abnormal rise in the temperature during the summer poses a great challenge to congenial climate of the area. The summer season is more pronounced from mid-March to nearly end of June. The highest temperature is felt in the month of May-June. The highest temperature goes up to 48.9°C. Occasional showers with thunderstorms are a common feature experienced in this locality which is locally called Kala Baishakhi. The climate change has increased temperature which caused drought with increased forest fire. The water shortage for wild animals during summer is increasing day by day. The extreme wind / cyclone uprooted trees in forest areas. Hence forest must be conserved for preventing change of climate.

14. CHAPTER – XIV

APPLICATION OF MODERN TECHNOLOGY TO FOREST MANAGEMENT

14.1 Introduction:

Geographic Information Systems (GIS) and Global Positioning System (GPS) are the vastly used technology in Forestry Sector. For modern Foresters, an array of hand held receivers can be used to download data gathered from GPS which can improve other GIS information. These data can be used in modeling programmes, visualization applications and mapping projects. Such technology helps Foresters to monitor and analyze forest health, track forest growth and maintain a data base for identifying changes in forest canopy. In present working plan the satellite map on forest cover was used to determine areas under 10% canopy density to be placed under Plantation Working Circle.

LIDAR Technology (Light Detection and Ranging) is also beneficial to Foresters. Equipments designed through LIDAR technology collects tree measurements and detailed imaging. LIDAR helps to measure canopy heights, volume, basal area and habitat mapping.

Drones are proving to be a valuable asset for the Foresters and wildlife managers. In difficult terrain drones are used to detect disease, forest fire and movement of wild animals & hunters.

Most of these tools have practical applications on the ground in the field. Some customized data based available in Silva-Stat 360 helps the Foresters to take appropriate decisions. Foresters who embrace these technologies will be well positioned to succeed in the modern forest management.

14.2 Adoption of Modern Technologies in Forestry

Forest officials frequently use following technologies in forest management.

- Use of Global Positioning System (GPS) in survey, demarcation of boundaries and locating incident inside forest.

- Use of Differential Global Positioning System (DGPS) in survey, demarcation of boundaries of forest blocks and determining area of forest blocks/ plantations/ patch of forests with 95% accuracy.
- GIS applications for preparation of map and map study.
- Use of satellite imagery (MODIS Satellite) for detection of forest fire and faster communication to control forest fire.
- Clonal propagation with mist chamber helps in production of genetically improved seedlings for plantation.
- Root trainer nursery for large scale production of seedlings and economic transportation.
- Sprinkler irrigation/ drip irrigation for watering in nursery.
- Mobile applications, infra-red radio collars, GPS transmitters to monitor animal movement, use of camera trap, drone camera, night vision binocular etc. help in wildlife monitoring.

During this plan period it is proposed that Foresters in the field should have access to all these facilities for use in day to day forest and wildlife management.

15. CHAPTER – XV

General Financial Forecast and Financial Plan of Operation

15.1 Introduction:

Considering the prescriptions in various working circles the activities and its quantum of operation with financial forecast at 2020-21 price level is furnished below.

Financial Forecast for the plan period				
Sl. No.	**Working Circle/ Activity**	**Suggested Area of Operation**	**Per Unit Cost Norm (in Lakh `)**	**Total Amount (in Lakh `)**
1	Improvement Working Circle	Marking, SSO, Regeneration Cleaning	0.01	754
2	Rehabilitation Working Circle	Marking	0.74	25743
		Silvicultural Operation		
		Gap Planting		
3	Plantation Working Circle	Harvest of over matured plantation followed by planting elephant food species.	1.78	13718
		Inter cultural operations for improvement of plantations.		
		Block Plantation.		
		Avenue Plantation		
4	Farm Forestry	Facilitating Eucalyptus/ Acacia/ Teak Plantations in private land.	0.5	500
5	NTFP Working Circle	Training of VSS Members on techniques of collection, storage, processing and marketing.	2.0	200
6	Wildlife Working Circle	Construction of water holes	5.0	500
		Planting of Seedlings of Plants		
7	JFM Working Circle	Awareness on protection from forest fire	1.0	365
8	Adoption of Modern Technology	Firefighting equipments, DGPS, Satellite Map, GPS, etc.	--	100
9	REDD+ Initiative	Motivation	0.1	10
10	Pillar Posting & Boundary Demarcation of Forest Blocks	DGPS Survey followed by RCC Pillar Posting.	0.03	150
			Total Financial Forecast	**42040**

Annual expenditure: Annual expenditure during 2019-20 of Baripada Forest Division shows 11.74 crores. During 10 years the expenditure in normal budget may be around 120 crores. So there is need to increase the allocation of fund to meet the expenditure as per the activities prescribed.

16. CHAPTER – XVI

SUMMARY OF PRESCRIPTIONS

16.1 Introduction:

This chapter provides a brief description of prescriptions and suggestions as per working circles. This would help as ready reference.

16.2 Working Circles Constituted & Prescribed:

Considering the crop condition & objectives of management six working circles are constituted. These are

- Improvement Working Circle (Area assigned: 7707.08 ha.)
- Rehabilitation Working Circle (Area assigned: 21302.621 ha.)
- Plantation Working Circle (Area assigned: 21029.019 ha.)
- NTFP Over Lapping Working Circle (Area assigned: 27193.000 ha.)
- Wildlife Over Lapping Working Circle (Area assigned: 29108.960 ha.)
- JFM Over Lapping Working Circle (Area assigned: 30368.424 ha.)

There are three stand-alone Working Circles having independent area where as there is proposal to constitute three Working Circle with overlapping jurisdiction. The period of this working plan is from 1st April 2021 to 31st March 2031. The implementation and probable impact of various prescriptions may be reviewed after five years of working. If it is so required, revision of some chapters may be made.

16.3 Maintenance of Boundary

The missing boundary pillars of RF/ PRF/ PF/ VF should be constructed to protect the forest land. Boundary pillars constructed away from approved forest boundary needs to be re-constructed along forest block boundary approved by working plan. Steps to be taken to clearly demarcate the boundary lines of Forest Blocks and prepare maps in case of eligible individual title holder under FRA, 2006. Fresh encroachment of forest land since 13.12.2006 should be assessed through satellite maps and offenders should

be booked under relevant section of the O.F. Act, 1972 to discourage encroachment. The RCC forest boundary pillars should be constructed.

16.4 NTFP Management

Currently there are no mechanism/ policy to support aggregation of NTFP commodities at primary collectors‟ level. This forces the primary collector to sell the tiny amounts at very little prices to the middlemen. This also often leads to distress selling. The small size of production aggravates the problem by forcing the producers into a vicious cycle of a “small market-low production”, which leads to small surpluses. The limited surplus makes them vulnerable to exploitation by intermediaries because it continuously erodes their bargaining capacity as their need to convert small production into cash becomes more acute with time. In most cases prices of the produce, whether sold to consumers or to the intermediaries, bear no relationship to the cost of labour, input and transportation. In the case of direct sales, following factors lead to low prices at the local level. Quality of storage of NTFP and quality of processing can be improved through construction of NTFP go downs. NTFP Over Lapping Working Circle Prescriptions may be followed with emphasis on strengthening the scientific collection procedure of NTFP, scientific storage, processing through improved technology and organized marketing to give more value to the primary collectors of NTFP.

Sal leaf collectors use to cut-down the branches and top shoots of Sal tree to get more sal leaf within 2mtr height. During March-April the local people use to kindle the forests to collect Mahua flowers. These types of unscientific collection of NTFP should be stopped.

16.5 Human Elephant Conflict Management

Inter-state migration of wild Elephants is a great problem in Baripada Forest Division. Since 2010, wild Elephants from Dalma sanctuary of Jharkhand enter into Baripada Forest Division through Deuli and Rasgovindpur Range via West Bengal. The herd consists of 100 – 130 Elephants of all age classes. Every year, they cause lots of damages to the houses and crops in the area of movement. It is suggested that a new Elephant corridor from Moroda – Suliapada to Phuljhari RF of Betnoti Forest Range

along all routes used by Elephant be notified and sufficient number of fodder trees to be planted in this corridor. Furthermore Elephant friendly ponds need to be created for use of Elephants in the corridor. Special Elephant protection units with camp facilities for Elephant squad should be constructed in each section in this corridor. The water holes used by wild animals should be maintained for their use as perennial source of drinking water. Poaching of wild animals should be stopped.

16.6 Prescription for Improvement Working Circle:

The silvicultural system to be adopted for this working circle is "Improvement felling followed by subsidiary silvicultural operation with enrichment plantation and regeneration felling".

Improvement Felling:

- Area is to be demarcated during October & November of previous year.
- Marking should be conducted during December of previous year.
- Coupe will be delivered to OFDC for execution of felling from 1st October to 30th of June.
- Subsidiary Silvicultural Operation will be taken up after surrender of coupe by OFDC Ltd.
- Extensive Soil & Moisture Conservation measures to be taken up. Besides Contour trenches, contour bonding, gully plugging, Vegetative check dams, percolation pits are required to be taken up to improve soil moister regime. Individual plants of Natural origin need to be provided with Half Moon Trench, Soil Mulching etc.
- In gaps, seedlings of indigenous species matching with the natural seedlings/ saplings/ vegetation available nearby area are to be planted.
- NTFP species and plants used by animals like Fruits/ Berries to be preserved as far as practicable.

16.7 Prescription for Rehabilitation Working Circle:

The silvicultural system to be adopted for this working circle is "Silvicultural Cleaning, tending followed by Aided Natural Regeneration supplemented with

enrichment Plantation". The operations prescribed involve Silvicultural Cleaning, Silvicultural Tending (Thinning) and Aided Natural Regeneration.

Aided Natural Regeneration:

Besides Silvicultural Cleaning the following activities are prescribed for the Aided Natural Regeneration (ANR).

- Regeneration from Seed Origin (Recruits, Seedlings and Saplings) to be aided with weeding, Soil Working and application of fertilizer to enhance growth & speedy establishment.
- Extensive Soil & Moisture Conservation measures to be taken up. Besides Contour trenches, contour bonding, gully plugging, Vegetable check dams, percolation pits are required to be taken up to improve soil moister regime. Individual plants of Natural origin need to be provided with Half Moon Trench, Soil Mulching etc.

Enrichment plantation:

In blanks, seedlings of indigenous species matching with the natural seedlings/ saplings/ vegetation available nearby area are to be planted. Planting of teak Acacia, Chakunda, Eucalyptus inside natural forest is to be avoided.

The objectives of this Working Circle are not to harvest any Forest Produce within this Plan Period. There are few NTFP species available within the forest blocks. Sal is the main species forming congested clumps, need to be managed. The treatment period is made co-terminus with the Plan period i.e. 10 years.

A treatment Cycle of 5years is prescribed, for management of available Sal and miscellaneous species. For other NTFP like Fruits/ Berries/ Grasses/ Fodders an Annual Cycle is to be followed. Within the plan period one cycle will be completed.

16.8 Plantation Working Circle:

Besides the area covered under new plantations, there are many old plantations of Eucalyptus and Acacia taken up by Forest Department in Forest Blocks. During Social Forestry Project period i.e. 1985-1993, Plantations have been raised at various villagers and the area was declared as Village Forest u/s 30 of the Odisha Forest Act, 1972. Similarly under "National Afforestation Program" through Forest Development

Agency plantations have been raised in various villages. All the areas covered up under various plantation schemes (within the administrative control of Forest Department) are to be managed under this Working Circle.

Silvicultural System:

Silvicultural system adopted for this Working Circle is "Clear Felling with Standard followed by Artificial Regeneration" through planting. Where promising coppice shoots will develop / come up, the same will also be retained to reduce the replanting cost. The number of standard per Ha will be depend upon, Biotic interference, possibility of dispersal of seeds for a high forest system, fruit bearing species, having timber value at a higher girth class.

Rotation Period:

The normal rotation period is Ten years which is co-terminus with the plan period. The standard trees those will be retained are required to be removed when they will either achieve their objectives or attain utilizable girth. The standard trees those are likely to be retained are Acacia, Neem and fruit bearing species.

Execution of Felling & Sharing of Forest Produce:

The marked trees may be felled, converted and removed as per modern logging practices and the Odisha Timber and Other Forest produce Transit rules. 1980 and up to date amendments thereof, sharing of forest produce, in case of Village forests, the sharing of forest produce will be regulated as per Rule 9 of the Odisha Village Forest Rules, 1985.

Subsidiary Silvicultural Operation (SSO)

Subsidiary Silvicultual operation (SSO) after main felling in any coupe is essential to maintain the hygiene of any forest. It involves in cleaning of the debris and thinning in the advance growth if retained during marking. In this case no thinning will be required as the felling cycle is ten year and clear felling with standard system is adopted.

Restocking of Area:

The coupe area is to be reforested through artificial regeneration i.e. by planting of seedlings with adequate Soil & Moisture Conservation measures. The standard planting techniques has been enumerated in approved cost norm. There are RF / PRF / PF / VFs which has been partly encroached either by individual / group or community. It will be the prime endeavor to get the area vacated and make the area free from encroachment.

Silvicultural System for Bamboo Plantations:

The Silvicultural System prescribed is:-

- Culm Selection & Clump Improvement Combined with simultaneous cleaning and cultural operation for Saila Bamboos
- Clump improvement combined with simultaneous cleaning and cultural operation for Daba Bamboos.

16.9 Wildlife (Overlapping) Working Circle:

This Division comprises of 124 Reserved Forests, 15 Proposed Reserved Forests, 6 Protected Forests and 127 Village Forest as declared under provision of Odisha Forest Act, 1972. Besides these forests there are 29064.48 ha of Revenue Forests & DLC Forests with good vegetation. The wild animals are observed throughout the Division. For the management of wild animals, 100 Forest Block areas covering 29108.960 ha are taken as forest areas mostly used by wild animals.

Available Fauna & Management unit:

The Fauna/ Avifauna live normally throughout the year and migratory birds are seen in winter season. Wild elephants are the primary fauna and the target species for holistic management. The wild animals are observed in all the area of the Division. The animal concentration is higher in Forest areas, near to Similipal Sanctuary. For management purpose the each range is taken as a management Unit.

Management Practices:

The general management practices involve improvement of existing habitat and Development of new habitat, planting species found in the locality and used by wild animals. Practices encompass preservation of existing wetlands, providing a conductive and safe breeding zone in and around dams and reservoirs. Strengthening of forests used by migratory elephants with plantation of species eaten by elephant and creation of water harvesting structures for use of elephant is the primary work for wildlife management.

Method of treatment:

The method of treatment involves improvement of habitats, Providing protection, detail study of Animal behavior & scientific Documentation, Creation of Public awareness & public participation in management.

Threat to wild animals & Suggested Mechanism:

The animals / birds are subjected to threats from hunters / poachers. Illegal trade in wild animals and articles, road accidents, railway accidents and electrocution pose threat to elephants, snakes, chameleon, parrots and hornbill. The low level electric transmission lines pose largest threat to moving elephants as their body come in contact with the transmission line resulting in elephant death. Poisoning of wild animals and capturing wild animals through snare/ trap/ gum/ net reduce their number significantly.

16.10 JFM (Overlapping) Working Circle:

At present there are 402 VSS functioning in the Division, protecting an area of 37436.55 ha of forests. In addition to this, 127 Village Forest Committee constituted under Village Forest Rule, 1985 are also assigned for management of 127 Village Forests over 588.314 ha. Out of 37436.55 ha of forest land protected by VSS 7656.44 ha of forests are protected by 78 VSS out side plan area and 29780.11 ha of forests protected by 324 VSS are within plan area. Hence 30368.424 ha of RF/ PRF/ PF/ VF are protected in 219 Forest Blocks of Baripada Forest Division are included under JFM (O) Working Circle.

Area allotted & Crop Condition:

The areas allotted to VSS are RF/ PRF/ PF/ VF/ Revenue Forests/ DLC Forest. The vegetation of these areas is natural forest and / or plantations of previous plan periods. The plantations assigned to VSS are mostly FDA plantations, CAMPA Plantations, Social Forestry Project Plantations and plantations under other schemes. Crop varies from natural forest to monoculture like Eucalyptus/ Acacia. Crop density also varies from 30% to 70%.

Silvicultural System:

The VSS areas are under JFM Overlapping Working Circle. It overlaps with Rehabilitation Working Circle, Improvement Working Circle and Plantation Working Circle. The Silvicultural system prescribed to these working circles will be followed as applicable.

Method of Execution:

The methods of execution under this Working Circle are Demarcation of VSS Area. Preparation of Micro-plan, Plantation & Choice of Species, Incentive schemes for the VSS, Capacity Building Programmes, VFDF (Village Forest Development Fund), Engagement of specialists for input support to JFM and Training camps for VSS members.

Scope of expanding JFM Working Circle:

(i) There are many RF/ PRF/ PF/ VF under encroachment by individual/ community. All-out effort will be taken up by the Forest Department/ Staff to make the area free from all encroachments after 13/12/2006 and all other illegal encroachments to bring back the encroached forests to the management fold. These areas may be brought within the purview of JFM for mutual cooperation & better relation with the people.

(ii) There are 29064.48 ha forested area under the administrative control of Revenue Department as Revenue Forest and DLC Forest, out of which 7656.44 ha are being protected and managed by local communities. The JFM resolution 2011 has extended its purview to manage Revenue Forests

in a Joint Forest Management mode. Hence steps may be taken to constitute JFM committees for protection and management of balance Revenue & DLC forests.

(iii) After cyclone "Phailin / Hudhud", trees were uprooted in large numbers. Those trees were harvested but there is need for improvement of such damaged crop through ANR.

Evaluation of Performance & Incentive:

The performance of VSS is required to be evaluated periodically and provision for income generation/ livelihood options to VSS will go a long way in motivating the people and ensure successful joint forest management in the Division.

16.11 ToF (Tree outside the Forest)

This ToF area encompasses the forest outside the designated forest land. The plantations raised by Forest department under various schemes outside RF/ PRF/ VF will be one component under ToF. For other plantations like Farm Forestry, Avenue plantations, CSR (Corporate Social Responsibility) Plantations, FFRP, Urban Tree plantation and other plantations raised. The total area under ToF is 5805.78 ha and Avenue Plantations. Commercial Plantation in Farmer‟s Land is to be planned and executed will also be dealt within ToF.

16.12 REDD+:

REDD+ stands for countries efforts to "Reduce Emissions from Deforestation and Forest Degradation" and forest conservation, sustainable management of forests and enhancement of forest carbon stock. Deforestation and forest degradation are the second leading cause of global warming, responsible for about 15% of global greenhouse gas emissions, which makes the loss and depletion of forests a major issue for climate change.

FAO's support:

FAO‟s support to countries is based on technical experts in ascending the driver‟s deforestation and forest degradation and finding opportunities for forest carnet

conservation, management and enhancement. Our country‟s commitments for "**Nationally Determined Contributions**" (NDCs) are:-

- To reduce the emissions intensity of its GDP by 33-35% from 2005 levels by 2030.
- To achieve about 40% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).
- To create an additional carbon sink of 2.5 to 3 billion tons of CO_2 equivalent through additional forest and tree cover by 2030.
- To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, Coastal regions, health and disaster management.

16.13 Indicative Work Plan to Combat Climate Change:

- Government helps on sustainable lifestyle to fight climate change.
- Promising raising requisite funds and adopting new technology.
- More focus on agriculture, water resources, coastal regions and health & disaster management.
- To tackle climate change by adopting healthy and sustainable lifestyle, which were "inherent in traditions and values of conservation & moderation.
- To reduce consumerism in our lifestyle & reduce per capita consumption by not wasting food and limiting the number of durables/ cars per household.
- To have ambitions focus on energy efficiency and dramatic increase in renewable energy.
- To enhance dependency on non-fossil fuel-based energy.

Suggested measures in Forestry Sectors:

In forestry sectors to combat climate change the following activities are suggested.

a) To reduce felling of trees in all sphere and enhance creation of renewable energy.

b) To reduce dependency on fossil fuel including that of firewood.
c) To enhance use of solar energy/ electric energy/ wind energy where ever possible.
d) To motivate people to reduce consumerism & reduce generation of solid waste.
e) Conserve water body and enhance efficient use of water.

16.14 Adoption of New Technology in Forestry:

With advancement of technology it is proposed to have the following facilities available with Baripada Forest Division for better management.

a) Identified Plus trees within the Division and maintaining a Clonal Orchard.
b) To have improved Mega Nursery with clonal propagation facilities with mist chamber, sprinkler system.
c) Root-trainer facilities and capacity to meet requirement of quality planting materials for the Division instead of depending upon temporary nursery.
d) All forest blocks/ plantations surveyed with DGPS and mapping thereof.
e) Establishment of GIS cell with available Satellite imagery for monitoring purpose.
f) Modern logging tools to meet emergency in Post Cyclone Management.
g) Drone camera facilities to watch wild elephant movement.

16.15 Financial Requirement:

The financial requirement to implement the plan prescription is Rs. 42040 lakhs as the present price level on a holistic approach over 10years of plan period. Basing on wage escalation, the cost of implementation will be hiked by minimum 10% of the estimated cost.

Source of Funding:

The Division receives funds from State Plan, Central Plan, National Afforestation Program, MGNREGA, District Planning Unit Funds, CAMPA, funds of companies etc. The level of present resources allocation is to a tune of 15.00 Crore. For restoration of vegetation Government is keen on more plantations in private land and better Wildlife management. Hence funds for implementation of Working plan prescription may not be a problem.

APPENDICES

Appendix – I

Range wise Forest Blocks with Diverted Land

Range		Forest block	No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
PITHABATA RANGE								
PITHABATA	1	Baldiha R.F.	7	R.F	110.130	1.000		109.130
	2	Bhagabat Chandrapur R.F.		R.F	806.280	10.800		795.480
	3	Budhikhamari R.F.		R.F	863.100	6.000	0.480	856.620
	4	Dungurusahi R.F.		R.F	10.950			10.950
	5	Hatikote R.F.		R.F	556.840	3.120		553.720
	6	Lulung-Purunapani R.F.		R.F	223.310			223.310
	7	Manchabandha R.F.		R.F	1020.920	6.960		1013.960
	8	Asanabani PRF	1	PRF	57.030			57.030
	9	Gopalpur	5	VF	4.000			4.000
	10	Srirampur		VF	3.140			3.140
	11	Gadadharpur		VF	0.840			0.840
	12	Baunsda		VF	0.940			0.940
	13	Dumuria		VF	5.000			5.000
				TOTAL	**3662.480**	**27.880**	**0.480**	**3634.120**
DUKURA RANGE								
DUKURA	14	Aghasole R.F.	19	R.F	37.550			37.550
	15	Badsahi R.F.		R.F	340.740		0.040	340.700
	16	Bidhyadharpur R.F.		R.F	238.760			238.760
	17	Chakradharpur R.F.		R.F	141.310			141.310
	18	Chengua-Mangalpur R.F.		R.F	79.640			79.640
	19	Deulia R.F.		R.F	241.670			241.670
	20	Gojodi-Damodarpur R.F.		R.F	33.020			33.020
	21	Haldia R.F.		R.F	52.000			52.000
	22	Itamundia R.F.		R.F	111.370			111.370
	23	Jarkani R.F.		R.F	10.680			10.680

Range		Forest block	No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
DUKURA	24	Kanpura R.F.		R.F	533.850		0.890	532.960
	25	Kuldiha R.F.		R.F	25.250			25.250
	26	Pundala R.F.		R.F	17.970			17.970
	27	Purunapani R.F.		R.F	42.730			42.730
	28	Belpal R.F.		R.F	110.600			110.600
	29	Dukura R.F.		R.F	162.750			162.750
	30	Itamundia-Jamuna R.F.		R.F	111.250			111.250
	31	Khanua R.F.		R.F	113.680			113.680
	32	Kerko R.F.		R.F	110.070			110.070
	33	Nigirdha-(A) PRF	8	PRF	15.750			15.750
	34	Nigirdha-(B) PRF		PRF	37.120			37.120
	35	Kukurbhuka-(I) PRF		PRF	122.820			122.820
	36	Kukurbhuka-(II) PRF		PRF	124.580			124.580
	37	Sanmokabadi PRF		PRF	129.000			129.000
	38	Budhabalanga-(A) PRF		PRF	46.560			46.560
	39	Budhabalanga-(B) PRF		PRF	76.000			76.000
	40	Gopinathpur PRF		PRF	566.400			566.400
	41	Manatri	8	VF	6.400			6.400
	42	Bhupad		VF	5.000			5.000
	43	Manatri		VF	3.480			3.480
	44	Rangadihi		VF	4.588			4.588
	45	Ranibandha		VF	3.440			3.440
	46	Khanua		VF	6.000			6.000
	47	Basipitha		VF	10.000			10.000
	48	Basipitha		VF	8.120			8.120
				TOTAL	**3680.148**	**0.000**	**0.930**	**3679.218**
RASGOVINDPUR RANGE								
RASGOVINDPUR	49	Amarda R.F.	13	R.F	1512.200	0.648		1511.552
	50	Betnasia R.F.		R.F	110.230			110.230
	51	Baghajharan R.F.		R.F	147.950	2.400		145.550
	52	Baldiha R.F.		R.F	95.830			95.830

Range	Forest block		No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
RASGOVINDPUR	53	Chitrada R.F.		R.F	422.640	12.800		409.840
	54	Jamsole R.F.		R.F	434.300	215.250		219.050
	55	Moroda R.F.		R.F	1479.140	14.850		1464.290
	56	Nalagaja R.F.		R.F	260.290			260.290
	57	Nichuapada R.F.		R.F	52.280			52.280
	58	Nuajhalia R.F.		R.F	50.500			50.500
	59	Nunchatia R.F.		R.F	148.270			148.270
	60	Sarumula R.F.		R.F	330.220		0.380	329.840
	61	Sukhilakhali R.F.		R.F	231.310	0.750		230.560
	62	Chikitamatia	8	VF	10.000			10.000
	63	Sarajharan		VF	7.344			7.344
	64	Praharajpur		VF	5.000			5.000
	65	Duarsuni		VF	5.000			5.000
	66	Nahiasoli		VF	2.940			2.940
	67	Jhatiada		VF	5.000			5.000
	68	Nalagaja		VF	2.000			2.000
	69	Chandanpur		VF	3.500			3.500
				TOTAL	**5315.944**	**246.698**	**0.380**	**5068.866**
UDALA RANGE								
UDALA	70	Anantasahi R.F.	24	R.F	7.120			7.120
	71	Belakuti R.F.		R.F	223.380			223.380
	72	Bhandagaon R.F.		R.F	122.210			122.210
	73	Charada R.F.		R.F	7.120			7.120
	74	Dhaundia R.F.		R.F	524.790		0.800	523.990
	75	Dimgadia R.F.		R.F	6.960			6.960
	76	Dugdha R.F.		R.F	35.290			35.290
	77	Ghantasila R.F.		R.F	5.340			5.340
	78	Jaypur R.F.		R.F	27.800			27.800
	79	Khunta R.F.		R.F	427.990	4.590		423.400
	80	Kuamara R.F.		R.F	229.530			229.530
	81	Kuriakhunta R.F.		R.F	7.450			7.450

Range	Forest block		No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
UDALA	82	Marsigaon R.F.		R.F	263.320			263.320
	83	Nahara R.F.		R.F	161.870			161.870
	84	Naupada R.F.		R.F	324.380			324.380
	85	Mundhakata R.F.		R.F	20.400		0.060	20.340
	86	Phuljhari – (A) R.F.		R.F	315.650			315.650
	87	Purunabaripada R.F.		R.F	25.850			25.850
	88	Sialia R.F.		R.F	34.320			34.320
	89	Sunduria R.F.		R.F	2.430			2.430
	90	Sirathali R.F.		R.F	74.140			74.140
	91	Udala R.F.		R.F	533.930			533.930
	92	Purna Baripada (Mankad Kenda)	22	VF	0.648			0.648
	93	Kusunia Patpur		VF	0.320			0.320
	94	Bhalimunduli		VF	3.900			3.900
	95	Salabani		VF	2.960			2.960
	96	Sialia		VF	2.880			2.880
	97	Raghunathpur		VF	4.660			4.660
	98	Jamudiha		VF	2.000			2.000
	99	Nuagaon		VF	13.324			13.324
	100	Bahanada		VF	1.300			1.300
	101	Jalda		VF	1.124			1.124
	102	Murari		VF	0.992			0.992
	103	Gohira		VF	5.000			5.000
	104	Jogibandha		VF	2.000			2.000
	105	Jajpur		VF	14.884			14.884
	106	Kuchiladiha		VF	15.000			15.000
	107	Khunta		VF	10.000			10.000
	108	Khunta		VF	3.756			3.756
	109	Khunta		VF	0.096			0.096
	110	Khunta		VF	6.148			6.148
	111	Khunta		VF	0.400			0.400

Range	Forest block		No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
UDALA	112	Khunta		VF	12.600			12.600
	113	Sridamchandrapur		VF	1.376			1.376
				TOTAL	**3486.638**	**4.590**	**0.860**	**3481.188**
BETNOTI RANGE								
BETNOTI	114	Asanabani R.F.	52	R.F	810.170	5.100	0.400	804.670
	115	Asankhali R.F.		R.F	12.950		0.120	12.830
	116	Badampur R.F.		R.F	952.290		0.039	952.251
	117	Badguma R.F.		R.F	28.970			28.970
	118	Baisinga R.F.		R.F	108.440		0.128	108.312
	119	Balka R.F.		R.F	23.960			23.960
	120	Bartana R.F.		R.F	194.890			194.890
	121	Basantapur R.F.		R.F	113.800			113.800
	122	Beldiha R.F.		R.F	41.600			41.600
	123	Bhimpur R.F.		R.F	18.290			18.290
	124	Bishrampur R.F.		R.F	42.250			42.250
	125	Chhatnna R.F.		R.F	393.510	2.050		391.460
	126	Daldali R.F.		R.F	71.220	6.000		65.220
	127	Dalki R.F.		R.F	827.970			827.970
	128	Dumapada R.F.		R.F	224.350	4.800		219.550
	129	Durgapur R.F.		R.F	961.840	4.300		957.540
	130	Gad-deulia R.F.		R.F	58.730			58.730
	131	Gandigadha R.F.		R.F	1085.180	17.800	0.999	1066.381
	132	Garudabasa R.F.		R.F	71.870			71.870
	133	Gopalpur R.F.		R.F	10.880			10.880
	134	Gobindapur R.F.		R.F	11.820			11.820
	135	Haripur R.F.		R.F	41.280	0.300	0.040	40.940
	136	Hatijhuri R.F.		R.F	109.110			109.110
	137	Hempur R.F.		R.F	290.790			290.790
	138	Ajadiha R.F.		R.F	2.100			2.100
	139	Jagannathpur R.F.		R.F	452.590	1.350		451.240
	140	Jarka R.F.		R.F	6.630			6.630

Range	Forest block		No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
BETNOTI	141	Jugal R.F.		R.F	305.290		0.500	304.790
	142	Kalma R.F.		R.F	24.360		0.120	24.240
	143	Kapoi R.F.		R.F	109.260			109.260
	144	Ketakisole R.F.		R.F	39.330			39.330
	145	Khadikapada R.F.		R.F	75.110			75.110
	146	Khetrapatana R.F.		R.F	4.210			4.210
	147	Khiripada R.F.		R.F	420.540		0.580	419.960
	148	Krushnachandrapur R.F.		R.F	1272.070	18.000	1.160	1252.910
	149	Kochilakhunta R.F.		R.F	259.320			259.320
	150	Machhapada R.F.		R.F	62.810			62.810
	151	Mantapal R.F.		R.F	222.730			222.730
	152	Merda R.F.		R.F	495.820			495.820
	153	Mohanpur R.F.		R.F	35.130			35.130
	154	Nuagaon R.F.`		R.F	39.330			39.330
	155	Phuljhari R.F.		R.F	217.420			217.420
	156	Purunia R.F.		R.F	442.300		1.350	440.950
	157	Raikama R.F.		R.F	191.340	10.000		181.340
	158	Rautra R.F.		R.F	119.460	0.300		119.160
	159	Sarbana R.F.		R.F	41.120			41.120
	160	Thakurtota R.F.		R.F	73.330			73.330
	161	Bhalukchua R.F.		R.F	199.430			199.430
	162	Bharadasole R.F.		R.F	50.670			50.670
	163	Totapada R.F.		R.F	65.070			65.070
	164	Tikayatpur R.F.		R.F	160.960	0.870		160.090
	165	Patpur RF		R.F	141.480	0.600		140.880
	166	Kochilakhunta PRF	2	PRF	99.000			99.000
	167	Bhalia PRF		PRF	340.160			340.160
	168	Kathapal	34	VF	0.240			0.240
	169	Chakulia		VF	3.000			3.000
	170	Karatpata		VF	0.780			0.780
	171	Chakulia		VF	4.000			4.000

Range	Forest block		No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
BETNOTI	172	Anlagadia (Mantidahi)		VF	3.060			3.060
	173	Jhinkuria		VF	1.600			1.600
	174	Singada Munduli		VF	3.320			3.320
	175	Athabahia		VF	1.700			1.700
	176	Mendha mundia		VF	2.100			2.100
	177	Anbagadia		VF	12.664			12.664
	178	Kalana		VF	5.000			5.000
	179	Routrapur		VF	5.000			5.000
	180	Kalana		VF	10.000			10.000
	181	Tulajhuri		VF	8.000			8.000
	182	Asukanda		VF	3.300			3.300
	183	Angaria		VF	0.560			0.560
	184	Tikayetpur		VF	0.800			0.800
	185	Purunia		VF	10.000			10.000
	186	Purunia		VF	10.000			10.000
	187	Purunia		VF	3.880			3.880
	188	Purunia		VF	6.560			6.560
	189	Balaka		VF	2.000			2.000
	190	Raghupur		VF	10.000			10.000
	191	Raghupur		VF	7.000			7.000
	192	Raghupur		VF	9.600			9.600
	193	Raghupur		VF	3.000			3.000
	194	Raghupur		VF	5.684			5.684
	195	Raghupur		VF	11.232			11.232
	196	Raghupur		VF	7.000			7.000
	197	Gadigaon		VF	9.644			9.644
	198	Gadadeuli		VF	0.840			0.840
	199	Gadadeuli		VF	7.296			7.296
	200	Nuagaon		VF	3.200			3.200
	201	Buguhuda		VF	2.000			2.000
				TOTAL	**12648.590**	**71.470**	**5.436**	**12571.684**

Range	Forest block		No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
DEULI RANGE								
DEULI	202	Andhari R.F.	5	R.F	731.630			731.630
	203	Chandua R.F.		R.F	3073.120	8.840		3064.280
	204	Deuli R.F.		R.F	2379.260	1.200		2378.060
	205	Kuliana R.F.		R.F	1203.680	4.800		1198.880
	206	Suliapada R.F.		R.F	2889.560	8.000		2881.560
	207	Badsole PRF	3	PRF	227.030	10.000		217.030
	208	Tangasole PRF		PRF	236.800	5.120		231.680
	209	Kaliasole PRF		PRF	320.160			320.160
	210	Dhalu Suliapada	6	VF	1.060			1.060
	211	Kasia		VF	1.740			1.740
	212	Handibhanga		VF	2.468			2.468
	213	Anlakuda		VF	6.000			6.000
	214	Sankhunta		VF	2.000			2.000
	215	Jalada		VF	0.276			0.276
				TOTAL	**11074.784**	**37.960**	**0.000**	**11036.824**
KAPTIPADA RANGE								
KAPTIPADA	216	Asanabani – (A) R.F.	3	R.F	262.560			262.560
	217	Nachhipur R.F.		R.F	229.000			229.000
	218	Notto R.F.		R.F	7707.080			7707.080
	219	Sukhuapata hill	1	PF	92.320	0.330		91.990
	220	Kaladahi	3	VF	1.500			1.500
	221	Pedagadia		VF	0.220			0.220
	222	Khaladi		VF	2.112			2.112
				TOTAL	**8294.792**	**0.330**	**0.000**	**8294.462**
BANGIRIPOSI RANGE								
BANGIRIPOSI	223	Dighi R.F.	3	R.F	515.940			515.940
	224	Rangahudi R.F.		R.F	86.670			86.670
	225	Thakurani R.F.		R.F	497.020			497.020
	226	Juha PRF	1	PRF	86.040			86.040
	227	Pimpudijharan	5	PF	60.970			60.970

Range	Forest block		No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
BANGIRIPOSI	228	Kopadiha		PF	10.730			10.730
	229	Ambadiha		PF	14.030			14.030
	230	Hill Block-I		PF	712.750			712.750
	231	Maheshpur		PF	98.430			98.430
	232	Manbhanj	41	VF	3.940			3.940
	233	Baghajhampa		VF	8.000			8.000
	234	Jarkani		VF	7.000			7.000
	235	Nata		VF	7.000			7.000
	236	Birsingh		VF	0.600			0.600
	237	Nohanatia		VF	4.000			4.000
	238	Pahadpur		VF	9.000			9.000
	239	Heena Chandrapur		VF	9.000			9.000
	240	Heena Chandrapur		VF	5.000			5.000
	241	Jaivilla		VF	0.532			0.532
	242	Sindurgoura		VF	0.260			0.260
	243	Handivanga		VF	2.468			2.468
	244	Bagbuda		VF	4.000			4.000
	245	Pokhariadiha		VF	8.000			8.000
	246	Govindpur		VF	8.000			8.000
	247	Bedhakudar		VF	10.000			10.000
	248	Gopoinathpur		VF	1.424			1.424
	249	Pahadpur		VF	1.500			1.500
	250	Brundabanchandrapur		VF	1.846			1.846
	251	Brundabanchandrapur		VF	4.500			4.500
	252	Brundabanchandrapur		VF	0.720			0.720
	253	Kuabuda		VF	12.000			12.000
	254	Kuabuda		VF	5.000			5.000
	255	Kuabuda		VF	8.000			8.000
	256	Kuabuda		VF	10.608			10.608
	257	Kuabuda		VF	5.000			5.000
	258	Pokharia		VF	6.208			6.208

Range		Forest block	No. of Forest Block	Legal status	Notified area in ha	Land Diverted under FC Act (in ha.)	Land Diverted under FRA (3.2) (in ha.)	Balance Land Area of Forest Block available for Working Plan (in ha.)
BANGIRIPOSI	259	Pokharia		VF	4.000			4.000
	260	Pokharia		VF	10.000			10.000
	261	Pokharia		VF	4.000			4.000
	262	Pokharia		VF	1.608			1.608
	263	Pokharia		VF	0.788			0.788
	264	Pokharia		VF	6.000			6.000
	265	Pokharia		VF	3.000			3.000
	266	Pokharia		VF	2.108			2.108
	267	Joka		VF	8.000			8.000
	268	Jharpokharia		VF	0.540			0.540
	269	Jharpokharia		VF	2.000			2.000
	270	Bagbuda		VF	0.400			0.400
	271	Bagbuda		VF	0.640			0.640
	272	Banakati		VF	3.088			3.088
				Total	**2272.358**	**0.000**	**0.000**	**2272.358**
				Grand Total	***50435.734***	***388.928***	***8.086***	***50038.720***

Appendix – II

Proposal wise Forest Area Diverted for Non-Forestry Activities Under F.C. Act, 1980

Sl. No	Name of proposal letter No. & Date G.O.I. of approval.	Name of user agency / purposes for diversion of Forest land	Area of Forest diverted with legal status-wise break-up.
1.	Sunei, M.I.P.	Executive Engineer, Sunei Dam Division, Udala/Irrigation /Purposes/	1071.74 Ha. Forest land diverted. R.F. = 17.33 Ha. P.F. = 1054. 41 Ha. **Total = 1071. 74Ha.**
2.	400 K.V. Transmission line from Rengali to Kolaghat/ No.-8-245/ 86 FC dt. 16.02.88.	Executive Engineer, (Electrical)- .H.T. (Maintenance) Divn. Keonjhar/Electric purposes	10.92 Ha. Forest land diverted / R.F. = 8.84Ha. P.F. = 2.08Ha.. **10.92 Ha.**
3	Subarnarekha Irrigation Project. No.8-9/88FC Dt.7.8.1990	Chief Engineer, & Basin Manager, Baitarani Subarnarekha, Budhabalanage Basin, At/P.o- Laxmiposi, Baripada/ Irrigation purposes/	1166.07 Ha. of Forest Land diverted. R.F. = 506.44Ha. P.F. = 659.63Ha. **Total = 1166.07Ha.**
4	.I.P No. 8 – 292 FC /FE dt.1.11. 1990	Executive Engineer, M.I. Divn. Mayurbhanj Irrigation purposes/	6.25 Ha. Forest landdiverted. R.F. = 2.50 Ha. VillageForest = 3.75Ha. **Total = 6.25 Ha.**
5	Construction of Khunta college in Mayurbhanj District. No. 8-173/94FCE dt. 15.09.95.	Secretary, Khunta College/land for College purposes 4.59 Ha. Forest Land diverted	**R.F. = 4.59 Ha.**
6	Sankarmara, M.I.P.No.8-265/FCE, dt.30.07.98.& No.8-265/FCE, dt.30.07.2004, dt.15.10.2004.	Executive Engineer, Mayurbhanj M.I. Division Irrigation/ purposes /	10.41 Ha. Forest Land/ UDPF = 6.47 Ha. Village Forest=3.94Ha. **Total = 10.41Ha.**
7	Diversion of 0.648 Ha. of Forest Land for construction of road from Madhuria to Nuasahi under Nalagaja G.P. in Rasgovindapur Block. No. 8 (26) 13/2003-FCE dt. 22.04.2003.	Project Administrator, ITDA, Baripada for construction of road.	**R.F. = 0.648 Ha**
8	400KV. Transmission line from Jamshedpur to Baripada byPGCI Ltd. No. 5 –ORB-082/2008-FCE dt.17.04.2009	rid Corporation of India / Electri purposes	**3.38 ha. P.F**
9	For re-settlement of evacuees of Kala dam project. Vide letter – 1892/F&H Dt.19.07.1979	Irrigation Dept.	**140.08 ha. In Nabra R.F.**
		TOTAL	**2414.088 ha.**

Appendix –III

Block wise Soil Types of Baripada Forest Division

Name of Block	Soil Type		Land Slope	
	Major Soil Classes	Area(ha)	0-3% (ha)	3-8% (ha)
Bangiriposi	Mixed Grey Soil (Inceptisols)	79805.26	23208.63	12991.62
	Settlement	2912.08		
	Water body	316.72		
	Total	83034.05		
Baripada	Matured, Red & Lateritic Soil (Alfisols)	15779.89	15252.21	527.68
	Mixed Grey Soil (Inceptisols)	9846.93	9245.59	601.35
	Settlement	2303.30		
	Water body	470.92		
	Total	28401.05		
Badasahi	Matured, Red & Lateritic Soil (Alfisols)	7780.41	7268.81	509.82
	Mixed Grey Soil (Inceptisols)	21692.11	21086.1	595.770798
	Unaltered Soil with Coarse Parent Materials (Entisols)	2.27	2.27	
	Settlement	4514.05		
	Water body	1078.33		
	Total	35067.16		
Betnoti	Matured, Red & Lateritic Soil (Alfisols)	9513.49	9397.06	116.44
	Mixed Grey Soil (Inceptisols)	17656.39	17491.14	165.25
	Unaltered Soil with Coarse Parent Materials (Entisols)	87.39	87.39	
	Settlement	4535.41		
	Water body	183.22		
	Total	31975.91		
Gopabandhunagar	Matured, Red & Lateritic Soil (Alfisols)	275.64	259.10	16.45
	Mixed Grey Soil (Inceptisols)	15462.80	14573.32	794.48
	Unaltered Soil with Coarse Parent Materials (Entisols)	0.10	0.10	
	Settlement	2225.31		
	Water body	372.62		
	Total	18336.48		
Kaptipada	Matured, Red & Lateritic Soil (Alfisols)	198.32	179.71	18.59
	Mixed Grey Soil (Inceptisols)	57496.90	35254.26	14591.07
	Unaltered Soil with Coarse Parent Materials (Entisols)	0.91	0.00	0.32
	Settlement	3924.16		
	Water body	1677.78		
	Total	63298.08		
Khunta	Matured, Red & Lateritic Soil (Alfisols)	5779.37	5236.28	510.52
	Mixed Grey Soil (Inceptisols)	13567.26	12920.98	506.28
	Settlement	2600.44		
	Water body	89.40		
	Total	22036.47		
Kuliana	Matured, Red & Lateritic Soil (Alfisols)	9582.68	9323.95	258.73
	Mixed Grey Soil (Inceptisols)	19302.21	17266.69	1904.87
	Settlement	2688.62		
	Water body	675.70		
	NA	2.81		
	Total	32252.03		

Name of Block	Soil Type		Land Slope	
	Major Soil Classes	Area(ha)	0-3% (ha)	3-8% (ha)
Moroda	Matured, Red & Lateritic Soil (Alfisols)	18030.65	17738.59	292.06
	Mixed Grey Soil (Inceptisols)	11440.51	11064.94	375.58
	Settlement	2927.20		
	Water body	444.38		
	NA	0.02		
	Total	32842.76		
Rasgovindapur	Matured, Red & Lateritic Soil (Alfisols)	9864.95	9776.14	88.32
	Mixed Grey Soil (Inceptisols)	11445.15	11246.77	198.38
	Unaltered Soil with Coarse Parent Materials (Entisols)	0.02	0.02	
	Settlement	2753.91		
	Water body	218.27		
	Total	24282.31		
Saraskana	Matured, Red & Lateritic Soil (Alfisols)	857.79	821.43	36.34
	Mixed Grey Soil (Inceptisols)	31044.65	23143.53	4899.69
	Settlement	2749.25		
	Water body	447.92		
	NA	6.56		
	Total	35106.18		
Shamakhunta	Matured, Red & Lateritic Soil (Alfisols)	3617.46	2849.89	688.72
	Mixed Grey Soil (Inceptisols)	73664.18	12308.75	11013.17
	Settlement	2319.54		
	Water body	685.57		
	Total	80286.76		
Suliapada	Matured, Red & Lateritic Soil (Alfisols)	19440.48	19164.01	276.48
	Mixed Grey Soil (Inceptisols)	10695.31	10305.32	389.99
	Settlement	2715.28		
	Water body	806.27		
	NA	0.06		
	Total	33657.40		
Udala	Matured, Red & Lateritic Soil (Alfisols)	567.47	468.41	99.06
	Mixed Grey Soil (Inceptisols)	33159.37	17119.38	4273.01
	Settlement	2718.46		
	Water body	497.07		
	Total	36942.38		

Appendix – IV

FOREST BLOCK WISE CARBON STOCK

Name of the Forest Block	Plan Area in ha.	Total Forest Cover in ha.	Biomass (t/ha)	Total Forest Block Biomass (t/ha)	Forest Block Carbon Stock (t/ha)
Baldiha R.F.	110.13	99.13	556.46	55161.88	27580.94
Bhagabat Chandrapur R.F.	806.28	795.48	556.46	442652.80	221326.40
Budhikhamari R.F.	863.10	846.62	556.46	471110.17	235555.08
Dungurusahi R.F.	10.95	5.95	556.46	3310.94	1655.47
Hatikote R.F.	556.84	543.72	556.46	302558.43	151279.22
Lulung-Purunapani R.F.	223.31	213.31	556.46	118698.48	59349.24
Manchabandha R.F.	1020.92	978.96	556.46	544752.08	272376.04
Asanabani P.R..F	57.03	52.03	556.46	28952.61	14476.31
Goplapur V.F.	4.00	4.00	556.46	2225.84	1112.92
Srirampur V.F.	3.14	3.14	556.46	1747.28	873.64
Gadadharapur V.F.	0.84	0.84	556.46	467.43	233.71
Baunsda V.F.	0.94	0.94	556.46	523.07	261.54
Dumuria V.F.	5.00	5.00	556.46	2782.30	1391.15
Pithabata Range	**3662.48**	**3544.12**	**556.46**	**1972161.02**	**986080.51**
Aghasole R.F.	37.55	22.55	177.44	4001.27	2000.64
Badsahi R.F.	340.74	335.70	177.44	59566.61	29783.30
Bidhyadharpur R.F.	238.76	228.76	177.44	40591.17	20295.59
Chakradharpur R.F.	141.31	136.31	177.44	24186.85	12093.42
Chengua-Mangalpur R.F.	79.64	59.64	177.44	10582.52	5291.26
Deulia R.F.	241.67	226.67	177.44	40220.32	20110.16
Gojodi-Damodarpur R.F.	33.02	13.02	177.44	2310.27	1155.13
Haldia R.F.	52.00	47.00	177.44	8339.68	4169.84
Itamundia R.F.	111.37	61.37	177.44	10889.49	5444.75
Jarkani R.F.	10.68	8.68	177.44	1540.18	770.09
Kanpura R.F.	533.85	532.96	177.44	94568.42	47284.21
Kuldiha R.F.	25.25	20.25	177.44	3593.16	1796.58
Pundala R.F.	17.97	7.00	177.44	1242.08	621.04
Purunapani R.F.	42.73	30.73	177.44	5452.73	2726.37
Belpal R.F.	110.60	110.60	177.44	19624.86	9812.43
Dukura R.F.	162.75	157.75	177.44	27991.16	13995.58
Itamundia-Jamuna R.F.	111.25	96.25	177.44	17078.60	8539.30
Khanua R.F.	113.68	111.68	177.44	19816.50	9908.25
Kerko R.F.	110.07	110.07	177.44	19530.82	9765.41
Nigirdha (A) P.R.F.	15.75	15.75	177.44	2794.68	1397.34
Nigirdha (B) P.R.F.	37.12	37.12	177.44	6586.57	3293.29
Kukurbhuka (1)P.R.F.	122.82	122.82	177.44	21793.18	10896.59
Kukurbhuka (2)P.R.F.	124.58	124.58	177.44	22105.48	11052.74
Sanamakabadi P.R.F.	129.00	129.00	177.44	22889.76	11444.88
Budhabalang (A) P.R.F.	46.56	46.56	177.44	8261.61	4130.80
Budhabalang (B) P.R.F.	76.00	76.00	177.44	13485.44	6742.72
Gopinathpur P.R.F.	566.40	566.40	177.44	100502.02	50251.01
Manatri V.F.	6.40	6.40	177.44	1135.62	567.81
Bhupad V.F.	5.00	5.00	177.44	887.20	443.60
Manatri V.F.	3.48	3.48	177.44	617.49	308.75
Rangahidi V.F.	4.59	4.59	177.44	814.09	407.05

Name of the Forest Block	Plan Area in ha.	Total Forest Cover in ha.	Biomass (t/ha)	Total Forest Block Biomass (t/ha)	Forest Block Carbon Stock (t/ha)
Ranibandha V.F.	3.44	3.44	177.44	610.39	305.20
Khanua V.F.	6.00	6.00	177.44	1064.64	532.32
Basipitha V.F.	10.00	10.00	177.44	1774.40	887.20
Basipitha V.F.	8.12	8.12	177.44	1440.81	720.41
Dukura Range	**3680.15**	**3475.25**	**177.44**	**616648.01**	**308324.00**
Amarda R.F.	1512.20	1511.55	207.02	312921.50	156460.75
Betnasia R.F.	110.23	100.23	207.02	20749.61	10374.81
Baghajharan R.F.	147.95	135.55	207.02	28061.56	14030.78
Baladia R.F.	95.83	75.83	207.02	15698.33	7849.16
Chitrada R.F.	422.64	378.20	207.02	78294.96	39147.48
Jamsole R.F.	434.30	145.00	207.02	30017.90	15008.95
Moroda R.F.	1479.14	1449.29	207.02	300032.02	150016.01
Nalagaja R.F.	260.29	254.29	207.02	52643.12	26321.56
Nichuapada R.F.	52.28	52.28	207.02	10823.01	5411.50
Nuhajhalia R.F.	50.50	35.50	207.02	7349.21	3674.61
Nunchatia R.F.	148.27	125.27	207.02	25933.40	12966.70
Sarumula R.F.	330.22	319.84	207.02	66213.28	33106.64
Sukhilakhali R.F.	231.31	230.56	207.02	47730.53	23865.27
Chikitamatia V.F.	10.00	10.00	207.02	2070.20	1035.10
Sarajharan V.F.	7.34	7.34	207.02	1520.35	760.18
Pharajpur V.F.	5.00	5.00	207.02	1035.10	517.55
Duarsuni V.F.	5.00	5.00	207.02	1035.10	517.55
Nahiasoli V.F.	2.94	2.94	207.02	608.64	304.32
Jhatiada V.F.	5.00	5.00	207.02	1035.10	517.55
Nalagaja V.F.	2.00	2.00	207.02	414.04	207.02
Chandanpur V.F.	3.50	3.50	207.02	724.57	362.29
Rasgovindpur Range	**5315.94**	**4854.18**	**207.02**	**1004911.52**	**502455.76**
Anantasahi R.F.	7.12	7.12	365.25	2600.58	1300.29
Belakuti R.F.	223.38	158.38	365.25	57848.30	28924.15
Bhandagaon R.F.	122.21	67.21	365.25	24548.45	12274.23
Charada R.F.	7.12	2.12	365.25	774.33	387.17
Dhaundia R.F.	524.79	523.99	365.25	191387.35	95693.67
Dimgadia R.F.	6.96	2.00	365.25	730.50	365.25
Dugdha R.F.	35.29	30.29	365.25	11063.42	5531.71
Ghantasila R.F.	5.34	5.34	365.25	1950.44	975.22
Jaypur R.F.	27.80	2.80	365.25	1022.70	511.35
Khunta R.F.	427.99	373.40	365.25	136384.35	68192.18
Kuamara R.F.	229.53	214.53	365.25	78357.08	39178.54
Kuriakhunta R.F.	7.45	2.45	365.25	894.86	447.43
Marsigaon R.F.	263.32	223.32	365.25	81567.63	40783.82
Nahara R.F.	161.87	51.87	365.25	18945.52	9472.76
Naupada R.F.	324.38	278.66	365.25	101780.57	50890.28
Mundhakata R.F.	20.40	15.34	365.25	5602.94	2801.47
Phuljhari – (A) R.F.	315.65	305.65	365.25	111638.66	55819.33
Purunabaripada R.F.	25.85	5.00	365.25	1826.25	913.13
Sialia R.F.	34.32	4.32	365.25	1577.88	788.94
Sunduria R.F.	2.43	2.43	365.25	887.56	443.78
Sirathali R.F.	74.14	19.14	365.25	6990.89	3495.44
Udala R.F.	533.93	446.93	365.25	163241.18	81620.59

Name of the Forest Block	Plan Area in ha.	Total Forest Cover in ha.	Biomass (t/ha)	Total Forest Block Biomass (t/ha)	Forest Block Carbon Stock (t/ha)
Purunabaripada mankadakenda V.F.	0.65	0.65	365.25	236.68	118.34
Kusunia Patpur V.F.	0.32	0.32	365.25	116.88	58.44
Bhalimunduli V.F.	3.90	3.90	365.25	1424.48	712.24
Salabani V.F.	2.96	2.96	365.25	1081.14	540.57
Sialia V.F.	2.88	2.88	365.25	1051.92	525.96
Raghunathpur V.F.	4.66	4.66	365.25	1702.07	851.03
Jamudiha V.F.	2.00	2.00	365.25	730.50	365.25
Nuagaon V.F.	13.32	13.32	365.25	4866.59	2433.30
Bahanada V.F.	1.30	1.30	365.25	474.83	237.41
Jalda V.F.	1.12	1.12	365.25	410.54	205.27
Murari V.F.	0.99	0.99	365.25	362.33	181.16
Gohira V.F.	5.00	5.00	365.25	1826.25	913.13
Jogibandha V.F.	2.00	2.00	365.25	730.50	365.25
Jajpur`V.F.	14.88	14.88	365.25	5436.38	2718.19
Kochiladiha V.F.	15.00	15.00	365.25	5478.75	2739.38
Khunta V.F.	10.00	10.00	365.25	3652.50	1826.25
Khunta V.F.	3.76	3.76	365.25	1371.88	685.94
Khunta V.F.	0.10	0.10	365.25	35.06	17.53
Khunta V.F.	6.15	6.15	365.25	2245.56	1122.78
Khunta V.F.	0.40	0.40	365.25	146.10	73.05
Khunta V.F.	12.60	12.60	365.25	4602.15	2301.08
Sridamchandrapur V.F.	1.38	1.38	365.25	502.58	251.29
Udala Range	**3486.64**	**2845.66**	**365.25**	**1039376.58**	**519688.29**
Asanabani R.F.	810.17	174.90	676.93	118393.03	59196.51
Asankhali R.F.	12.95	7.83	676.93	5300.36	2650.18
Badampur R.F.	952.29	927.25	676.93	627684.02	313842.01
Badguma R.F.	28.97	8.97	676.93	6072.06	3036.03
Baisinga R.F.	108.44	50.00	676.93	33846.50	16923.25
Balka R.F.	23.96	23.96	676.93	16219.24	8109.62
Bartana R.F.	194.89	184.89	676.93	125157.59	62578.79
Basantapur R.F.	113.80	98.80	676.93	66880.68	33440.34
Beldiha R.F.	41.60	31.60	676.93	21390.99	10695.49
Bhimpur R.F.	18.29	18.29	676.93	12381.05	6190.52
Bishrampur R.F.	42.25	37.25	676.93	25215.64	12607.82
Chhatnna R.F.	393.51	391.46	676.93	264991.02	132495.51
Daldali R.F.	71.22	65.22	676.93	44149.37	22074.69
Dalki R.F.	827.97	762.97	676.93	516477.28	258238.64
Dumapada R.F.	224.35	219.55	676.93	148619.98	74309.99
Durgapur R.F.	961.84	907.54	676.93	614341.05	307170.53
Gad-deulia R.F.	58.73	58.73	676.93	39756.10	19878.05
Gandigadha R.F.	1085.18	1066.38	676.93	721865.29	360932.65
Garudabasa R.F.	71.87	60.60	676.93	41023.31	20511.66
Gopalpur R.F.	10.88	10.88	676.93	7365.00	3682.50
Gobindapur R.F.	11.82	11.82	676.93	8001.31	4000.66
Haripur R.F.	41.28	15.94	676.93	10790.26	5395.13
Hatijhuri R.F.	109.11	71.75	676.93	48569.73	24284.86
Hempur R.F.	290.79	185.79	676.93	125766.82	62883.41
Ajadiha R.F.	2.10	2.10	676.93	1421.55	710.78
Jagannathpur R.F.	452.59	431.51	676.93	292104.77	146052.39

Name of the Forest Block	Plan Area in ha.	Total Forest Cover in ha.	Biomass (t/ha)	Total Forest Block Biomass (t/ha)	Forest Block Carbon Stock (t/ha)
Jarka R.F.	6.63	6.63	676.93	4488.05	2244.02
Jugal R.F.	305.29	299.79	676.93	202936.84	101468.42
Kalma R.F.	24.36	24.24	676.93	16408.78	8204.39
Kapoi R.F.	109.26	104.26	676.93	70576.72	35288.36
Ketakisole R.F.	39.33	39.33	676.93	26623.66	13311.83
Khadikapada R.F.	75.11	65.11	676.93	44074.91	22037.46
Khetrapatana R.F.	4.21	4.21	676.93	2849.88	1424.94
Khiripada R.F.	420.54	50.00	676.93	33846.50	16923.25
Krushnachandrapur R.F.	1272.07	1252.91	676.93	848132.37	424066.18
Kochilakhunta R.F.	259.32	249.32	676.93	168772.19	84386.09
Machhapada R.F.	62.81	57.81	676.93	39133.32	19566.66
Mantapal R.F.	222.73	212.73	676.93	144003.32	72001.66
Merda R.F.	495.82	475.82	676.93	322096.83	161048.42
Mohanpur R.F.	35.13	35.13	676.93	23780.55	11890.28
Nuagaon R.F.`	39.33	39.33	676.93	26623.66	13311.83
Phuljhari R.F.	217.42	197.42	676.93	133639.52	66819.76
Purunia R.F.	442.30	414.53	676.93	280609.82	140304.91
Raikama R.F.	191.34	181.34	676.93	122754.49	61377.24
Rautra R.F.	119.46	19.16	676.93	12969.98	6484.99
Sarbana R.F.	41.12	18.40	676.93	12452.80	6226.40
Thakurtota R.F.	73.33	53.33	676.93	36100.68	18050.34
Bharadasole R.F.	50.67	35.67	676.93	24146.09	12073.05
Bhalukchua R.F.	199.43	184.09	676.93	124614.69	62307.34
Totapada R.F.	65.07	65.07	676.93	44047.84	22023.92
Tikayatpur R.F.	160.96	150.09	676.93	101600.42	50800.21
Patpur RF	141.48	130.88	676.93	88596.60	44298.30
Kochilakhunta P.R.F.	99.00	99.00	676.93	67016.07	33508.04
Bhalia P.R.F.	340.16	340.16	676.93	230264.51	115132.25
Kathapal V.F.	0.24	0.24	676.93	162.46	81.23
Chakulia V.F.	3.00	3.00	676.93	2030.79	1015.40
Karatpata V.F.	0.78	0.78	676.93	528.01	264.00
Chakulia V.F.	4.00	4.00	676.93	2707.72	1353.86
Analagadia (Matidahi) V.F.	3.06	3.06	676.93	2071.41	1035.70
Jhinkiria V.F.	1.60	1.60	676.93	1083.09	541.54
Singida Munduli V.F.	3.32	3.32	676.93	2247.41	1123.70
Athabahia V.F.	1.70	1.70	676.93	1150.78	575.39
Mendhamundia V.F.	2.10	2.10	676.93	1421.55	710.78
Anbagadia V.F.	12.66	12.66	676.93	8572.64	4286.32
Kalana	5.00	5.00	676.93	3384.65	1692.33
Rautrapur V.F.	5.00	5.00	676.93	3384.65	1692.33
Kalana V.F.	10.00	10.00	676.93	6769.30	3384.65
Tulajhuri V.F.	8.00	8.00	676.93	5415.44	2707.72
Asukanda V.F.	3.30	3.30	676.93	2233.87	1116.93
Angaria V.F.	0.56	0.56	676.93	379.08	189.54
Tikayatpur V.F.	0.80	0.80	676.93	541.54	270.77
Purunia V.F.	10.00	10.00	676.93	6769.30	3384.65
Purunia V.F.	10.00	10.00	676.93	6769.30	3384.65
Purunia V.F.	3.88	3.88	676.93	2626.49	1313.24
Purunia V.F.	6.56	6.56	676.93	4440.66	2220.33

Name of the Forest Block	Plan Area in ha.	Total Forest Cover in ha.	Biomass (t/ha)	Total Forest Block Biomass (t/ha)	Forest Block Carbon Stock (t/ha)
Balaka V.F.	2.00	2.00	676.93	1353.86	676.93
Raghupur V.F.	10.00	10.00	676.93	6769.30	3384.65
Raghupur V.F.	7.00	7.00	676.93	4738.51	2369.26
Raghupur V.F.	9.60	9.60	676.93	6498.53	3249.26
Raghupur V.F.	3.00	3.00	676.93	2030.79	1015.40
Raghupur V.F.	5.68	5.68	676.93	3847.67	1923.84
Raghupur V.F.	11.23	11.23	676.93	7603.28	3801.64
Raghupur V.F.	7.00	7.00	676.93	4738.51	2369.26
Gadigaon V.F.	9.64	9.64	676.93	6528.31	3264.16
Gadadeuli V.F.	0.84	0.84	676.93	568.62	284.31
Gadadeuli V.F.	7.30	7.30	676.93	4938.88	2469.44
Nuagaon V.F.	3.20	3.20	676.93	2166.18	1083.09
Buguhuda V.F.	2.00	2.00	676.93	1353.86	676.93
Betnoti Range	**12648.59**	**10805.80**	**676.93**	**7314771.55**	**3657385.77**
Andhari R.F.	731.63	348.23	246.37	85792.19	42896.10
Chandua R.F.	3073.12	3064.28	246.37	754946.66	377473.33
Deuli R.F.	2379.26	2378.06	246.37	585882.64	292941.32
Kuliana R.F.	1203.68	1188.88	246.37	292904.37	146452.18
Suliapada R.F.	2889.56	2881.56	246.37	709929.94	354964.97
Badsole P.R.F.	227.03	217.03	246.37	53469.68	26734.84
Tangasole P.R.F.	236.80	231.68	246.37	57079.00	28539.50
Kaliasole P.R.F.	320.16	320.16	246.37	78877.82	39438.91
Dhalu Suliapada V.F.	1.06	1.06	246.37	261.15	130.58
Kasia V.F.	1.74	1.74	246.37	428.68	214.34
Handibhanga V.F.	2.47	2.47	246.37	608.04	304.02
Anlakuda V.F.	6.00	6.00	246.37	1478.22	739.11
Sankhunta V.F.	2.00	2.00	246.37	492.74	246.37
Jalda V.F.	0.28	0.28	246.37	68.00	34.00
Deuli Range	**11074.78**	**10643.42**	**246.37**	**2622219.14**	**1311109.57**
Asanabani – (A) R.F.	262.56	212.56	292.09	62086.65	31043.33
Nachhipur R.F.	229.00	204.13	292.09	59623.75	29811.87
Notto R.F.	7707.08	7548.37	292.09	2204803.39	1102401.70
Sukhuapata Hill P.F.	92.32	91.99	292.09	26869.36	13434.68
Kaladahi V.F.	1.50	1.50	292.09	438.14	219.07
Pedagadia V.F.	0.22	0.22	292.09	64.26	32.13
Khaladi V.F.	2.11	2.11	292.09	616.89	308.45
Kaptipada Range	**8294.79**	**8060.88**	**292.09**	**2354502.44**	**1177251.22**
Dighi R.F.	515.94	364.77	165.12	60230.33	30115.16
Rangahudi R.F.	86.67	75.26	165.12	12426.77	6213.38
Thakurani R.F.	497.02	487.02	165.12	80416.74	40208.37
Juha P.R.F.	86.04	86.04	165.12	14206.92	7103.46
Pimpudijharan P.F.	60.97	60.97	165.12	10067.37	5033.68
Kapadiha P.F.	10.73	10.73	165.12	1771.74	885.87
Ambadiha P.F.	14.03	14.03	165.12	2316.63	1158.32
Hill Block-1 P.F.	712.75	712.75	165.12	117689.28	58844.64
Maheshpur P.F.	98.43	98.43	165.12	16252.76	8126.38
Manbhanj V.F.	3.94	3.94	165.12	650.57	325.29
Baghajhampa V.F.	8.00	8.00	165.12	1320.96	660.48
Jarkani V.F.	7.00	7.00	165.12	1155.84	577.92
Nata V.F.	7.00	7.00	165.12	1155.84	577.92

Name of the Forest Block	Plan Area in ha.	Total Forest Cover in ha.	Biomass (t/ha)	Total Forest Block Biomass (t/ha)	Forest Block Carbon Stock (t/ha)
Birsingh V.F.	0.60	0.60	165.12	99.07	49.54
Nohanatia V.F.	4.00	4.00	165.12	660.48	330.24
Pahadpur V.F.	9.00	9.00	165.12	1486.08	743.04
Heenachandrapur V.F.	9.00	9.00	165.12	1486.08	743.04
Heenachandrapur V.F.	5.00	5.00	165.12	825.60	412.80
Jaivilla V.F.	0.53	0.53	165.12	87.84	43.92
Sindurgoura V.F.	0.26	0.26	165.12	42.93	21.47
Handibhanga V.F.	2.47	2.47	165.12	407.52	203.76
Bagbuda V.F.	4.00	4.00	165.12	660.48	330.24
Pokhariadiha V.F.	8.00	8.00	165.12	1320.96	660.48
Govindpur V.F.	8.00	8.00	165.12	1320.96	660.48
Bedhakudar V.F.	10.00	10.00	165.12	1651.20	825.60
Gopinathpur V.F.	1.42	1.42	165.12	235.13	117.57
Pahadpur V.F.	1.50	1.50	165.12	247.68	123.84
Brundabanchandrapur V.F.	1.85	1.85	165.12	304.81	152.41
Brundabanchandrapur V.F.	4.50	4.50	165.12	743.04	371.52
Brundabanchandrapur V.F.	0.72	0.72	165.12	118.89	59.44
Kuabuda V.F.	12.00	12.00	165.12	1981.44	990.72
Kuabuda V.F.	5.00	5.00	165.12	825.60	412.80
Kuabuda V.F.	8.00	8.00	165.12	1320.96	660.48
Kuabuda V.F.	10.61	10.61	165.12	1751.59	875.80
Kuabuda V.F.	5.00	5.00	165.12	825.60	412.80
Pokharia V.F.	6.21	6.21	165.12	1025.06	512.53
Pokharia V.F.	4.00	4.00	165.12	660.48	330.24
Pokharia V.F.	10.00	10.00	165.12	1651.20	825.60
Pokharia V.F.	4.00	4.00	165.12	660.48	330.24
Pokharia V.F.	1.61	1.61	165.12	265.51	132.76
Pokharia V.F.	0.79	0.79	165.12	130.11	65.06
Pokharia V.F.	6.00	6.00	165.12	990.72	495.36
Pokharia V.F.	3.00	3.00	165.12	495.36	247.68
Pokharia V.F.	2.11	2.11	165.12	348.07	174.04
Joka V.F.	8.00	8.00	165.12	1320.96	660.48
Jharpokharia V.F.	0.54	0.54	165.12	89.16	44.58
Jharpokharia V.F.	2.00	2.00	165.12	330.24	165.12
Bagbuda V.F.	0.40	0.40	165.12	66.05	33.02
Bagbuda V.F.	0.64	0.64	165.12	105.68	52.84
Banakati V.F.	3.09	3.09	165.12	509.89	254.95
Bangiriposi Range	**2272.36**	**2099.77**	**165.12**	**346714.68**	**173357.34**
272 Forest Blocks	***50435.73***	***46329.08***	***2686.68***	***17271304.93***	***8635652.46***

Appendix – V

List of Block Plantations in ToF (outside Plan Area)

Name of Range	Name of Village	Area in ha.	Seedlings Planted	Scheme
Bangiriposi	Baunsiapat	30	48000	Economic
Bangiriposi	Baunsiapat	60	96000	Economic Plantation
Bangiriposi	Uchagaon-Katisole	50	80000	CAMPA
Bangiriposi	Uchagaon-Katisole	30	48000	CAMPA
Bangiriposi	Umadeipur	15	24000	Economic plantation
Bangiriposi	Kandalia	15	24000	Economic plantation
Bangiriposi	Mahantipadasia	15	24000	Economic plantation
Bangiriposi	Balikhani	6	9600	13th FCG (SP)
Bangiriposi	Rajaloka	14	22400	13th FCG (SP)
Bangiriposi	Mahantipadasia	20	32000	13th FCG (SP)
Bangiriposi	Sunamunhi	15	24000	13th FCG (PLWC)
Bangiriposi	Jogibanda	10	16000	13th FCG (PLWC)
Bangiriposi	Kandalia	10	16000	13th FCG (PLWC)
Bangiriposi	Hijili	10	16000	Bald Hill Plantation
Bangiriposi	Jaganathpur	10	16000	MGNREGS-AR
Bangiriposi	Anlatota	5	8000	MGNREGS-AR
Bangiriposi	Jaldiha	5	8000	MGNREGS-AR
Bangiriposi	Mahulisole	10	16000	Bald hill Plantation
Bangiriposi	Kalapani	25	40000	13th FCG (Block)
Bangiriposi	Mahulisole	15	24000	MGNREGS
Betnoti	Bhandarikula/	20	50000	WFP welfare
Betnoti	Sunahaja	40	64000	CAMPA
Betnoti	Siliphudi	11	18000	13th FCG (SP)
Betnoti	Raikama	10	11000	FDA
Betnoti	Agada	20	22000	NAP (FDA)-AR
Betnoti	Bidukudia	10	16000	MGNREGS
Deuli	Uphalgadia	20	32000	CAMPA
Deuli	Gadia	25	40000	CAMPA
Deuli	Gunthurdihi	20	32000	CAMPA
Deuli	Purunapani	25	40000	CAMPA
Deuli	Budhamara	10	16000	Bald Hill Plantation
Deuli	Budamara hill	5	8000	Bald hill Plantation
Dukura	Baligadia	25	40000	CAMPA
Dukura	Subarna manjari	20	8000	SP-Bamboo plantation
Dukura	Baincha	25	40000	13th FCG (PLWC)
Dukura	Matiahudi	15	24000	Bald Hill Plantation

Name of Range	Name of Village	Area in ha.	Seedlings Planted	Scheme
Dukura	Sansole	10	16000	Bald hill Plantation
Dukura	Singtia	7	11200	13th FCG (Block)
Kaptipada	Haridachua	20	32000	CAMPA
Kaptipada	Debagaon	20	32000	13th FCG (SP)
Kaptipada	Salagaon	4	6000	13th FCG (SP)
Kaptipada	Khadikhania	20	7000	NBM-Bamboo
Kaptipada	Kusumpur	20	7000	NBM-Bamboo
Kaptipada	Sarisua	10	3000	NBM-Bamboo
Kaptipada	Dughda	10	3000	NBM-Bamboo
Pithabata	Asanabani	8	12800	CAMPA
Pithabata	Pokharia	30	48000	CAMPA
Pithabata	Bhalubasa	10	16000	13th FCG (SP)
Pithabata	Banatalapada	15	24000	Economic plantation
Rasgobindpur	Baghajharan	5	8000	WL- corridor
Rasgovindpur	Baghuasole	15	4995	FDA
Rasgovindpur	Hemachandrapur	15	6000	OBDA
Rasgovindpur	Shyamanandapur	20	32000	CAMPA
Rasgovindpur	Sarusole Ghagara, Bhalughera	20	32000	CAMPA
Rasgovindpur	Sankhabhanga	50	80000	CAMPA
Rasgovindpur	Jamsole	10	16000	Economic Plantation
Rasgovindpur	Rangamatia	5	8000	Economic Plantation
Rasgovindpur	Harinasole	20	32000	Economic plantation
Udala	Manikpur	10	16000	Saraca asoca
Udala	Brundabana Ch. Pur	10	16000	NREGS
Udala	Kutling	25	40000	CAMPA
Udala	Realdah	50	80000	CAMPA
Udala	Sindurgaoura	10	11000	FDA
Udala	Arpata	10	11000	FDA
Udala	Arpata	20	8000	SP-Bamboo
Udala	Kendumundi	15	24000	13th FCG (Block)
Udala	Surukuna	10	16000	13th FCG (Block)
	Total	**1175**	**1711995**	

Appendix – VI

Village Forests of Baripada Forest Division

Sl. No	Name of Range	Name of Tahasil	Name of Village	Khata No	Plot No	Area (in ha)	Notification No & Date
1	Bangiriposi	Saraskana	Manbhanj	107, 109, 106	338, 499, 510, 511, 512	3.94	AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992
2	Bangiriposi	Saraskana	Baghajhampa	264	641, 1035	8	
3	Bangiriposi	Saraskana	Jarkani	258	111	7	
4	Bangiriposi	Saraskana	Nata	1,04,101	112, 325, 110	7	
5	Bangiriposi	Saraskana	Birsingh	57, 59	19, 20, 22	0.6	
6	Bangiriposi	Saraskana	Nohanatia	130, 127	891, 827, 880	4	
7	Bangiriposi	Saraskana	Pahadpur	111, 112	293, 294, 295, 320, 508	9	
8	Bangiriposi	Baripada	Heena Chandrapur	1	4	9	
9	Bangiriposi	Baripada	Heena Chandrapur	1	4	5	
10	Bangiriposi	Bangiriposi	Handivanga	-	-	2.468	
11	Bangiriposi	Shamakhunta	Sindurgoura	233	309	0.26	
12	Bangiriposi	Saraskana	Bagbuda	142	596, 704, 707, 709, 714, 731, 745, 945	4	
13	Bangiriposi	Saraskana	Pokhariadiha	161	7,33,784	8	
14	Bangiriposi	Saraskana	Govindpur	72	220, 228, 229,, 231, 232, 233, 234, 235, 286	8	AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992
15	Bangiriposi	Saraskana	Bedhakudar	170, 173	442, 454, 436, 1249, 461, 471, 451, 1253, 473, 475, 452, 465, 1316, 457, 1251, 472, 444, 469, 468, 244, 439, 476	10	AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992
16	Bangiriposi	Saraskana	Gopinathpur	152	826, 819, 825	1.424	AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991
17	Bangiriposi	Saraskana	Pahadpur	112	320	1.5	
18	Bangiriposi	Saraskana	B.C. Pur	396	1320	1.846	
19	Bangiriposi	Saraskana	B.C. Pur	243	1526	4.5	
20	Bangiriposi	Saraskana	B.C. Pur	644	2070	0.72	AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991
21	Bangiriposi	Koliana	Kuabuda	246, 243	744, 745, 1504, 1506, 1517, 1546, 1547, 1908	12	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1192
22	Bangiriposi	Koliana	Kuabuda	243	460, 400 , 318	5	
23	Bangiriposi	Koliana	Kuabuda	15	23	8	
24	Bangiriposi	Koliana	Kuabuda	90, 92, 94	205, 206, 207, 357, 379, 380	10.608	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1192
25	Bangiriposi	Koliana	Kuabuda	243	143	5	
26	Bangiriposi	Saraskana	Pokharia	190	660	4	
27	Bangiriposi	Saraskana	Pokharia	123	426, 1028, 652, 1006, 1002	10	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1192

Sl. No	Name of Range	Name of Tahasil	Name of Village	Khata No	Plot No	Area (in ha)	Notification No & Date
28	Bangiriposi	Saraskana	Pokharia	513, 516	1831, 1808, 1761, 1755	6.208	
29	Bangiriposi	Saraskana	Joka	161	733 ,784	8	
30	Bangiriposi	Saraskana	Pokharia	121	295, 89	4	
31	Bangiriposi	Saraskana	Pokharia	258	35, 90, 460	1.608	
32	Bangiriposi	Saraskana	Pokharia	147	520, 522, 527, 509, 680, 706	0.788	
33	Bangiriposi	Saraskana	Pokharia	297, 299, 296, 298	559, 480, 481, 484, 53, 482, 483, 585, 257, 489, 256	6	
34	Bangiriposi	Saraskana	Jharpokharia	291	1	0.54	
35	Bangiriposi	Saraskana	Jharpokharia	74	406	2	
36	Bangiriposi	Saraskana	Bagbuda	142	653, 1271	0.4	
37	Bangiriposi	Saraskana	Bagbuda	134	330, 331, 332, 344, 329,	0.64	
38	Bangiriposi	Saraskana	Pokharia	123, 124, 126	788, 785, 601	3	
39	Bangiriposi	Saraskana	Pokharia	68,	267, 282, 281, 297,	2.108	
40	Bangiriposi	Bangiriposi	Banakati	196, 195	81, 59, 250	3.088	
41	Betnoti	Betnoti	Kathapal	125	456	0.24	AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992
42	Betnoti	Rasgobindpur	Chakulia	418	1785	3	
43	Betnoti	Rasgobindpur	Karatpata	152, 151	385, 434	0.78	
44	Betnoti	Rasgobindpur	Chakulia	418	1714, 1785	4	
45	Betnoti	Rasgobindpur	Anlagadia (Mantidahi)	770, 771, 772	3793, 3806, 3794	3.06	
46	Betnoti	Moroda	Jhinkuria	205	296	1.6	
47	Betnoti	Betnoti	Singada Munduli	129	12, 16, 732	3.32	
48	Betnoti		Athabahia	36	85	1.7	
49	Betnoti	Badasahi	Mendha mundia	96	26	2.1	
50	Betnoti	Betnoti	Anbagadia	770, 772	164, 255, 396, 452, 3389, 3395, 3397, 3401	12.664	
51	Betnoti	Betnoti	Kalana	339, 342	1467, 1855	5	
52	Betnoti	Betnoti	Routrapur	78	61	5	
53	Betnoti	Betnoti	Kalana	339, 342	1467, 713, 692	10	
54	Betnoti	Badasahi	Tulajhuri	125	607	8	
55	Betnoti	Badasahi	Asukanda	208, 206	40, 1, 2, 225, 227	3.3	
56	Betnoti	Betnoti	Angaria	356	33	0.56	
57	Betnoti	Betnoti	Tikayetpur	283, 286	586, 577	0.8	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992
58	Betnoti	Betnoti	Purunia	263	140, 142, 137	10	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA)
59	Betnoti	Betnoti	Purunia	263	137	10	
60	Betnoti	Betnoti	Balaka	246	1165	2	
61	Betnoti	Betnoti	Raghupur	147	523, 519	10	
62	Betnoti	Betnoti	Raghupur	283	2	7	
63	Betnoti	Moroda	Gadigaon	132	394, 428, 427, 428, 429, 432,	9.644	

Sl. No	Name of Range	Name of Tahasil	Name of Village	Khata No	Plot No	Area (in ha)	Notification No & Date
					433, 434		86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992
64	Betnoti	Betnoti	Raghupur	174	170, 93, 45	9.6	
65	Betnoti	Betnoti	Raghupur	147	470	3	
66	Betnoti	Betnoti	Raghupur	772, 770	3677, 3678, 3679, 3681, 3680, 3682, 3683, 3684, 3688, 3690, 3694, 3695, 4225, 3645, 3651, 3652, 3692, 3647, 3648, 3655, 3656	5.684	
67	Betnoti	Betnoti	Gadadeuli	516	332	0.84	
68	Betnoti	Betnoti	Raghupur	772, 770	3327, 3366, 3273, 3303,3302, 3300, 3301, 3304, 3305,4256, 3299, 2972, 2973,3283,3284, 3285, 3286, 3326, 3262, 3263, 3265, 3267,3218, 3219,3216, 3217,3220,3274, 3275,3276, 3277, 3278, 3196, 3192,3191, 3271,,3272	11.232	
69	Betnoti	Betnoti	Purunia	105	233	3.88	
70	Betnoti	Betnoti	Purunia	283	2, 26	6.56	
71	Betnoti	Betnoti	Raghupur	174	4, 10, 12, 13, 26, 27, 28, 14, 15	7	
72	Betnoti	Betnoti	Gadadeuli	166	6,20,624	7.296	
73	Betnoti	Betnoti	Nuagaon	40	311, 161, 324, 330, 332	3.2	
74	Betnoti	Betnoti	Buguhuda	134	667	2	
75	Dukura	Badasahi	Manatri	405	411	6.4	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992
76	Dukura	Khunta	Bhupad	264, 267	99,84, 39, 85, 40,41, 42,43, 78, 79, 80, 81, 82, 83, 152, 28, 86, 87, 88, 30, 31, 32, 38, 34, 150, 151, 27 , 29	5	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992
77	Dukura	Badasahi	Manatri	142	302	3.48	
78	Dukura	Badasahi	Rangadihi	88	279, 224, 227	4.588	
79	Dukura	Badasahi	Ranibandha	39	107	3.44	
80	Dukura	Badasahi	Khanua	459	3016, 2077,	6	

Sl. No	Name of Range	Name of Tahasil	Name of Village	Khata No	Plot No	Area (in ha)	Notification No & Date
					2081, 3196, 2003		
81	Dukura	Khunta	Basipitha	259	1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310,1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1277, 1272, 1271, 1266, 1265, 1298, 1299, 1300, 896, 897, 965, 964, 963, 962, 960, 958, 954, 953, 952 ,951, 950, 949, 948, 947, 946 ,945 , 944, 943, 942, 941, 981, 982, 985, 1281, 1282, 1283, 1284, 1285, 1286, 1280, 1278, 1279, 1275, 1276,	10	
82	Dukura	Khunta	Basipitha	127, 126	4271	8.12	
83	Deuli	Kuliana	Kasia	115	314, 318, 317, 322	1.74	AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992
84	Bangiriposi	Shuliapada	Handivanga	163	168, 145	2.468	
85	Deuli	Suliapada	Dhalu Suliapada	31	185, 186	1.06	
86	Deuli	Sulipada	Anlakuda	113	329	6	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E
87	Deuli	Saraskana	Sankhunta	323	1035	2	
88	Deuli	Saraskana	Jalada	164, 165	212, 461, 213	0.276	

Sl. No	Name of Range	Name of Tahasil	Name of Village	Khata No	Plot No	Area (in ha)	Notification No & Date
							dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992
89	Pithabatta	Baripada	Gopalpur	140	626	4	AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992
90	Pithabatta	Khunta	Srirampur	249	409, 508	3.14	
91	Pithabatta	Saraskana	Gadadharpur	147, 146	212, 213, 214, 215, 216, 219	0.84	
92	Pithabatta	Saraskana	Baunsda	104	261	0.94	
93	Pithabatta	Saraskana	Dumuria	166, 163	1, 6, 7, 10, 11, 16, 17, 18, 19, 20, 29, 222, 223, 238, 240, 242, 247, 255, 258, 260, 261,279, 287	5	
94	R. G. Pur	Morada	Chikitamatia	138	451	10	AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992
95	R. G. Pur	Baripada	Sarajharan	57	55, 56, 57, 59, 60, 61, 557,558,559, 560,561, 573	7.344	
96	R. G. Pur	R. G. Pur	Praharajpur	146	203, 205	5	AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA)
97	R. G. Pur	R. G. Pur	Duarsuni	101	56, 59, 58, 60, 57, 68, 58, 604	5	
98	R. G. Pur	R. G. Pur	Nahiasoli	12	76, 113	2.94	
99	R. G. Pur	R. G. Pur	Jhatiada	295	24, 1491, 1940, 1498	5	

Sl. No	Name of Range	Name of Tahasil	Name of Village	Khata No	Plot No	Area (in ha)	Notification No & Date
							86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991
100	R. G. Pur	R. G. Pur	Nalagaja	144	52, 54	2	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992
101	R. G. Pur	Baripada	Chandanpur	81	58,63	3.5	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992
102	Bangiriposi	Bangiriposi	Jaivilla	270	426	0.532	AFFN (SIDA) 86/91-3768/F&E dt.28.12.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992
103	Udala	Badasahi	Purna Baripada (Mankad Kenda)	93	50, 48	0.648	
104	Udala	Gopabandhu Nagar	Kusunia Patpur	204	644	0.32	
105	Udala	Udala	Bhalimunduli	120, 121	543, 49, 56, 424, 425, 588, 50, 61, 62, 47, 48, 63	3.9	
106	Udala	Betnoti	Salabani	54, 55, 56	1, 2, 3, 40	2.96	
107	Udala	G. B. Nagar	Sialia	180	1166	2.88	
108	Udala	Udala	Raghunathpur	45	263, 264, 262	4.66	
109	Udala	Udala	Jamudiha	123	2411	2	
110	Udala	Udala	Nuagaon	268	1,3, 4,5,14, 11, 207, 208, 210, 299, 1335, 1334, 1336, 1339, 1340, 213, 214, 216, 217, 218, 224, 226, 932, 901, 900, 220, 221, 222, 230, 233, 898, 899,897	13.324	
111	Udala	Khunta	Bahanada	213	129, 225, 350/1083	1.3	
112	Udala	Udala	Jalda	165	1454, 1455, 1456, 1457, 1458, 1460, 1459,	1.124	AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992
113	Udala	Khunta	Murari	151	25, 26, 27, 32, 33, 54, 47	0.992	
114	Udala	Udala	Gohira	125	702, 707	5	
115	Udala	Udala	Jogibandha	177	463, 464, 453, 1273	2	

Sl. No	Name of Range	Name of Tahasil	Name of Village	Khata No	Plot No	Area (in ha)	Notification No & Date
							AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.03.04.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991
116	Udala	Udala	Jajpur	83	368, 364, 365,354, 365, 364, 374 , 375, 376, 377, 356, 357, 359, 360	14.884	AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992
117	Udala	Udala	Kuchiladiha	255	429, 540, 968, 976, 634	15	
118	Udala	Udala	Khunta	180	677, 678, 679, 681, 682, 683, 685, 689, 690, 691, 676, 670	10	
119	Udala	Udala	Khunta	428	1113, 1114, 1115, 1117, 1118, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1745, 1680, 1679, 1748, 1093	3.756	
120	Udala	Udala	Khunta	430	1768, 1116	0.096	
121	Udala	Udala	Khunta	431	1141, 1112, 1749	6.148	
122	Udala	Udala	Sridamchandrapur	856	29, 38, 32, 33, 34, 35	1.376	
123	Udala	Udala	Khunta	431	1142	0.4	
124	Udala	Udala	Khunta	428	1143, 1144, 1145, 1146, 1147, 1148, 1149, 1150, 1151, 1152, 1156, 1140, 821, 823, 759, 828,824, 830, 1141, 1081, 1155	12.6	
125	Kaptipada	Kaptipada	Kaladahi	323	2631, 2638	1.5	AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992
126	Kaptipada	Kaptipada	Pedagadia	342	1400	0.22	

Sl. No	Name of Range	Name of Tahasil	Name of Village	Khata No	Plot No	Area (in ha)	Notification No & Date
							AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991 AFFN (SIDA) 86/91-3768/F&E dt.18.02.1992 AFFN (SIDA) 86/91-3768/F&E dt.29.11.1991
127	Kaptipada	Kaptipada	Khaladi	233	1450, 201, 154	2.112	
Total Area in Ha						**588.314**	

Appendix – VII

Range wise Distribution of Forest Blocks

Range	Sl. No.	Forest block	Legal status	Notified area in ha	Forest area available for Working Plan in ha.
PITHABATA	1	Baldiha R.F.	R.F	110.13	109.130
	2	Bhagabat Chandrapur R.F.	R.F	806.28	795.480
	3	Budhikhamari R.F.	R.F	863.1	856.620
	4	Dungurusahi R.F.	R.F	10.95	10.950
	5	Hatikote R.F.	R.F	556.84	553.720
	6	Lulung-Purunapani R.F.	R.F	223.31	223.310
	7	Manchabandha R.F.	R.F	1020.92	1013.960
	8	Asanabani PRF	PRF	57.03	57.030
	9	Gopalpur	VF	4.000	4.000
	10	Srirampur	VF	3.140	3.140
	11	Gadadharpur	VF	0.840	0.840
	12	Baunsda	VF	0.940	0.940
	13	Dumuria	VF	5.000	5.000
			TOTAL	**3662.48**	**3634.120**
DUKURA	14	Aghasole R.F.	R.F	37.55	37.550
	15	Badsahi R.F.	R.F	340.74	340.700
	16	Bidhyadharpur R.F.	R.F	238.76	238.760
	17	Chakradharpur R.F.	R.F	141.31	141.310
	18	Chengua-Mangalpur R.F.	R.F	79.64	79.640
	19	Deulia R.F.	R.F	241.67	241.670
	20	Gojodi-Damodarpur R.F.	R.F	33.02	33.020
	21	Haldia R.F.	R.F	52	52.000
	22	Itamundia R.F.	R.F	111.37	111.370
	23	Jarkani R.F.	R.F	10.68	10.680
	24	Kanpura R.F.	R.F	533.85	532.960
	25	Kuldiha R.F.	R.F	25.25	25.250
	26	Pundala R.F.	R.F	17.97	17.970
	27	Purunapani R.F.	R.F	42.73	42.730
	28	Belpal R.F.	R.F	110.6	110.600
	29	Dukura R.F.	R.F	162.75	162.750
	30	Itamundia-Jamuna R.F.	R.F	111.25	111.250
	31	Khanua R.F.	R.F	113.68	113.68
	32	Kerko R.F.	R.F	110.07	110.07
	33	Nigirdha-(A) PRF	PRF	15.75	15.75
	34	Nigirdha-(B) PRF	PRF	37.12	37.12
	35	Kukurbhuka-(I) PRF	PRF	122.82	122.82
	36	Kukurbhuka-(II) PRF	PRF	124.58	124.58
	37	Sanmokabadi PRF	PRF	129.00	129.00
	38	Budhabalanga-(A) PRF	PRF	46.56	46.56
	39	Budhabalanga-(B) PRF	PRF	76.00	76.00
	40	Gopinathpur PRF	PRF	566.40	566.40
	41	Manatri	VF	6.400	6.400
	42	Bhupad	VF	5.000	5.000
	43	Manatri	VF	3.48	3.48
	44	Rangadihi	VF	4.588	4.588

Range	Sl. No.	Forest block	Legal status	Notified area in ha	Forest area available for Working Plan in ha.
DUKURA	45	Ranibandha	VF	3.44	3.44
	46	Khanua	VF	6.000	6.000
	47	Basipitha	VF	10.00	10.00
	48	Basipitha	VF	8.12	8.12
			TOTAL	**3680.148**	**3679.218**
RASGOVINDPUR	49	Amarda R.F.	R.F	1512.2	1511.552
	50	Betnasia R.F.	R.F	110.23	110.230
	51	Baghajharan R.F.	R.F	147.95	145.550
	52	Baldiha R.F.	R.F	95.83	95.830
	53	Chitrada R.F.	R.F	422.64	409.840
	54	Jamsole R.F.	R.F	434.3	219.050
	55	Moroda R.F.	R.F	1479.14	1464.290
	56	Nalagaja R.F.	R.F	260.29	260.29
	57	Nichuapada R.F.	R.F	52.28	52.28
	58	Nuajhalia R.F.	R.F	50.5	50.5
	59	Nunchatia R.F.	R.F	148.27	148.270
	60	Sarumula R.F.	R.F	330.22	329.840
	61	Sukhilakhali R.F.	R.F	231.31	230.560
	62	Chikitamatia	VF	10.000	10.000
	63	Sarajharan	VF	7.344	7.344
	64	Praharajpur	VF	5.00	5.00
	65	Duarsuni	VF	5.00	5.00
	66	Nahiasoli	VF	2.94	2.94
	67	Jhatiada	VF	5.00	5.00
	68	Nalagaja	VF	2.00	2.00
	69	Chandanpur	VF	3.50	3.50
			TOTAL	**5315.944**	**5068.866**
UDALA	70	Anantasahi R.F.	R.F	7.12	7.12
	71	Belakuti R.F.	R.F	223.38	223.38
	72	Bhandagaon R.F.	R.F	122.21	122.21
	73	Charada R.F.	R.F	7.12	7.12
	74	Dhaundia R.F.	R.F	524.79	523.990
	75	Dimgadia R.F.	R.F	6.96	6.96
	76	Dugdha R.F.	R.F	35.29	35.29
	77	Ghantasila R.F.	R.F	5.34	5.34
	78	Jaypur R.F.	R.F	27.8	27.8
	79	Khunta R.F.	R.F	427.99	423.400
	80	Kuamara R.F.	R.F	229.53	229.53
	81	Kuriakhunta R.F.	R.F	7.45	7.45
	82	Marsigaon R.F.	R.F	263.32	263.32
	83	Nahara R.F.	R.F	161.87	161.87
	84	Naupada R.F.	R.F	324.38	324.38
	85	Mundhakata R.F.	R.F	20.4	20.340
	86	Phuljhari – (A) R.F.	R.F	315.65	315.65
	87	Purunabaripada R.F.	R.F	25.85	25.85
	88	Sialia R.F.	R.F	34.32	34.32
	89	Sunduria R.F.	R.F	2.43	2.43
	90	Sirathali R.F.	R.F	74.14	74.14
	91	Udala R.F.	R.F	533.93	533.93

Range	Sl. No.	Forest block	Legal status	Notified area in ha	Forest area available for Working Plan in ha.
UDALA	92	Purna Baripada (Mankad Kenda)	VF	0.648	0.648
	93	Kusunia Patpur	VF	0.320	0.320
	94	Bhalimunduli	VF	3.900	3.900
	95	Salabani	VF	2.960	2.960
	96	Sialia	VF	2.880	2.880
	97	Raghunathpur	VF	4.660	4.660
	98	Jamudiha	VF	2.000	2.000
	99	Nuagaon	VF	13.324	13.324
	100	Bahanada	VF	1.300	1.300
	101	Jalda	VF	1.124	1.124
	102	Murari	VF	0.992	0.992
	103	Gohira	VF	5.00	5.00
	104	Jogibandha	VF	2.00	2.00
	105	Jajpur	VF	14.884	14.884
	106	Kuchiladiha	VF	15.00	15.00
	107	Khunta	VF	10.00	10.00
	108	Khunta	VF	3.756	3.756
	109	Khunta	VF	0.096	0.096
	110	Khunta	VF	6.148	6.148
	111	Khunta	VF	0.400	0.400
	112	Khunta	VF	12.60	12.60
	113	Sridamchandrapur	VF	1.376	1.376
			TOTAL	**3486.638**	**3481.188**
BETNOTI	114	Asanabani R.F.	R.F	810.17	804.670
	115	Asankhali R.F.	R.F	12.95	12.830
	116	Badampur R.F.	R.F	952.29	952.251
	117	Badguma R.F.	R.F	28.97	28.970
	118	Baisinga R.F.	R.F	108.44	108.312
	119	Balka R.F.	R.F	23.96	23.960
	120	Bartana R.F.	R.F	194.89	194.890
	121	Basantapur R.F.	R.F	113.8	113.8
	122	Beldiha R.F.	R.F	41.6	41.6
	123	Bhimpur R.F.	R.F	18.29	18.29
	124	Bishrampur R.F.	R.F	42.25	42.25
	125	Chhatnna R.F.	R.F	393.51	391.460
	126	Daldali R.F.	R.F	71.22	65.220
	127	Dalki R.F.	R.F	827.97	827.97
	128	Dumapada R.F.	R.F	224.35	219.550
	129	Durgapur R.F.	R.F	961.84	957.540
	130	Gad-deulia R.F.	R.F	58.73	58.730
	131	Gandigadha R.F.	R.F	1085.18	1066.381
	132	Garudabasa R.F.	R.F	71.87	71.87
	133	Gopalpur R.F.	R.F	10.88	10.88
	134	Gobindapur R.F.	R.F	11.82	11.82
	135	Haripur R.F.	R.F	41.28	40.940
	136	Hatijhuri R.F.	R.F	109.11	109.11
	137	Hempur R.F.	R.F	290.79	290.79
	138	Ajadiha R.F.	R.F	2.1	2.1

Range	Sl. No.	Forest block	Legal status	Notified area in ha	Forest area available for Working Plan in ha.
BETNOTI	139	Jagannathpur R.F.	R.F	452.59	451.240
	140	Jarka R.F.	R.F	6.63	6.630
	141	Jugal R.F.	R.F	305.29	304.790
	142	Kalma R.F.	R.F	24.36	24.240
	143	Kapoi R.F.	R.F	109.26	109.26
	144	Ketakisole R.F.	R.F	39.33	39.33
	145	Khadikapada R.F.	R.F	75.11	75.11
	146	Khetrapatana R.F.	R.F	4.21	4.21
	147	Khiripada R.F.	R.F	420.54	419.960
	148	Krushnachandrapur R.F.	R.F	1272.07	1252.910
	149	Kochilakhunta R.F.	R.F	259.32	259.32
	150	Machhapada R.F.	R.F	62.81	62.81
	151	Mantapal R.F.	R.F	222.73	222.73
	152	Merda R.F.	R.F	495.82	495.82
	153	Mohanpur R.F.	R.F	35.13	35.13
	154	Nuagaon R.F.`	R.F	39.33	39.33
	155	Phuljhari R.F.	R.F	217.42	217.42
	156	Purunia R.F.	R.F	442.3	440.950
	157	Raikama R.F.	R.F	191.34	181.340
	158	Rautra R.F.	R.F	119.46	119.160
	159	Sarbana R.F.	R.F	41.12	41.12
	160	Thakurtota R.F.	R.F	73.33	73.33
	161	Bhalukchua R.F.	R.F	199.43	199.43
	162	Bharadasole R.F.	R.F	50.67	50.67
	163	Totapada R.F.	R.F	65.07	65.07
	164	Tikayatpur R.F.	R.F	160.96	160.090
	165	Patpur RF	R.F	141.48	140.880
	166	Kochilakhunta PRF	PRF	99.00	99.00
	167	Bhalia PRF	PRF	340.16	340.16
	168	Kathapal	VF	0.240	0.240
	169	Chakulia	VF	3.000	3.000
	170	Karatpata	VF	0.780	0.780
	171	Chakulia	VF	4.000	4.000
	172	Anlagadia (Mantidahi)	VF	3.060	3.060
	173	Jhinkuria	VF	1.600	1.600
	174	Singada Munduli	VF	3.320	3.320
	175	Athabahia	VF	1.700	1.700
	176	Mendha mundia	VF	2.100	2.100
	177	Anbagadia	VF	12.664	12.664
	178	Kalana	VF	5.000	5.000
	179	Routrapur	VF	5.000	5.000
	180	Kalana	VF	10.000	10.000
	181	Tulajhuri	VF	8.000	8.000
	182	Asukanda	VF	3.300	3.300
	183	Angaria	VF	0.560	0.560
	184	Tikayetpur	VF	0.800	0.800
	185	Purunia	VF	10.000	10.000
	186	Purunia	VF	10.000	10.000
	187	Purunia	VF	3.880	3.880

Range	Sl. No.	Forest block	Legal status	Notified area in ha	Forest area available for Working Plan in ha.
BETNOTI	188	Purunia	VF	6.560	6.560
	189	Balaka	VF	2.000	2.000
	190	Raghupur	VF	10.000	10.000
	191	Raghupur	VF	7.000	7.000
	192	Raghupur	VF	9.600	9.600
	193	Raghupur	VF	3.000	3.000
	194	Raghupur	VF	5.684	5.684
	195	Raghupur	VF	11.232	11.232
	196	Raghupur	VF	7.000	7.000
	197	Gadigaon	VF	9.644	9.644
	198	Gadadeuli	VF	0.840	0.840
	199	Gadadeuli	VF	7.296	7.296
	200	Nuagaon	VF	3.200	3.200
	201	Buguhuda	VF	2.000	2.000
			TOTAL	**12648.590**	**12571.684**
DEULI	202	Andhari R.F.	R.F	731.63	731.63
	203	Chandua R.F.	R.F	3073.12	3064.280
	204	Deuli R.F.	R.F	2379.26	2378.060
	205	Kuliana R.F.	R.F	1203.68	1198.880
	206	Suliapada R.F.	R.F	2889.56	2881.560
	207	Badsole PRF	PRF	227.03	217.030
	208	Tangasole PRF	PRF	236.80	231.680
	209	Kaliasole PRF	PRF	320.16	320.16
	210	Dhalu Suliapada	VF	1.060	1.060
	211	Kasia	VF	1.74	1.74
	212	Handibhanga	VF	2.468	2.468
	213	Anlakuda	VF	6.00	6.00
	214	Sankhunta	VF	2.00	2.00
	215	Jalada	VF	0.276	0.276
			TOTAL	**11074.784**	**11036.824**
KAPTIPADA	216	Asanabani – (A) R.F.	R.F	262.56	262.56
	217	Nachhipur R.F.	R.F	229.00	229.000
	218	Notto R.F.	R.F	7707.08	7707.08
	219	Sukhuapata hill	PF	92.32	91.990
	220	Kaladahi	VF	1.500	1.500
	221	Pedagadia	VF	0.220	0.220
	222	Khaladi	VF	2.112	2.112
			TOTAL	**8294.792**	**8294.462**
BANGIRIPOSI	223	Dighi R.F.	R.F	515.94	515.94
	224	Rangahudi R.F.	R.F	86.67	86.67
	225	Thakurani R.F.	R.F	497.02	497.02
	226	Juha PRF	PRF	86.04	86.04
	227	Pimpudijharan	PF	60.97	60.97
	228	Kopadiha	PF	10.73	10.73
	229	Ambadiha	PF	14.03	14.03
	230	Hill Block-I	PF	712.75	712.75
	231	Maheshpur	PF	98.43	98.43
	232	Manbhanj	VF	3.940	3.940
	233	Baghajhampa	VF	8.000	8.000

Range	Sl. No.	Forest block	Legal status	Notified area in ha	Forest area available for Working Plan in ha.
BANGIRIPOSI	234	Jarkani	VF	7.000	7.000
	235	Nata	VF	7.000	7.000
	236	Birsingh	VF	0.600	0.600
	237	Nohanatia	VF	4.000	4.000
	238	Pahadpur	VF	9.000	9.000
	239	Heena Chandrapur	VF	9.000	9.000
	240	Heena Chandrapur	VF	5.000	5.000
	241	Jaivilla	VF	0.532	0.532
	242	Sindurgoura	VF	0.260	0.260
	243	Handivanga	VF	2.468	2.468
	244	Bagbuda	VF	4.000	4.000
	245	Pokhariadiha	VF	8.000	8.000
	246	Govindpur	VF	8.000	8.000
	247	Bedhakudar	VF	10.000	10.000
	248	Gopoinathpur	VF	1.424	1.424
	249	Pahadpur	VF	1.500	1.500
	250	Brundabanchandrapur	VF	1.846	1.846
	251	Brundabanchandrapur	VF	4.500	4.500
	252	Brundabanchandrapur	VF	0.720	0.720
	253	Kuabuda	VF	12.000	12.000
	254	Kuabuda	VF	5.000	5.000
	255	Kuabuda	VF	8.000	8.000
	256	Kuabuda	VF	10.608	10.608
	257	Kuabuda	VF	5.000	5.000
	258	Pokharia	VF	6.208	6.208
	259	Pokharia	VF	4.000	4.000
	260	Pokharia	VF	10.000	10.000
	261	Pokharia	VF	4.000	4.000
	262	Pokharia	VF	1.608	1.608
	263	Pokharia	VF	0.788	0.788
	264	Pokharia	VF	6.000	6.000
	265	Pokharia	VF	3.000	3.000
	266	Pokharia	VF	2.108	2.108
	267	Joka	VF	8.000	8.000
	268	Jharpokharia	VF	0.540	0.540
	269	Jharpokharia	VF	2.000	2.000
	270	Bagbuda	VF	0.400	0.400
	271	Bagbuda	VF	0.640	0.640
	272	Banakati	VF	3.088	3.088
			TOTAL	**2272.358**	**2272.358**
			Grand Total	**50435.734**	**50038.720**

Appendix – VIII

Forest Block wise Comparative Statement of Areas in Outgoing & Revision Working Plan

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
PITHABATA	1	Baldiha R.F.	110.130	109.130	0.000	0.000	0.000	72.408	110.130	36.722
	2	Bhagabat Chandrapur R.F.	806.280	795.480	0.000	0.000	806.280	334.955	0.000	460.525
	3	Budhikhamari R.F.	863.100	856.620	0.000	0.000	863.100	529.988	0.000	326.632
	4	Dungurusahi R.F.	10.950	10.950	0.000	0.000	0.000	0.000	10.950	10.950
	5	Hatikote R.F.	556.840	553.720	0.000	0.000	556.840	378.932	0.000	174.788
	6	Lulung-Purunapani R.F.	223.310	223.310	0.000	0.000	223.310	139.269	0.000	84.041
	7	Manchabandha R.F.	1020.920	1013.960	0.000	0.000	135.650	771.525	885.270	242.435
	8	Asanabani P.R..F	57.030	57.030	0.000	0.000	0.000	0.000	0.000	57.030
	9	Goplapur V.F.	4.000	4.000	0.000	0.000	0.000	0.000	0.000	4.000
	10	Srirampur V.F.	3.140	3.140	0.000	0.000	0.000	0.000	0.000	3.140
	11	Gadadharapur V.F.	0.840	0.840	0.000	0.000	0.000	0.000	0.000	0.840
	12	Baunsda V.F.	0.940	0.940	0.000	0.000	0.000	0.000	0.000	0.940
	13	Dumuria V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	Sub-total		**3662.480**	**3634.120**	**0.000**	**0.000**	**2585.180**	**2227.077**	**1006.350**	**1407.043**
DUKURA	14	Aghasole R.F.	37.550	37.550	0.000	0.000	37.550	4.563	0.000	32.987
	15	Badsahi R.F.	340.740	340.700	0.000	0.000	0.000	136.832	340.740	203.868
	16	Bidhyadharpur R.F.	238.760	238.760	0.000	0.000	0.000	124.918	238.760	113.842
	17	Chakradharpur R.F.	141.310	141.310	0.000	0.000	141.310	53.599	0.000	87.711
	18	Chengua-Mangalpur R.F.	79.640	79.640	0.000	0.000	0.000	0.000	79.640	79.640
	19	Deulia R.F.	241.670	241.670	0.000	0.000	0.000	105.089	241.670	136.581
	20	Gojodi-Damodarpur R.F.	33.020	33.020	0.000	0.000	0.000	13.971	33.020	19.049

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
DUKURA	21	Haldia R.F.	52.000	52.000	0.000	0.000	0.000	5.091	52.000	46.909
	22	Itamundia R.F.	111.370	111.370	0.000	0.000	111.370	36.416	0.000	74.954
	23	Jarkani R.F.	10.680	10.680	0.000	0.000	0.000	9.116	10.680	1.564
	24	Kanpura R.F.	533.850	532.960	0.000	0.000	485.130	177.456	48.720	355.504
	25	Kuldiha R.F.	25.250	25.250	0.000	0.000	0.000	0.000	25.250	25.250
	26	Pundala R.F.	17.970	17.970	0.000	0.000	0.000	0.000	17.970	17.970
	27	Purunapani R.F.	42.730	42.730	0.000	0.000	42.730	25.516	0.000	17.214
	28	Belpal R.F.	110.600	110.600	0.000	0.000	0.000	0.000	110.600	110.600
	29	Dukura R.F.	162.750	162.750	0.000	0.000	0.000	126.085	162.750	36.665
	30	Itamundia-Jamuna R.F.	111.250	111.250	0.000	0.000	0.000	0.000	111.250	111.250
	31	Khanua R.F.	113.680	113.680	0.000	0.000	0.000	0.000	113.680	113.680
	32	Kerko R.F.	110.070	110.070	0.000	0.000	0.000	0.000	110.070	110.070
	33	Nigirdha (A) P.R.F.	15.750	15.750	0.000	0.000	0.000	0.000	0.000	15.750
	34	Nigirdha (B) P.R.F.	37.120	37.120	0.000	0.000	0.000	30.311	0.000	6.809
	35	Kukurbhuka (1)P.R.F.	122.820	122.820	0.000	0.000	0.000	101.764	0.000	21.056
	36	Kukurbhuka (2)P.R.F.	124.580	124.580	0.000	0.000	0.000	70.272	0.000	54.308
	37	Sanamakabadi P.R.F.	129.000	129.000	0.000	0.000	0.000	109.296	0.000	19.704
	38	Budhabalang (A) P.R.F.	46.560	46.560	0.000	0.000	0.000	40.440	0.000	6.120
	39	Budhabalang (B) P.R.F.	76.000	76.000	0.000	0.000	0.000	69.029	0.000	6.971
	40	Gopinathpur P.R.F.	566.400	566.400	0.000	0.000	0.000	305.580	0.000	260.820
	41	Manatri V.F.	6.400	6.400	0.000	0.000	0.000	0.000	0.000	6.400
	42	Bhupad V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	43	Manatri V.F.	3.480	3.480	0.000	0.000	0.000	0.000	0.000	3.480
	44	Rangahidi V.F.	4.588	4.588	0.000	0.000	0.000	0.000	0.000	4.588
	45	Ranibandha V.F.	3.440	3.440	0.000	0.000	0.000	0.000	0.000	3.440
	46	Khanua V.F.	6.000	6.000	0.000	0.000	0.000	0.000	0.000	6.000
	47	Basipitha V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	48	Basipitha V.F.	8.120	8.120	0.000	0.000	0.000	0.000	0.000	8.120
	Sub-total		**3680.148**	**3679.218**	**0.000**	**0.000**	**818.09 0**	**1545.344**	**1696.800**	**2133.874**

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
R.G.PUR	49	Amarda R.F.	1512.200	1511.552	0.000	0.000	521.710	1122.819	990.490	388.733
	50	Betnasia R.F.	110.230	110.230	0.000	0.000	110.230	61.945	0.000	48.285
	51	Baghajharan R.F.	147.950	145.550	0.000	0.000	147.950	34.144	0.000	111.406
	52	Baladia R.F.	95.830	95.830	0.000	0.000	95.830	43.450	0.000	52.380
	53	Chitrada R.F.	422.640	409.840	0.000	0.000	0.000	269.856	422.640	139.984
	54	Jamsole R.F.	434.300	219.050	0.000	0.000	0.000	0.000	434.300	219.050
	55	Moroda R.F.	1479.140	1464.290	0.000	0.000	1479.140	1144.054	0.000	320.236
	56	Nalagaja R.F.	260.290	260.290	0.000	0.000	260.290	126.045	0.000	134.245
	57	Nichuapada R.F.	52.280	52.280	0.000	0.000	0.000	17.771	52.280	34.509
	58	Nuhajhalia R.F.	50.500	50.500	0.000	0.000	50.500	0.000	0.000	50.500
	59	Nunchatia R.F.	148.270	148.270	0.000	0.000	0.000	103.377	148.270	44.893
	60	Sarumula R.F.	330.220	329.840	0.000	0.000	330.220	200.350	0.000	129.490
	61	Sukhilakhali R.F.	231.310	230.560	0.000	0.000	231.310	154.329	0.000	76.231
	62	Chikitamatia V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	63	Sarajharan V.F.	7.344	7.344	0.000	0.000	0.000	0.000	0.000	7.344
	64	Pharajpur V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	65	Duarsuni V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	66	Nahiasoli V.F.	2.940	2.940	0.000	0.000	0.000	0.000	0.000	2.940
	67	Jhatiada V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	68	Nalagaja V.F.	2.000	2.000	0.000	0.000	0.000	0.000	0.000	2.000
	69	Chandanpur V.F.	3.500	3.500	0.000	0.000	0.000	0.000	0.000	3.500
	Sub-total		**5315.944**	**5068.866**	**0.000**	**0.000**	**3227.180**	**3278.140**	**2047.980**	**1790.726**

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
UDALA	70	Anantasahi R.F.	7.120	7.120	0.000	0.000	0.000	0.000	7.120	7.120
	71	Belakuti R.F.	223.380	223.380	0.000	0.000	0.000	30.822	223.380	192.558
	72	Bhandagaon R.F.	122.210	122.210	0.000	0.000	0.000	0.000	122.210	122.210
	73	Charada R.F.	7.120	7.120	0.000	0.000	0.000	0.000	7.120	7.120
	74	Dhaundia R.F.	524.790	523.990	0.000	0.000	524.790	206.722	0.000	317.268
	75	Dimgadia R.F.	6.960	6.960	0.000	0.000	0.000	0.000	6.960	6.960
	76	Dugdha R.F.	35.290	35.290	0.000	0.000	0.000	17.530	35.290	17.760
	77	Ghantasila R.F.	5.340	5.340	0.000	0.000	0.000	0.000	5.340	5.340
	78	Jaypur R.F.	27.800	27.800	0.000	0.000	0.000	9.977	27.800	17.823
	79	Khunta R.F.	427.990	423.400	0.000	0.000	0.000	133.988	427.990	289.412
	80	Kuamara R.F.	229.530	229.530	0.000	0.000	0.000	0.000	229.530	229.530
	81	Kuriakhunta R.F.	7.450	7.450	0.000	0.000	0.000	2.777	7.450	4.673
	82	Marsigaon R.F.	263.320	263.320	0.000	0.000	0.000	0.000	263.320	263.320
	83	Nahara R.F.	161.870	161.870	0.000	0.000	0.000	0.000	161.870	161.870
	84	Nuapada R.F.	324.380	324.380	0.000	0.000	0.000	167.230	324.380	157.150
	85	Mundhakata R.F.	20.400	20.340	0.000	0.000	0.000	0.000	20.400	20.340
	86	Phuljhari R.F.	315.650	315.650	0.000	0.000	0.000	250.117	315.650	65.533
	87	Purunabaripada R.F.	25.850	25.850	0.000	0.000	0.000	1.441	25.850	24.409
	88	Sialia R.F.	34.320	34.320	0.000	0.000	0.000	0.000	34.320	34.320
	89	Sunduria R.F.	2.430	2.430	0.000	0.000	0.000	0.000	2.430	2.430
	90	Sirathali R.F.	74.140	74.140	0.000	0.000	0.000	0.000	74.140	74.140
	91	Udala R.F.	533.930	533.930	0.000	0.000	0.000	259.119	533.930	274.811
	92	Purunabaripada mankadakenda V.F.	0.648	0.648	0.000	0.000	0.000	0.000	0.000	0.648
	93	Kusunia Patpur V.F.	0.320	0.320	0.000	0.000	0.000	0.000	0.000	0.320
	94	Bhalimunduli V.F.	3.900	3.900	0.000	0.000	0.000	0.000	0.000	3.900

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
UDALA	95	Salabani V.F.	2.960	2.960	0.000	0.000	0.000	0.000	0.000	2.960
	96	Sialia V.F.	2.880	2.880	0.000	0.000	0.000	0.000	0.000	2.880
	97	Raghunathpur V.F.	4.660	4.660	0.000	0.000	0.000	0.000	0.000	4.660
	98	Jamudiha V.F.	2.000	2.000	0.000	0.000	0.000	0.000	0.000	2.000
	99	Nuagaon V.F.	13.324	13.324	0.000	0.000	0.000	0.000	0.000	13.324
	100	Bahanada V.F.	1.300	1.300	0.000	0.000	0.000	0.000	0.000	1.300
	101	Jalda V.F.	1.124	1.124	0.000	0.000	0.000	0.000	0.000	1.124
	102	Murari V.F.	0.992	0.992	0.000	0.000	0.000	0.000	0.000	0.992
	103	Gohira V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	104	Jogibandha V.F.	2.000	2.000	0.000	0.000	0.000	0.000	0.000	2.000
	105	Jajpur`V.F.	14.884	14.884	0.000	0.000	0.000	0.000	0.000	14.884
	106	Kochiladiha V.F.	15.000	15.000	0.000	0.000	0.000	0.000	0.000	15.000
	107	Khunta V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	108	Khunta V.F.	3.756	3.756	0.000	0.000	0.000	0.000	0.000	3.756
	109	Khunta V.F.	0.096	0.096	0.000	0.000	0.000	0.000	0.000	0.096
	110	Khunta V.F.	6.148	6.148	0.000	0.000	0.000	0.000	0.000	6.148
	111	Khunta V.F.	0.400	0.400	0.000	0.000	0.000	0.000	0.000	0.400
	112	Khunta V.F.	12.600	12.600	0.000	0.000	0.000	0.000	0.000	12.600
	113	Sridamchandrapur V.F.	1.376	1.376	0.000	0.000	0.000	0.000	0.000	1.376
	Sub-total		**3486.638**	**3481.188**	**0.000**	**0.000**	**524.790**	**1079.723**	**2856.480**	**2401.465**
BETNOTI	114	Asanbani R.F.	810.170	804.670	0.000	0.000	0.000	0.000	810.170	804.670
	115	Asankhali R.F.	12.950	12.830	0.000	0.000	0.000	2.874	12.950	9.956
	116	Badampur R.F.	952.290	952.251	0.000	0.000	952.290	515.102	0.000	437.149
	117	Badguma R.F.	28.970	28.970	0.000	0.000	0.000	7.661	28.970	21.309
	118	Baisinga R.F.	108.440	108.312	0.000	0.000	0.000	0.000	108.440	108.312
	119	Balka R.F.	23.960	23.960	0.000	0.000	0.000	0.000	23.960	23.960

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
BETNOTI	120	Bartana R.F.	194.890	194.890	0.000	0.000	194.890	67.935	0.000	126.955
	121	Basantapur R.F.	113.800	113.800	0.000	0.000	0.000	74.416	113.800	39.384
	122	Beldiha R.F.	41.600	41.600	0.000	0.000	0.000	22.096	41.600	19.504
	123	Bhimpur R.F.	18.290	18.290	0.000	0.000	0.000	0.000	18.290	18.290
	124	Bishrampur R.F.	42.250	42.250	0.000	0.000	0.000	6.571	42.250	35.679
	125	Chhatnna R.F.	393.510	391.460	0.000	0.000	0.000	267.369	393.510	124.091
	126	Daldali R.F.	71.220	65.220	0.000	0.000	0.000	0.000	71.220	65.220
	127	Dalki R.F.	827.970	827.970	0.000	0.000	0.000	440.893	827.970	387.077
	128	Dumapada R.F.	224.350	219.550	0.000	0.000	224.350	158.018	0.000	61.532
	129	Durgapur R.F.	961.840	957.540	0.000	0.000	961.840	516.280	0.000	441.260
	130	Gad-deulia R.F.	58.730	58.730	0.000	0.000	0.000	0.000	58.730	58.730
	131	Gandigadha R.F.	1085.180	1066.381	0.000	0.000	0.000	625.290	1085.180	441.091
	132	Garudabasa R.F.	71.870	71.870	0.000	0.000	71.870	49.910	0.000	21.960
	133	Gopalpur R.F.	10.880	10.880	0.000	0.000	0.000	0.000	10.880	10.880
	134	Gobindapur R.F.	11.820	11.820	0.000	0.000	11.820	0.000	0.000	11.820
	135	Haripur R.F.	41.280	40.940	0.000	0.000	41.280	0.000	0.000	40.940
	136	Hatijhuri R.F.	109.110	109.110	0.000	0.000	0.000	28.637	109.110	80.473
	137	Hempur R.F.	290.790	290.790	0.000	0.000	0.000	0.000	290.790	290.790
	138	Ajadiha R.F.	2.100	2.100	0.000	0.000	0.000	0.000	2.100	2.100
	139	Jagannathpur R.F.	452.590	451.240	0.000	0.000	0.000	191.561	452.590	259.679
	140	Jarka R.F.	6.630	6.630	0.000	0.000	0.000	0.000	6.630	6.630
	141	Jugal R.F.	305.290	304.790	0.000	0.000	305.290	218.460	0.000	86.330
	142	Kalma R.F.	24.360	24.240	0.000	0.000	0.000	0.000	24.360	24.240
	143	Kapoi R.F.	109.260	109.260	0.000	0.000	109.260	98.250	0.000	11.010
	144	Ketakisole R.F.	39.330	39.330	0.000	0.000	0.000	11.640	39.330	27.690
	145	Khadikapada R.F.	75.110	75.110	0.000	0.000	0.000	18.180	75.110	56.930

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
BETNOTI	146	Khetrapatana R.F.	4.210	4.210	0.000	0.000	0.000	0.000	4.210	4.210
	147	Khiripada R.F.	420.540	419.960	0.000	0.000	0.000	0.000	420.540	419.960
	148	Krushnachandrapur R.F.	1272.070	1252.910	0.000	0.000	1272.070	771.710	0.000	481.200
	149	Kochilakhunta R.F.	259.320	259.320	0.000	0.000	0.000	229.320	259.320	30.000
	150	Machhapada R.F.	62.810	62.810	0.000	0.000	0.000	0.000	62.810	62.810
	151	Mamtapal R.F.	222.730	222.730	0.000	0.000	0.000	0.000	222.730	222.730
	152	Merda R.F.	495.820	495.820	0.000	0.000	495.820	324.725	0.000	171.095
	153	Mohanpur R.F.	35.130	35.130	0.000	0.000	0.000	13.511	35.130	21.619
	154	Nuagaon R.F.`	39.330	39.330	0.000	0.000	0.000	0.000	39.330	39.330
	155	Phuljhari R.F.	217.420	217.420	0.000	0.000	0.000	167.420	217.420	50.000
	156	Purunia R.F.	442.300	440.950	0.000	0.000	0.000	0.000	442.300	440.950
	157	Raikama R.F.	191.340	181.340	0.000	0.000	191.340	103.041	0.000	78.299
	158	Rautra R.F.	119.460	119.160	0.000	0.000	0.000	66.085	119.460	53.075
	159	Sarbana R.F.	41.120	41.120	0.000	0.000	0.000	4.062	41.120	37.058
	160	Thakurtota R.F.	73.330	73.330	0.000	0.000	0.000	0.000	73.330	73.330
	161	Bharadasole R.F.	50.670	50.670	0.000	0.000	50.670	32.893	0.000	17.777
	162	Bhalukchua R.F.	199.430	199.430	0.000	0.000	199.430	164.403	0.000	35.027
	163	Totapada R.F.	65.070	65.070	0.000	0.000	0.000	0.000	65.070	65.070
	164	Tikayatpur R.F.	160.960	160.090	0.000	0.000	0.000	0.000	160.960	160.090
	165	Patpur RF	141.480	140.880	0.000	0.000	0.000	49.023	141.480	91.857
	166	Kochilakhunta P.R.F.	99.000	99.000	0.000	0.000	0.000	72.199	0.000	26.801
	167	Bhalia P.R.F.	340.160	340.160	0.000	0.000	0.000	0.998	0.000	339.162
	168	Kathapal V.F.	0.240	0.240	0.000	0.000	0.000	0.000	0.000	0.240
	169	Chakulia V.F.	3.000	3.000	0.000	0.000	0.000	0.000	0.000	3.000
	170	Karatpata V.F.	0.780	0.780	0.000	0.000	0.000	0.000	0.000	0.780
	171	Chakulia V.F.	4.000	4.000	0.000	0.000	0.000	0.000	0.000	4.000

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
BETNOTI	172	Analagadia (Matidahi) V.F.	3.060	3.060	0.000	0.000	0.000	0.000	0.000	3.060
	173	Jhinkiria V.F.	1.600	1.600	0.000	0.000	0.000	0.000	0.000	1.600
	174	Singida Munduli V.F.	3.320	3.320	0.000	0.000	0.000	0.000	0.000	3.320
	175	Athabahia V.F.	1.700	1.700	0.000	0.000	0.000	0.000	0.000	1.700
	176	Mendhamundia V.F.	2.100	2.100	0.000	0.000	0.000	0.000	0.000	2.100
	177	Anbagadia V.F.	12.664	12.664	0.000	0.000	0.000	0.000	0.000	12.664
	178	Kalana	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	179	Rautrapur V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	180	Kalana V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	181	Tulajhuri V.F.	8.000	8.000	0.000	0.000	0.000	0.000	0.000	8.000
	182	Asukanda V.F.	3.300	3.300	0.000	0.000	0.000	0.000	0.000	3.300
	183	Angaria V.F.	0.560	0.560	0.000	0.000	0.000	0.000	0.000	0.560
	184	Tikayatpur V.F.	0.800	0.800	0.000	0.000	0.000	0.000	0.000	0.800
	185	Purunia V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	186	Purunia V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	187	Purunia V.F.	3.880	3.880	0.000	0.000	0.000	0.000	0.000	3.880
	188	Purunia V.F.	6.560	6.560	0.000	0.000	0.000	0.000	0.000	6.560
	189	Balaka V.F.	2.000	2.000	0.000	0.000	0.000	0.000	0.000	2.000
	190	Raghupur V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	191	Raghupur V.F.	7.000	7.000	0.000	0.000	0.000	0.000	0.000	7.000
	192	Raghupur V.F.	9.600	9.600	0.000	0.000	0.000	0.000	0.000	9.600
	193	Raghupur V.F.	3.000	3.000	0.000	0.000	0.000	0.000	0.000	3.000
	194	Raghupur V.F.	5.684	5.684	0.000	0.000	0.000	0.000	0.000	5.684
	195	Raghupur V.F.	11.232	11.232	0.000	0.000	0.000	0.000	0.000	11.232
	196	Raghupur V.F.	7.000	7.000	0.000	0.000	0.000	0.000	0.000	7.000
	197	Gadigaon V.F.	9.644	9.644	0.000	0.000	0.000	0.000	0.000	9.644

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
BETNOTI	198	Gadadeuli V.F.	0.840	0.840	0.000	0.000	0.000	0.000	0.000	0.840
	199	Gadadeuli V.F.	7.296	7.296	0.000	0.000	0.000	0.000	0.000	7.296
	200	Nuagaon V.F.	3.200	3.200	0.000	0.000	0.000	0.000	0.000	3.200
	201	Buguhuda V.F.	2.000	2.000	0.000	0.000	0.000	0.000	0.000	2.000
	Sub-total		**12648.590**	**12571.684**	**0.000**	**0.000**	**5082.220**	**5320.533**	**6953.150**	**7251.151**
DEULI	202	Andhari R.F.	731.630	731.630	0.000	0.000	0.000	8.912	731.630	722.718
	203	Chandua R.F.	3073.120	3064.280	0.000	0.000	3073.120	1818.245	0.000	1246.035
	204	Deuli R.F.	2379.260	2378.060	0.000	0.000	1554.530	1822.907	824.730	555.153
	205	Kuliana R.F.	1203.680	1198.880	0.000	0.000	0.000	465.843	1203.680	733.037
	206	Suliapada R.F.	2889.560	2881.560	0.000	0.000	2889.560	1854.461	0.000	1027.099
	207	Badsole P.R.F.	227.030	217.030	0.000	0.000	0.000	156.103	0.000	60.927
	208	Tangasole P.R.F.	236.800	231.680	0.000	0.000	0.000	206.694	0.000	24.986
	209	Kaliasole P.R.F.	320.160	320.160	0.000	0.000	0.000	185.431	0.000	134.729
	210	Dhalu Suliapada V.F.	1.060	1.060	0.000	0.000	0.000	0.000	0.000	1.060
	211	Kasia V.F.	1.740	1.740	0.000	0.000	0.000	0.000	0.000	1.740
	212	Handibhanga V.F.	2.468	2.468	0.000	0.000	0.000	0.000	0.000	2.468
	213	Anlakuda V.F.	6.000	6.000	0.000	0.000	0.000	0.000	0.000	6.000
	214	Sankhunta V.F.	2.000	2.000	0.000	0.000	0.000	0.000	0.000	2.000
	215	Jalda V.F.	0.276	0.276	0.000	0.000	0.000	0.000	0.000	0.276
	Sub-total		**11074.784**	**11036.824**	**0.000**	**0.000**	**7517.210**	**6518.596**	**2760.040**	**4518.228**
KAPTIPADA	216	Asanabani R.F.	262.560	262.560	0.000	0.000	262.560	87.095	0.000	175.465
	217	Nachhipur R.F.	229.000	229.000	0.000	0.000	229.000	0.000	0.000	229.000
	218	Notto R.F.	7707.080	7707.080	7707.080	7707.080	0.000	0.000	0.000	0.000
	219	Sukhuapata Hill P.F.	92.320	91.990	0.000	0.000	0.000	46.990	0.000	45.000
	220	Kaladahi V.F.	1.500	1.500	0.000	0.000	0.000	0.000	0.000	1.500
	221	Pedagadia V.F.	0.220	0.220	0.000	0.000	0.000	0.000	0.000	0.220

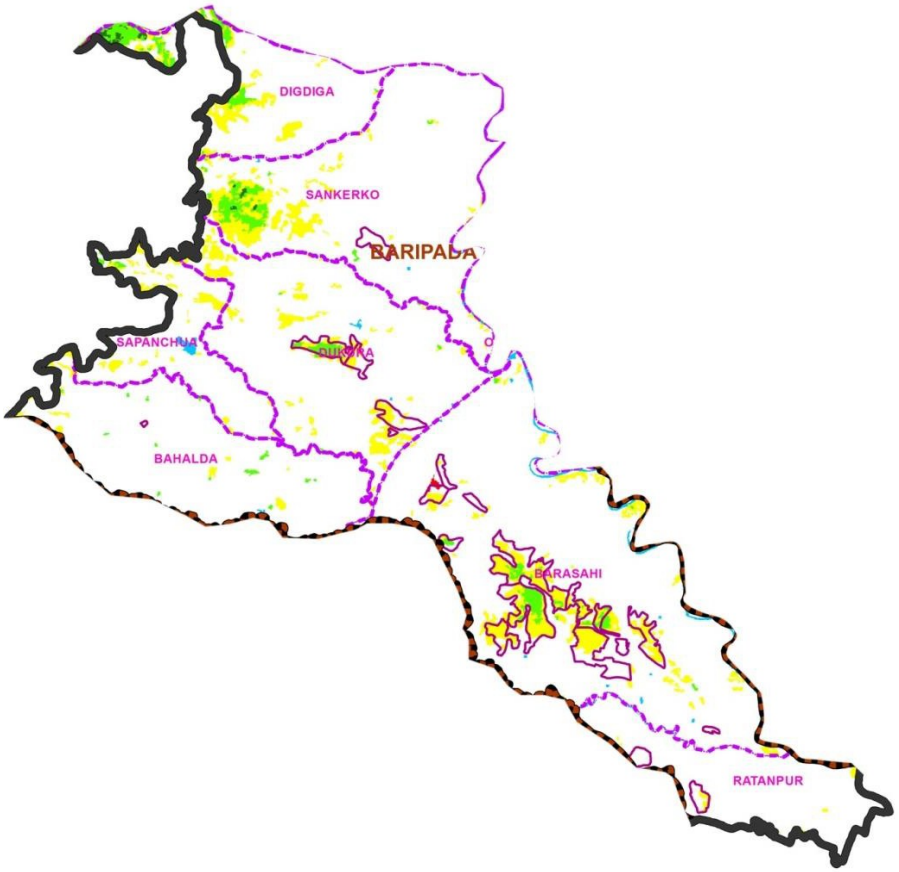
Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
KAPTIPADA	222	Khaladi V.F.	2.112	2.112	0.000	0.000	0.000	0.000	0.000	2.112
		Sub-total	**8294.792**	**8294.462**	**7707.080**	**7707.080**	**491.560**	**134.085**	**0.000**	**453.297**
BANGRIPOSI	223	Dighi R.F.	515.940	515.940	0.000	0.000	0.000	0.000	515.940	515.940
	224	Rangahudi R.F.	86.670	86.670	0.000	0.000	86.670	33.083	0.000	53.587
	225	Thakurani R.F.	497.020	497.020	0.000	0.000	497.020	209.896	0.000	287.124
	226	Juha P.R.F.	86.040	86.040	0.000	0.000	0.000	59.234	0.000	26.806
	227	Pimpudijharan P.F.	60.970	60.970	0.000	0.000	0.000	60.970	0.000	0.000
	228	Kapadiha P.F.	10.730	10.730	0.000	0.000	0.000	10.730	0.000	0.000
	229	Ambadiha P.F.	14.030	14.030	0.000	0.000	0.000	14.030	0.000	0.000
	230	Hill Block-1 P.F.	712.750	712.750	0.000	0.000	0.000	712.750	0.000	0.000
	231	Maheshpur P.F.	98.430	98.430	0.000	0.000	0.000	98.430	0.000	0.000
	232	Manbhanj V.F.	3.940	3.940	0.000	0.000	0.000	0.000	0.000	3.940
	233	Baghajhampa V.F.	8.000	8.000	0.000	0.000	0.000	0.000	0.000	8.000
	234	Jarkani V.F.	7.000	7.000	0.000	0.000	0.000	0.000	0.000	7.000
	235	Nata V.F.	7.000	7.000	0.000	0.000	0.000	0.000	0.000	7.000
	236	Birsingh V.F.	0.600	0.600	0.000	0.000	0.000	0.000	0.000	0.600
	237	Nohanatia V.F.	4.000	4.000	0.000	0.000	0.000	0.000	0.000	4.000
	238	Pahadpur V.F.	9.000	9.000	0.000	0.000	0.000	0.000	0.000	9.000
	239	Heenachandrapur V.F.	9.000	9.000	0.000	0.000	0.000	0.000	0.000	9.000
	240	Heenachandrapur V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	241	Jaivilla V.F.	0.532	0.532	0.000	0.000	0.000	0.000	0.000	0.532
	242	Sindurgoura V.F.	0.260	0.260	0.000	0.000	0.000	0.000	0.000	0.260
	243	Handibhanga V.F.	2.468	2.468	0.000	0.000	0.000	0.000	0.000	2.468
	244	Bagbuda V.F.	4.000	4.000	0.000	0.000	0.000	0.000	0.000	4.000
	245	Pokhariadiha V.F.	8.000	8.000	0.000	0.000	0.000	0.000	0.000	8.000
	246	Govindpur V.F.	8.000	8.000	0.000	0.000	0.000	0.000	0.000	8.000

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Plan Area after Forest Diversion	Area Allotted IWC (in Ha)		Area Allotted RWC (in Ha)		Area Allotted PWC (in Ha)	
					Outgoing	Revision	Outgoing	Revision	Outgoing	Revision
BANGRIPOSI	247	Bedhakudar V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	248	Gopinathpur V.F.	1.424	1.424	0.000	0.000	0.000	0.000	0.000	1.424
	249	Pahadpur V.F.	1.500	1.500	0.000	0.000	0.000	0.000	0.000	1.500
	250	Brundabanchandrapur V.F.	1.846	1.846	0.000	0.000	0.000	0.000	0.000	1.846
	251	Brundabanchandrapur V.F.	4.500	4.500	0.000	0.000	0.000	0.000	0.000	4.500
	252	Brundabanchandrapur V.F.	0.720	0.720	0.000	0.000	0.000	0.000	0.000	0.720
	253	Kuabuda V.F.	12.000	12.000	0.000	0.000	0.000	0.000	0.000	12.000
	254	Kuabuda V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	255	Kuabuda V.F.	8.000	8.000	0.000	0.000	0.000	0.000	0.000	8.000
	256	Kuabuda V.F.	10.608	10.608	0.000	0.000	0.000	0.000	0.000	10.608
	257	Kuabuda V.F.	5.000	5.000	0.000	0.000	0.000	0.000	0.000	5.000
	258	Pokharia V.F.	6.208	6.208	0.000	0.000	0.000	0.000	0.000	6.208
	259	Pokharia V.F.	4.000	4.000	0.000	0.000	0.000	0.000	0.000	4.000
	260	Pokharia V.F.	10.000	10.000	0.000	0.000	0.000	0.000	0.000	10.000
	261	Pokharia V.F.	4.000	4.000	0.000	0.000	0.000	0.000	0.000	4.000
	262	Pokharia V.F.	1.608	1.608	0.000	0.000	0.000	0.000	0.000	1.608
	263	Pokharia V.F.	0.788	0.788	0.000	0.000	0.000	0.000	0.000	0.788
	264	Pokharia V.F.	6.000	6.000	0.000	0.000	0.000	0.000	0.000	6.000
	265	Pokharia V.F.	3.000	3.000	0.000	0.000	0.000	0.000	0.000	3.000
	266	Pokharia V.F.	2.108	2.108	0.000	0.000	0.000	0.000	0.000	2.108
	267	Joka V.F.	8.000	8.000	0.000	0.000	0.000	0.000	0.000	8.000
	268	Jharpokharia V.F.	0.540	0.540	0.000	0.000	0.000	0.000	0.000	0.540
	269	Jharpokharia V.F.	2.000	2.000	0.000	0.000	0.000	0.000	0.000	2.000
	270	Bagbuda V.F.	0.400	0.400	0.000	0.000	0.000	0.000	0.000	0.400
	271	Bagbuda V.F.	0.640	0.640	0.000	0.000	0.000	0.000	0.000	0.640
	272	Banakati V.F.	3.088	3.088	0.000	0.000	0.000	0.000	0.000	3.088
BANGRIPOSI	**Sub-total**		**2272.358**	**2272.358**	**0.000**	**0.000**	**583.690**	**1199.123**	**515.940**	**1073.235**
Division Total	***272 Forest Blocks***		***50435.734***	***50038.720***	***7707.080***	***7707.080***	***20829.920***	***21302.621***	***17836.740***	***21029.019***

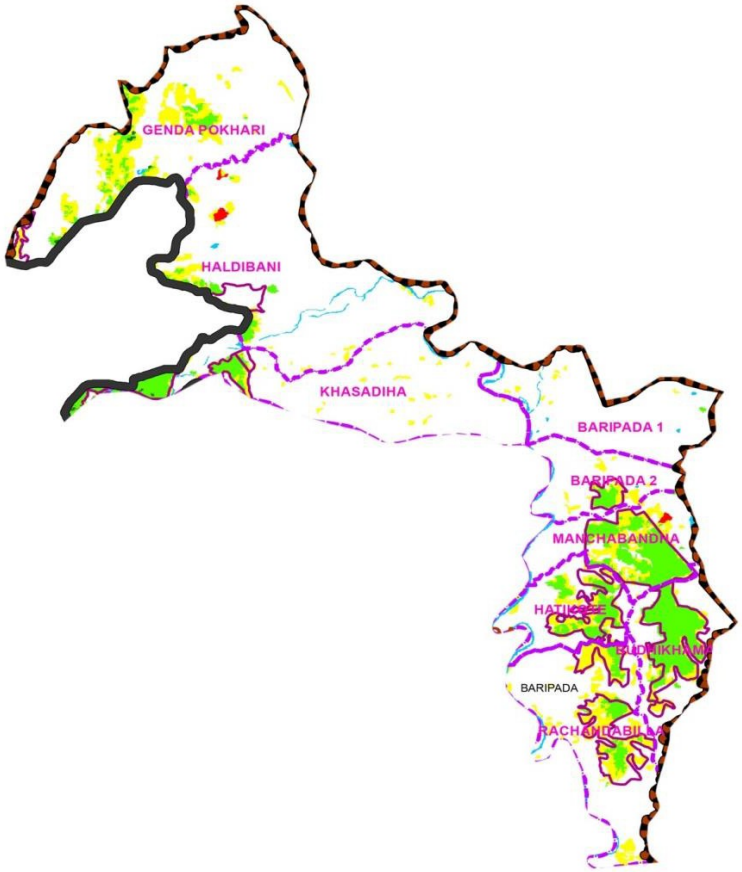
Appendix – IX

Dukupa & Pithabata Range Map

DUKURA RANGE



PITHABATA RANGE



Appendix – X

DIVERSION OF FOREST LAND UNDER SUB SECTION-2 OF SECTION 3 OF S.T AND O.T. F.D. (RoFR) ACT, 2006 OF BARIPADA FOREST DIVISION

Sl No.	Name of the user Agency	Name of the project	Particulars of Forest land				
			Mouza	Khata No.	Plot No.	Kisam	Area diverted (in ha.)
1	Executive Engineer, RWD, Baripada,	Execution of PMGSY road improvement of road from Badjre to Tungaduha	Badjre	Reserve Forest	-	Jungle	1.0
2	Headmster, Pushi SahiNew Primary School,Gayalmara	Construction of School Building at Mouza Gayalmara (Pushi Sahi)	Pushi Sahi	255	230/1	-do-	0.33
3	Executive Engineer RW Deptt. Baripada	Construction of PMGSY road at Budhikhamari to Ahari	Budhikhamari	Reserve Forest	-	-do-	0.48
4	Head Master Haribaladev High School, Khirpada	For construction of Haribaladev High School, Khirpada	Khirpada	-do-	-	-do-	0.58
5	Sarpanch Sarumula GP Officer, Rasgovindpur Block	Construction of Sarumula GP Office	Sarumula	-do-	-	-do-	0.38
6	Head Master, Baghua Primay School, Haripur	Construction of Baghua Primay School at Haripur	Baghua	-do-	-	-do-	0.04
7	Head Master, Nischintapur New Primary School, Khanua	Construction of Nischintapur New Primary School at Khanua	Nischintapur	-do-	-	-do-	0.04
8	Head Master, Handifhuta New Primary School	Construction of New Primary School at Handiphuta	Asanabani	266	1016	-do-	0.14
9	Head Master, Baghiagoda New Primay School	Construction of Baghiagoda New Primary School	Sudsudia	315	1303	-do-	0.2
10	Head Master, Barakhanda New Primary School	Construction of Barakhanda New Primary School at Dangarsahi	Dangarsahi	58	199/1	-do-	0.1

Sl No.	Name of the user Agency	Name of the project	Particulars of Forest land				
			Mouza	Khata No.	Plot No.	Kisam	Area diverted (in ha.)
11	Head Master, Basudhar New Primary School	Construction of Basudhar New Primary School	Mankadpada	210	1888	-do-	0.3
12	Bharati Bala Das , AWW, Bhalaghaty	Construction of Anganwadi School House at Bholaghaty	Kaladahi	380	1883/1	-do-	0.032
13	BRC Co-ordinator, Saraskana Block	Construction School Building at Dhangheri	Dhangheri	73	547/1	-do-	0.08
14	BRC Co-ordinator, Saraskana Block	Construction of School Building at Dhipasahi	Murunia (Dhipasai)	Reserve Forest	-	-do-	0.06
15	ead Master Madhudahi New Primary School	Construction of Madhudahi New primary School at Taradasole	Mundhakota	-do-	-	-do-	0.06
16	Priyanath Marandi Secy. FRC. Manikpur	Construction of Sub- Centre Building at Pathura	Manikpur	-do-	-	-do-	0.08
17	President, Kutling Forest Committee, Manikpur	Construction of Anganwadi Kendra at Pathuria	Manikpur	-do-	-	-do-	0.04
18	Secy. Forest Right Committee, Balabhadrapur	Construction of Anganwadi Kendra at Balabhadrapur	Balabhadrapur	1	1054	-do-	0.08
19	Head Master Bathudisahi Dandghat New Primary School	ConStruction of New Primary School at Bathudisahi Dandghat	Nachhipur	203	63/1	-do-	0.16
20	Secy. SHG Bureisahi, Radho	Construction of SHG Building at Bureisahi	Radho	1100/38	127/1	-do-	0.02
21	PS Member, Arpata GP	Proposal for Digging of pond at Dhaundia	Arpata	Reserve Forest	-	-do-	0.8
22	Head Master, Kaliasai New Primary School	Construction of Kaliasahi New Primary School at Gadiapal	Gadiapal	327	2109	-do-	0.29
23	Executive Officer, Bhimba GP	Proposal for Digging of pond at Chenguamangalpur	Chenguamangalpur	219	401/1	-do-	0.14
24	Chairman, Birateswari SHG Jadhukhunta	Construction of SHG Building at Jadhukhunta	Jadhukhunta	169	387	-do-	0.012

Sl No.	Name of the user Agency	Name of the project	Particulars of Forest land				
			Mouza	Khata No.	Plot No.	Kisam	Area diverted (in ha.)
25	Chairman Kuladahani UP School	Construction of Kuladahani UP School	Kuladahani	40	81	-do-	0.32
26	District Inspector Of Schools, Betnoti	Construction of Gangpur New Primary School at Gaddeulia	Kalma	Reserve Forest	-	-do-	0.12
27	Special Officer LDA, Moroda	Construction of Loda (PTG) Boys Educational Complex at Chikitimatia	Chikitimatia	138	451	-do-	1
28	BDO, Betnoti	Digging of pond at Purunia	Purunia	RF	-	-do-	0.4
29	Chairperson, SMC,Jiani (Khadiasahi)NPSchool	Construction Jiani (Khadiasahi) New Primary School	Jiani	253	1763	-do-	0.08
30	Special Officer, LDA, Morada	Construction of Educational complex for Lodha (PTG) boys at village,Chikitimatia	Chikitimatia	138	451	-do-	1
31	Harekrushna Behera,District Inspector of School,Baripada	Construction of baghuasole UP School & Hostel.	Baghuasole	152	461	-do-	0.765
32	Executive Engineer Rural works Division, Mayurbhanj, Baripada	PMGSY road from Durgapur to Agada	PMGSY road from Durgapur to Agada	-	-	-Do-	0.96
33	Block Development officer, Betnoti	Construction Anganbadi Kendra at jampada	Jamupada	118	207/1	Village forest	0.04
34	Executive Engineer Rural Works Division,Mayurbhanj, Baripada	PMGSY(IAP- II)- road from PWD road to Dhansole	Dhansole	-	-	-	0.71
35	Medical Officer Govt. Ayurbedic Dispensary at Khunta, Ps- Rasgovindpur	Construction of Govt Ayurbedic Dispensary	Kamardiha	92	119	Revenue Forest	0.0283
36	Executive Engineer Rural Works Division, Mayurbhanj, Baripada	PMGSY (IAP) road, " RD road to Tarajodi".	-	-	-	-	0.36
37	Block Development Officer, Badsahi Block	Construction of New pond at kanpura	Kanpura			RF	0.89

Sl No.	Name of the user Agency	Name of the project	Particulars of Forest land				
			Mouza	Khata No.	Plot No.	Kisam	Area diverted (in ha.)
38	Headmaster Bangalisahi NPS	Establishment of Bangalisahi (Ghutusahi) New Primary School	Bangalisahi	89	44/1	Forest land	0.12
39	Block Development Officer, G.B. Nagar, Block	Digging of tank under MGNREGS at Bardangua under Sankhunta GP	Badadangua	-	-	Jungle	0.91
40	Block Development Officer, Betnoti	Construction of Dhadasahi Godi Tank	Tilada	-	-	Reserve forest	0.5
41	Block Development Officer, Betnoti	Construction of new road and culvert from village Tikargadia to Nadpur	-	-	-	-	0.125
42	Development Officer, Betnoti	Construction of Chhanchipada Adibasi Sahi to Jamsuli RD road under MGNREGS	-	-	-	-	0.75
43	Block Development Officer, Udala	Construction of Nuasahi Anganwadi Kendra	Kaurpal	-	-	Jungle	0.02
44	dical Officer, Kaptipada CHC, Mayurbhanj	Construction of PHC Sub- Centre building at Khadikhania Under Mankadapada GP	Khadikhania	196	1209/1	Jungle	0.04
45	Parbati Panialia, Sarapancha, Kolialam Grampanchayat	Construction of Gosthi Kendra of Kolialam GP	Nuasahi	251	79	-	0.1
46	Block Development Officer, Baripada	Construction of MasinakathiNew Primary School in K.C.Purvillage	Masinakathi	-	-	-	0.5
47	BRC, Co-ordinator, Saraskana Block	Construction of Jharia New Primary School Building	Jharia	-	-	-	0.2
48	Block Development Officer, Udala Block	Construction of LI center at Badkhaman	Badkhaman		2241/1	Jungle-2	0.51
49	Executive Engineer, Rural Work Division, Mayurbhanj	Construction of RD road from Nachhipur- Kulialam to Sandei road (ACA)					0.84
50	Block development Officer, Betnoti	Construction of Road from kaifulia to Gadgadia (Nodpur GP)	Kaifulia	-			0.8
51	Block Development Officer, Moroda	Construction of New road from Dhansole to Durgapur, Dandasahi	Dhansole				0.5

Sl No.	Name of the user Agency	Name of the project	Particulars of Forest land				
			Mouza	Khata No.	Plot No.	Kisam	Area diverted (in ha.)
52	Block development Officer, Betnoti	Constriction of road Purunapani Nuapokharia to Kupa Chhaka at Chhachinapada	Chhachinapada				0.28
53	Executive Engineer, Rural Work Division , Mayurbhanj,Baripada	Construction of PMGSY IAP to road to Baripada block border (Dinabandhupur)					0.8892
54	Executive Engineer, Udala Electrical Division, Udala	Construction of 33/11KV new Grid substation at Gourachandrapur ofSarat	Gourachandrapur	176	3082	Jungle-1	0.26
55	District Ayurveda Medical Officer, Mayurbhanj, Baripada	Construction of Ayurvedic Dispensary Building village- Chakradharpur	Chakrakharpur	353	2210	jungle	0.08
56	District Social Welfare Officer, Mayurbhanj, Baripada	Construction of Permanent house for paribartan Disable Special School, Sathilo, Betnoti	Garudabasa	119	123	Village forest	0.25
57	Block Development Officer, Badsahi Block	Construction of road from PWD road to Satpada under MGNREGS					0.4
58	Chief District Veterinary Officer, Mayurbhanj	constructionof Live Stock Centre at Dahikoti		322	1220	Village forest	0.06
59	Block EducationOfficer, Kaptipada,Mayurbhanj	Constructionof New Primary School at Haidachua	Hill Block	443	2277/2278 /2290	Jungle	0.24
60	District Project Co-ordinator, RTE-SSA, MBJ	Construction of School Building for Jhadjamda New Primary Sachool	Jhadjamda	-	1	RF	0.16
61	Executive Engineer, Rural Works Division,MBJ	Constructiion of road Bhaliadiha Chhak to Sunahaja under PMGSY				RF	0.999
62	Block development Officer, Saraskana	Construction of hostel building of Panchayat High School under Murunia GP of Saraskana Tahasil	Murunia	261	246	RF	0.24
63	Executive Engineer, Rural Works Division., MBJ	Construction of PMGSY road from Durgapur to Saradiha	-	-	-	-	0.96

Sl No.	Name of the user Agency	Name of the project	Particulars of Forest land				
			Mouza	Khata No.	Plot No.	Kisam	Area diverted (in ha.)
64	Executive Engineer, Rural Works Division., MBJ	Construction of existing road from Khirbani to Kainfulia	-	-	-	-	0.98
65	Block Development Officer, Betnoti	Construction of all weather road under MGNREGS from Tanguru Mohakud House of Khunta to Phuljhari	-	-	-	-	0.6
66	Block Development Officer, Badsahi	Construction of community centre drinking water supply and water pipe lines	-	-	-	-	0.99
67	Block Development Officer, Morada	Construction of Community Hall at Jhinkiria Samil, Palasbani	Jhinkiria Samil,	205	269	Village forest	0.02
68	District Project Co-ordinator, RTE-SSA, MBJ	Construction of Sankhabhanga UGUP, School	Sankhabhanga	62	223	Revenue Forest	0.23
69	Block Development officer, Suliapada	Construction of School Building at Sanbhadua	Sanbhadua	54	268	jungle	0.04
	TOTAL						**25.6705**

Appendix – XI

STATEMENT SHOWING DETAILS OF ENCROACHMENT CASES OF BARIPADA FOREST DIVISION									
Sl.No	**PR No & Year**	**OR Case No**	**Area Encroachment in acres**	**ha.**	**Forest Beat**		**Forest Range**	**RF /D.P.F./P.R.F./P.F./V.F**	**Present Position**
1	12 of 2002-03	73U of 2000-01	0	0.00		Udala	Udala	Udala R.F.	PR Submitted
2	37 of 2002-03	35U of 2002-03	700 Sft.	0.01		Udala	Udala	Udala R.F.	PR Submitted 2(b)CC 05/2002
3	39 of 2002-03	43U of 2002-03	1500 Sft.	0.01		Udala	Udala	Udala R.F.	PR Submitted 2(b)CC 16/2002
4	47 of 2002-03	211K of 2001-02	50 Decimils	0.20	Pingu		Kaptipada	Asanabani – (A) R.F. (Kaptipada)	PR Submitted 2(b)CC 03/2003
5	74 of 2002-03	49U of 2002-03	60'.0" X 30'.0"=1800 Sft.	0.02		Udala	Udala	Udala R.F.	PR Submitted 2(b)CC 05/2003
6	102 of 2002-03	88B of 2002-03	5 Decimils	0.02	Badampur		Betnoti	Haripur R.F.	PR Submitted
7	106 of 2002-03	84B of 2002-03	576 Sqm	0.06	Badampur		Betnoti	Badampur R.F.	PR Submitted
8	107 of 2002-03	15DK of 2001-02	20mt X 15 mt=300 sqmt.	0.03			Dukura	Pundal R.F.	PR Submitted
9	108 of 2002-03	16DK of 2001-02	30mt X 15 mt=450 sqmt	0.05			Dukura	Pundal R.F.	PR Submitted
			96m X 9=864 sqmt	0.09					
10	109 of 2002-03	17DK of 2000-01	44m X10 = 440 sqmt	0.04			Dukura	Itamundia RF	PR Submitted
			15m X33 = 495 sqmt	0.05					
			76m X14 = 1064 sqmt	0.11					
11	110 of 2002-03	20DK of 2001-02	25' X 20' = 500 sqft	0.00			Dukura	Pundal R.F.	PR Submitted
12	111 of 2002-03	21DK of 2001-02	15' X 15' = 225 sqft	0.00			Dukura	Pundal R.F.	PR Submitted
13	112 of 2002-03	22DK of 2001-02	20' X 15' = 300 sqft	0.00			Dukura	Pundal R.F.	PR Submitted
14	113 of 2002-03	23DK of 2001-02	20' X 15' = 300 sqft	0.00			Dukura	Pundal R.F.	PR Submitted
15	114 of 2002-03	59DK of 2001-02	150' X 125' = 18750 sqft	0.17			Dukura	Kanpur RF	PR Submitted
16	115 of 2002-03	60DK of 2001-02	180' X 150' = 27000 sqft	0.25			Dukura	Kanpur RF	PR Submitted
17	116 of 2002-03	71DK of 2001-02	115' X 45' = 5175 sqft	0.05			Dukura	Kanpur RF	PR Submitted
18	27 of 2003-04	287B of 2002-03	4m X 5.5m=225 Sqm	0.02			Betnoti	Haripur R.F.	PR Submitted 2(b) CC No-53/03
			0.005 acre	0.00					
19	28 of 2003-04	288B of 2002-03	21m X 30m=630 Sqm	0.06			Betnoti	Haripur R.F.	PR Submitted 2(b) CC No-52/03
			0.1575 acre						

STATEMENT SHOWING DETAILS OF ENCROACHMENT CASES OF BARIPADA FOREST DIVISION									
Sl.No	**PR No & Year**	**OR Case No**	**Area Encroachment in acres**	**ha.**	**Forest Beat**		**Forest Range**	**RF /D.P.F./P.R.F./P.F./V.F**	**Present Position**
20	30 of 2003-04	385B of 2002-03	27m X 18m= 486 Sqm =0.12 acre	0.05		Nakichua	Betnoti	Haripur R.F.	PR Submitted 2(b) CC No-49/03
21	31 of 2003-04	498B of 2002-03	20 Decimils	0.08			Betnoti	Kalma RF	PR Submitted 2(b) CC No-50/03
22	108 of 2004-05	23U fo 2004-05	60' X 35'=2100 Sqft.	0.02	Khunta		Udala	Khunta RF	PR Submitted 2(b) CC No-12/05
23	107 of 2004-05	22U of 2004-05	100' X 40'=4000 Sqft	0.04	Khunta		Udala	Khunta RF	PR Submitted 2(b) CC No-11/05
24	106 of 2004-05	21U of 2004-05	70' X 65'=4550 Sqft.	0.04	Khunta		Udala	Khunta RF	PR Submitted 2(b) CC No-10/05
25	105 of 2004-05	20U of 2004-05	180' X 30'=5400 Sqft.	0.05	Khunta		Udala	Khunta RF	PR Submitted 2(b) CC No-9/05
26	104 of 2004-05	19U of 2004-05	150' X 70'=10500 Sqft.	0.10	Khunta		Udala	Khunta RF	PR Submitted 2(b) CC No-8/05
27	103 of 2004-05	18U of 2004-05	50' X 45'=2250 Sqft.	0.02	Khunta		Udala	Khunta RF	PR Submitted 2(b) CC No-7/05
28	102 of 2004-05	17U of 2004-05	85' X 80=10800 Sqft.	0.10	Khunta		Udala	Khunta RF	PR Submitted 2(b) CC No-6/05
29	101 of 2004-05	16U of 2004-05	100' X 25'=2500 Sqft.	0.02		Khunta	Udala	Khunta RF	PR Submitted 2(b) CC No-5/05
30	100 of 2004-05	15U of 2004-05	100' X 50'=5000 Sqft.	0.05		Khunta	Udala	Khunta RF	PR Submitted 2(b) CC No-4/05
31	99 of 2004-05	14U of 2004-05	135' X 75'=10125 Sqft.	0.09		Khunta	Udala	Khunta RF	PR Submitted 2(b) CC No-3/05
32	97 of 2004-05	176U of 2004-05	83' X 110'=9130 Sqft.	0.08		Khunta	Udala	Khunta RF	PR Submitted 2(b) CC No-2/05
33	96 of 2004-05	175U of 2004-05	80' X 100'=8000 Sqft.	0.07		Khunta	Udala	Khunta RF	PR Submitted 2(b) CC No-1/05
34	40 of 2005-06	89R fo 2005-06	15' X 20' =300 Sqft.	0.00	Nakichua		Rasgovindpur	Amarda South RF	PR Submitted 2(b) CC No-23/06
35	31 of 2006-07	97DK of 2005-06	50' X 60'=3000 Sqft.	0.03		Badasahi	Dukura	Bidyadharpur RF	PR Submitted 2(b) CC No-12/07

STATEMENT SHOWING DETAILS OF ENCROACHMENT CASES OF BARIPADA FOREST DIVISION									
Sl.No	**PR No & Year**	**OR Case No**	**Area Encroachment in acres**	**ha.**	**Forest Beat**		**Forest Range**	**RF /D.P.F./P.R.F./P.F./V.F**	**Present Position**
36	11 of 2007-08	27DK of 2006-07	20 chain X 6'.0" = 7920 sqft	0.79			Deuli	Nigirdha PRF	PR Submitted
37	33 of 2007-08	31U of 2006-07	0.155 acre	0.06		Udala	Udala	Udala R.F.	PR Submitted 2(b) CC No-33/07
38	34 of 2007-08	32U of 2006-07	0.14 acre	0.06		Udala	Udala	Udala R.F.	PR Submitted 2(b) CC No-34/07
39	35 of 2007-08	23U of 2006-07	4'.0" X 20'.0" = 80 sqft	0.00		Udala	Udala	Nabra RF	PR Submitted 2(b) CC No-26/07
40	36 of 2007-08	30U of 2006-07	0.12 acre	0.05		Udala	Udala	Reserve Forest	PR Submitted 2(b) CC No-35/07
41	37 of 2007-08	68U of 2006-07	500 Sqft.	0.00		Udala	Udala	Reserve Forest	PR Submitted 2(b) CC No-36/07
42	57 of 2007-08	28U of 2006-07	1.4 acre	0.57		Dengam	Udala	Smilipal RF	PR Submitted 2(b) CC No-50/07
43	58 of 2007-08	27U of 2006-07	3 acre 33 decimils	1.35		Dengam	Udala	Smilipal RF	PR Submitted 2(b) CC No-49/07
44	59 of 2007-08	29U of 2006-07	1 acre 66 decimils	0.67		Dengam	Udala	Smilipal RF	PR Submitted 2(b) CC No-47/07
45	11 of 2013-14	46U of 2006-07	10000 sq. feet	0.09			Udala	Similipal RF	PR Submitted
46	12 of 2013-14	47U of 2006-07	11,000 sq. feet	0.10			Udala	Similipal RF	PR Submitted
47	46 of 2013-14	44U of 2006-07	11000 sq. feet	0.10			Udala	Khunta RF	PR submitted
48	47 of 2013-14	45U of 2006-07	7500 sq. feet	0.07			Udala	Khunta RF	PR submitted
49	89 of 2007-08	93B of 2006-07	95'.0" X 85'.0" = 8075 sqft	0.08		Biasinga	Betnori	Baisinga RF	PR Submitted
50	90 of 2007-08	88B of 2007-08	18'.0" X 20'.0" = 360 sqft	0.00		Bainsinga	Betnoti	Baisinga RF	PRSubmitted
51	38 of 2007-08	13K of 2007-08	206'.0" X 78'.0"=16068 Sqft.	0.15			Kaptipada	Nato RF	PR Submitted
52	38 of 2008-09	112K of 2007-08	16068 sq feet	0.15			Kaptipada	Nato RF	PR Submitted
53	4 of 2007-08	40U of 2005-06	Length-30 meter Width-3 Meter	0.01		Udala	Udala	Nabra RF	PR Submitted
54	36 of 2010-11	38R of 2009-10	19' X 15'=285 Sqft.	0.00			Rasgovindpur	Sarumula RF	PR Submitted 2(b) CC No-28/09
55	38 of 2010-11	37R of 2009-10	18' X 20'=360 Sqft.	0.00			Rasgovindpur	Sarumula RF	PR Submitted 2(b) CC No-29/09
56	-	8-Jul	0.38 Dec	0.00	-	-	Betnoti	-	
	Total			**6.41**					

Appendix – XII

Human-Elephant Conflict

Year	Name of Range	Crop damaged		Property damaged		Human injury		Human death	
		In Ac.	In Rs.	In No.	In Rs.	In No.	In Rs.	In No.	In Rs.
2008-09	PITHABATA	92.77	92770	11	22000	-	-	1	100000
	DEULI	88.15	89150	147	30300	-	-	-	-
	RASGOVINDPUR	-	-	11	22000	-	-	-	-
	DUKURA	276.64	276640	-	-	-	-	-	-
	BETNOTI	-	-	21	42000	-	-	-	-
	BANGIRIPOSI	-	-	-	-	-	-	-	-
	KAPTIPADA	-	-	1	2000	-	-	-	-
	UDALA	-	-	-	-	-	-	-	-
	TOTAL	**457.56**	**458560**	**191**	**118300**	**0**	**0**	**1**	**100000**
2009-10	PITHABATA	91.21	91210	25	56000	-	-	-	-
	DEULI	38.65	38650	33	67500	-	-	-	-
	RASGOVINDPUR	-	-	-	-	-	-	-	-
	DUKURA	-	-	18	37500	1	2000	-	-
	BETNOTI	-	-	-	-	-	-	-	-
	BANGIRIPOSI	55.04	55040	-	-	-	-	-	-
	KAPTIPADA	-	-	-	-	-	-	-	-
	UDALA	-	-	-	-	-	-	-	-
	TOTAL	**184.9**	**184900**	**76**	**161000**	**1**	**2000**	**0**	**0**
2010-11	PITHABATA	57	87000	-	-	-	-	2	200000
	DEULI	53.37	53370	6	12000	-	-	1	100000
	RASGOVINDPUR	87.73	87300	-	-	-	-	-	-
	DUKURA	145.3	145030	-	-	-	-	-	-
	BETNOTI	368.72	368720	46	129500	-	-	-	-
	BANGIRIPOSI	-	-	-	-	-	-	-	-
	KAPTIPADA	-	-	-	-	-	-	-	-
	UDALA	-	-	-	-	-	-	-	-
	TOTAL	**712.12**	**741420**	**52**	**141500**	**0**	**0**	**3**	**300000**
2011-12	PITHABATA	-3	-	-	-	-	-	-	-
	DEULI	10.95	21350						
	RASGOVINDPUR	128.05	641750	-	-	-	-	1	100000
	DUKURA	-	-	9	45000	-	-	-	-
	BETNOTI	413.79	1548950	19	45500				
	BANGIRIPOSI	-	-	-	-	-	-	-	-
	KAPTIPADA	-	-	-	-	-	-	-	-
	UDALA	1.1	5500	-	-	-	-	-	-
	TOTAL	**553.89**	**2217550**	**28**	**90500**	**0**	**0**	**1**	**100000**

Year	Name of Range	Crop damaged		Property damaged		Human injury		Human death	
		In Ac.	In Rs.	In No.	In Rs.	In No.	In Rs.	In No.	In Rs.
2012-13	PITHABATA	54.05	305150						
	DEULI	95.57	958200						
	RASGOVINDPUR	115.69	1093350	6	12000	-	-	-	-
	DUKURA	34.57	357720	-	-	-	-	-	-
	BETNOTI	5	29250	19	38000	-	-	2	400000
	BANGIRIPOSI	-	-	-	-	-	-	-	-
	KAPTIPADA	-	-	-	-	-	-	-	-
	UDALA	-	-	-	-	-	-	-	-
	TOTAL	**304.88**	**2743670**	**25**	**50000**	**0**	**0**	**2**	**400000**
2013-14	ALL RANGES OF BARIPADA FOREST DIVISION	689.94	6911320	39	94000	1	75000	2	400000
	TOTAL	**689.94**	**6911320**	**39**	**94000**	**1**	**75000**	**2**	**400000**
2014-15	ALL RANGES OF BARIPADA FOREST DIVISION	**991.81**	**9918130**	**4**	**8000**	**1**	**75000**	**12**	**2266500**
	TOTAL	**991.81**	**9918130**	**4**	**8000**	**1**	**75000**	**12**	**2266500**
2015-16	ALL RANGES OF BARIPADA FOREST DIVISION	**491.43**	**4914620**	**1**	**2000**	**32**	**324000**	**8**	**1571000**
	TOTAL	**491.43**	**4914620**	**1**	**2000**	**32**	**324000**	**8**	**1571000**
2016-17	ALL RANGES OF BARIPADA FOREST DIVISION	**566.93**	**-**	**15**	**37500**	**1**	**50000**	**1**	**300000**
	TOTAL	**566.93**	**-**	**15**	**37500**	**1**	**50000**	**1**	**300000**
2017-18	ALL RANGES OF BARIPADA FOREST DIVISION	**487.64**	**4907060**	**38**	**125000**	**10**	**50000**	**4**	**1600000**
	TOTAL	**487.64**	**4907060**	**38**	**125000**	**10**	**50000**	**4**	**1600000**
2018-19	ALL RANGES OF BARIPADA FOREST DIVISION	**692.02**	**6935540**	**-**	**-**	**-**	**-**	**5**	**1640000**
	TOTAL	**692.02**	**6935540**	**-**	**-**	**-**	**-**	**5**	**1640000**
2019-20	ALL RANGES OF BARIPADA FOREST DIVISION	**635.8**	**6333560**	**26**	**52000**	**-**	**-**	**10**	**2524000**
	TOTAL	**635.8**	**6333560**	**26**	**52000**	**-**	**-**	**10**	**2524000**
2020-21	ALL RANGES OF BARIPADA FOREST DIVISION	**-**	**-**	**-**	**-**	**1**	**100000**	**1**	**-**
	TOTAL	**-**	**-**	**-**	**-**	**1**	**100000**	**1**	**-**

Appendix – XIII (a)

Human Casualty Data for the Year 2010-11 to 2020-21

Sl No.	year	Division	Range	Section	Beat	Village	Latitude	Longitude	Name of the Person	age	Gender	Details of animal
1	2010-11	Baripada Forest Division	Betnoti	Betnoti	Jugal	Paroi	21.734042	86.890008	Late GabindaTudu	65	Male	Elephant
2			BANGIRIPOSI	Sirsa	Joka	Uparbeda	N22.224022	E86.546437	Late Shyamsundar Mahali	35	Male	Elephant
3	2011-12		Betnoti	Baisinga	Baisinga	Astasahi	21.652871	86.878318	Late Kumari RaimatKisku	17	Female	Elephant
4				Betnoti	Durgapur	Sunahaja	21.840266	86.884801	Late UgresenMohanta	60	Male	Elephant
5	2012-13		Betnoti	Betnoti	Jugal	Murkundia	21.69345	86.920204	Late Budhuni Dei	35	Female	Elephant
6			Rasgovindpur	Morada	Chitrada	Tiansi	21 48 55.9	86 56 48.9	Late Kumari Sonia Naik	2	Female	Elephant
7				Morada	Chitrada	Tiansi	21 48 55.9	86 56 48.9	Late Fullamani Naik	60	Female	Elephant
8	2013-14		Pithabata	Haladibani	Gendapokhari	Srichandanpur	22 03 40.0	86 35 17.5	Late Bada Marandi		Male	
9			Deuli	Deuli	Chhenadhua	Badbila (Taldiha Sahi)	21 58 35.5	86 47 33.6	Late Salkhan Murmu		Male	Elephant
10			Deuli	Suliapada	Baghda	Singda	22 02 51.76	86 59 38.32	Late Rukmani Dhal		Female	Elephant
11	2014-15		Betnoti	K.C.Pur	K.C.Pur	Dantiamuhan	21 49 03.0	86 50 41.8	Late Kshetramani Dhal	40	Female	Elephant
12				K.C.Pur	K.C.Pur	Ambagadia	21 49 45.0	86 50 56.0	Late JateswarMohanta	12	Male	Elephant
13			Rasgovindpur	Sankhabhanga	Sankhabhanga	Chandanpur	21 54 41.0	86 51 49.1	Late Rukmani Murmu	12	Female	Elephant
14				Sankhabhanga	Sankhabhanga	Chandanpur	21 54 41.0	86 51 49.1	Late Fagu Murmu	7	Female	Elephant
15				Morada	Bramhanmara	Andhari	21 54 55.0	86 59 18.0	Late Milan Murmu	10	Male	Elephant
16			Pithabata	Manchabandha	Manchabandha	Manchabandha	21 53 08.87	86 46 10.21	Late Basanti Dehuri	55	Female	Elephant
17				Badaahi	Badasahi	Tunigambharia	21 41 42.78	86 48 01.61	Late Ambika Jena	13	Female	Elephant
18				Manchabandha	Baripada -I	Janardanapur	21 56 09.48	86 44 45.31	Late Susen Baitha	60	Male	Elephant
19				Manchabandha	Baripada-I	Gosala Chhaka Baripada	21 55 57 45	86 44 18 43	Late Panamani Majhi	60	Female	Elephant

Sl No.	year	Division	Range	Section	Beat	Village	Latitude	Longitude	Name of the Person	age	Gender	Details of animal
20	2014-15	Baripada Forest Division		Manchabandha	Baripada-I	Baura	21 56 58 18	86 46 34 55	Late Dhanai Murmu	65	Male	Elephant
21			Udala	Udala	Udala	Adapal(Babangad)	21 36 57.9	86 34 54.7	Late Pana Murmu	70	Female	
22	2016-17		Betnoti	Betnoti	Betnoti	Sarbana	21.711098	86.855914	Late SubarnnaGantayat	75	Female	Elephant
23	2017-18			Badampur	Gadigaon	Purnnachandrapur	21 47 30.0	86 53 47.0	Late Manoj Bhakta	20	Male	Elephant
24				Badampur	Gadigaon	Fulbadia	21 47 30.0	86 53 47.0	Late Bharat Mohanta	40	Male	Elephant
25			Rasgovindpur	Morada	Moroda	Gobindpur	21 52 56.8	87 01 07.8	Late Kandru Kisku	58	Male	Elephant
26			Deuli	Suliapada	Baghara	Bari	22 00 9.0	86 57 13.0	Late Maheswar Deo	64	Male	Elephant
27	2018-19		Betnoti	Badampur	Badampur	Phaljhari	21.751686	86.970191	Late Bhima Marandi	50	Male	Elephant
28			Rasgovindpur	Morada	Moroda	Pariakuli	21 52 16.6	86 57 54.5	Late Narayan Tudu	79	Male	Elephant
29			Pithabata	Manchabandha	Manchabandha	Ahari	21 52 13	86 45 57	Late Bimala Mohanta	62	Female	Elephant
30				Manchabandha	Manchabandha	Manchabandha	21 53 08 21	86 46 12 21	Late Bisu Dehuri	26	Male	Elephant
31				Digdiga	Digdiga	Baghuahudi,	21 54 40.12	86 37 14.02	Late Rathamani Singh	50	Female	Elephant
32	2019-20		Betnoti	Betnoti	Jugal	Haldipada	21.706482	86.894366	Late Sadhabani Singh	60	Female	Elephant
33				K.C.Pur	KCPur	Jamugadha	21.829175	86.848882	Late Gajendra Mohanta	77	Male	Elephant
34				Badampur	Saradiha	Kusumpura	21 42 46.0	86 56 07.0	Late Sita Marandi	57	Female	Elephant
35			Rasgovindpur	Morada	Chitrada	Dangarbila	21 50 18.0	86 55 13.0	LateHaria Soren	57	Male	Elephant
36			Rasgovindpur	Rasgovindpur	Gaon Amarda	Dhobakundia	21 47 57.0	87 06 23.0	Late Chhita Hansda	59	Female	Elephant
37				Rasgovindpur	Gaon Amarda	Gopinathpur	21 47 59.0	87 07 59.3	Late Kuanr Majhi	58	Male	Elephant
38				Rasgovindpur	Gaon Amarda	Daleidiha	21 49 01.6	87 06 40.0	Late Ram Hembram	63	Male	Elephant
39	2019-20		BANGIRIPOSI	Sirsa	Joka	Bhulurubani	N22 12 35.0	E86 30 12.0	Late Dagdu Murmu	52	Male	Elephant
40				BANGIRIPOSI	BANGIRIPOSI	Gosanipal	N22 09 35.0	E86 34 40.0	Late Snehalata Sethi	62	Female	Elephant
41			Kaptipada	Notto	Sandei	Sandei	21 29 59	86 24 47	Late Pandu Sing	32	Male	Elephant
42	2020-21		Rasgovindpur	Sankhabhanga	Sankhabhanga	Kukudajodi	21 56 19.5	86 50 32.9	Late Chaturbhuja Naik	65	Male	Elephant

Appendix – XIII (b)

Format for detail report on Elephant death from 2006-07 till date in respect of Baripada Forest Division.

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
1	12.12.2006	Female	25 to 30 years	Near Badsole village in a Murrom Pit	N 21^0 54' 34.4", E 86^0 37' 51.1"	Digdiga	Digdiga	Dukura	Death may be due to dehydration. Coma and shock resulting from Septicemia	UD case No-37DK of 2006-07
2	23.03.2007	UNK	UNK	Mayuranacha, Compt. No-SJ-10	N 21^0 48' 07.6", E 86^0 29' 05.0"	Nuagaon	Dengam	Udala	As per report of V.A.S- Khunta, Mayurbhanj the death of the animal could not be ascertained due to unavailability of body parts.	UD case No-315U of 2006-07
3	23.03.2007	UNK	UNK	Mayuranacha, Compt. No-SJ-10	N 21^0 48' 17.8", E 86^0 29' 01.2"	Nuagaon	Dengam	Udala	As per report of V.A.S- Khunta, Mayurbhanj the death of the animal could not be ascertained due to completely putrified.	UD case No-316U of 2006-07
4	14.11.2007	Male	7 to 8 years	Road side of Manidar Chhak near Palpala River	N 21^0 56' 45.4", E 86^0 34' 27.6"	Pithabata	Pithabata	Pithabata	As per report of Addl. Vetenarty, Asst. Surgen Samakhunta, Mayurbhanj the death of the animal may be due to respiratory failure resulting from Pulmonary congestion.	UD case No-86P of 2007-08

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
5	04.01.2008	Female	48 years (approx)	Baniabasa-Jenabil road near Tarubdarh in Compt. No-SJ-17 of Similipal Reserve Forest	N 21^0 44' 76.1", E 86^0 26' 82.1"	Dengam	Dengam	Udala	As per report of VAS, Kunta, Mayurbhanj the death of the animal may be due to chronic infections hepatitis leading to irappeteruar cloats later on	UD case No-166U of 2007-08
6	09.01.2008	Male	10 to 12 yrs	Deep inside in Compt. No-SJ-17 of Similipal Sanctuary	N 21^0 45' 90.7", E 86^0 27' 75.9"	Dengam	Dengam	Udala	As per report of VAS, Kunta, Mayurbhanj the death of the animal may be due to toxic origin	UD case No-167U of 2007-08
2008-09 Nil										
2009-10 Nil										
2010-11 Nil										
7	03.12.2011	Male	4 yrs (Approx)	Similipal R.F (near Asanabani village)	N 21^0 58' 37.2", E 86^0 36' 35.2"	Baldiha	Baldiha	Pithabata	Cause suspected for poisoning	UD case No-205P of 2011-12
8	12.02.2012	Male	5 years	Similipal Tiger Reserve (Core area)	N 21^0 38' 27.8", E 86^0 25' 8.8"	Dengam	Taldiha	Udala	Death due to gastritren	UD case No.-61U of 2011-12

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
9	21.05.2012	Male	1 year	Baldiha Reserve Forest (Near Patharabasani hill)	N 21^0 57' 15.4", E 86^0 36' 36.5"	Baldiha	Baldiha	Pithabata	Death due to shock arising from heat stroke	UD case No- 22P of 2012-13
10	03.10.2012	UNK	15 years	Notto Reserve Forest	N 21^0 29' 53.9", E 86^0 23' 3.6"	Sarat	Sanadei	Kaptipada	Caused of death not identified as the cracase is completely Putripied	UD case No-23K of 2012-13
11	20.11.2013	Male	10 years	Inside private agriculture field in Chipat Astia village near Budhabalanga river	N 21^0 56' 41.3", E 86^0 42' 30.6"	Baripada-1	Manchabandha	Pithabata	Death may be due to Intususception	UD case No-188P of 2013-14
2013-14- NIL										
12	27.07.2014	Male	8 years	Laxmiposi village in Kochilaghati post office	N 21^0 56' 50.7", E 86^0 36'08.7"	Digdiga	Digdiga	Dukura	Death due to Rexpirotory faliure due to Acote Tyopany	UD case No-16DK of 2014-15

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
13	11.11.2014	UNK	about 3 year	SRF-5 near Sanchandri hill	N 21^0 58' 57.4", E 86^0 35' 34.1"	Baldiha Section	Baldiha Beat	Pithabata	Cause of death and time of death could not be detected because all the organs are fully decomposed.	UD case No-217P of 2014-15
14	21.11.2014	Male	8 to 10 years	Harisole village, PO/ G.P-Kendua, PS- Baripada Sadar	N 21^0 53' 45.9", E 86^0 38' 08.8"	Digdiga	Digdiga	Dukura	Due to Contextire heart faliure .	UD case No-26DK of 2014-15
15	11.12.2014	Male	8 to 9 years	Inside Similipal Reserve Forest Sanjo Compt. No-5 near Sijupani Nala adjoining to village/PO/GP-Sapanchua	N 21^0 48' 41.9", E 86^0 33' 36.9"	Tadki	Sapanchua	Dukura	Death due to antxrax suspected by BVO, Khunta	UD case No-27DK of 2014-15
16	02.11.2015	Female	8 to 10 years	Sijupani Nala Compt. No-5 near village Sapanchua in Sapanchua G.P under Khunta Police Station	N-21^0 48' 48.4" E 86^0 33' 29.5"	Tadki	Sapanchua	Dukura	Death may be due to shock due to cardio respiratory failure as a result of fracture of skull and hemorrhage. This may be resulted due to falling into the nala with rocky bed from the top and as the head pressed against a hard heavy granite rock.	UD case No-18DK of 2015-16

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
17	26.11.2015	Female	Above 50 years	At- Notto R.F near village- Haridachua	N-21^0 30' 32.3" E-86^0 24' 02.3"	Sarat	Sanadei	Kaptipada	Death due to old age	UD case No-21K of 2015-16
18	13.12.2015	Male	8 to 10 years	Inside Similipal Sanctuary in Sanjo Compt. No-5 near Ambapani nala near village-Subarnamanjari, PO/GP Spanchua, PS/Block- Khunta, Dist-Mayurbhanj.	N-21^0 49' 18.8" E-86^0 32' 36.6"	Tadki	Sapanchua	Dukura	Elephant death due to antxrax, suspected by BVAS, Khunta	UD case No.-20DK of 2015-16
19	14.10.2016	Male	7 to 8 years	Inside Cashew field near village Sansole, PO/G.P-rangamatia, PS-Baripada Sadar, Block-Shyamakhunta, Mayurbhanj	N-21^0 54' 45.8" E-86^0 37' 48.0"	Digdiga	Digdiga	Dukura	Elenphant death due to antxrax, suspected by Addl. VAS, Shamakhunta & VAS, STR, Baripada	UD case No-14DK of 2016-17
20	08.06.2017	Male	30 years	On the earthen road of Jhadjamda village out skirts, PO-K.C.Pur, G.P Badjore, PS- Betnoti, Dist-Mayurbhanj	N-21^0 49' 59.77" E-86^0 47' 51.86"	Tungadhua	K.C.Pur	Betnoti	Elephant death, due to electrocution.	OR case No-36B of 2017-18

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
21	16.10.2017	Female	18 to 20 years	Inside Similipal Sanctuary Compt. No-ED-08, near village-Sarabasa (Fulbadia), PS- Udala under Patisanipur G.P	N-21^0 41' 57" E-86^0 29' 35"	Fulbadia	Taldiha	Udala	Due to antxrax, which is suspected by VAS, Udala, VAS STR, Baripada, VAS, Mobile unit WTI.	UD case No-13U of 2017-18
22	16.11.2017	Makhana	40 years	Inside Similipal Sanctuary Compt. No-TK-9, Khudaputuli near Adapai village	N-21^0 34' 18.6" E-86^0 25' 36.2"	Badakhaman	Podadiha	Kaptipada	Actual cause of the death will be known after receipt of PM Report. But during field observation & report of Addl. BVO, Kaptipada & VAS, Mobile Unit, WTI, it was ascertained that, the elephant might have died naturally as the age of the elephant seems to be above 40 years.	UD case No-17K of 2017-18
23	08.06.2017	Male	30 years	On the earthen road of Jhadjamda village out skirts, Mayurbhanj District, Baripada Division, Betnoti Range	N-21^0 49' 59.77" E-86 47' 51.86"	K.C. Pur	Betnoti	Betnoti	Death due to electrocution	OR case No-36B of 2017-18
24	16.10.2017	Female	20 years	Inside Similipal Sanctuary Compt. No- ED-08, near village -Sarabasa (Fulbadia) PS- Udala under Patisanipur GP	N-21^0 41' 57" E-86 29' 35"	Fulbadia	Dengam	Udala	Due to anthrax	UD case No-13U of 2017-18

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
25	16.11.2017	Makhana	40 years	Inside Similipal Sanctury Compt. No-TK-9, Khudaputuli, near village Adapai	N-21^0 34' 18.6" E-86 25' 36.2"	Badakhaman	Podadiha	Kaptipada	Due to suspect Anthrax	UD case No-17K of 2017-18
26	28.04.2018	Female	5 to 6 years	Inside a paddy field of Sri Baruna ku. Chand of Baincha, R.G.Pur	N-21^0 45' 30.06" E-87 00' 48.1"	Badampur	Badampur	Betnoti	Elephant death may be due to acute indigestion leads to metabolic acidosis causing vital organ failure	UD case No- 4B of 2018-19
27	04.07.2018	Male	6 years	Inside Sukhuapata hill near village Matiachua	N-21^0 22' 55.16" E-86 17' 54.6"	Notto	Sarat	Kaptipada	Elephant death may be due to septicemia, on 04.07.2018 at 10 am. As a result of animal fighting followed by fracture of Rt. Leg & bruise	UD case No- 13K of 2018-19
28	14.11.2018	Male	16 years	On the crop field near village Sunaposi under the 11KV transmission line from Bhaliatou to Keutunimari via Sunaposi	N-22^0 04' 00.03" E-86 45' 22.0"	Rangibeda	Chandua	Deuli	Elephant died due to cardiac failure as a result of electric shok.	OR 114D of 2018-19
29	17.01.2019	Male	5 months	Inside Jamchua Hudi near village Sudariagutha	N-21^0 22' 51.8" E-86 28'46.1"	Raipal	Sarisua	Kaptipada	Elephant died due to Septicemia and severe, internal bleeding injury by the penetration by the tusk of the adult male elephant	UD case No 28Kpof 2018-19

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
30	27.03.2019	Female	20 years	Inside Asanabani RF near village Dhansole	N-21^0 48' 41.7" E-86 53' 20.9"	Gadigaon	Badampur	Betnoti	Elephant died due to electrocution or may be suspected Anthrax disease	OR case No-183B of 2018-19
31	09.06.2019	Female	16 years	Inside the paddy field near Pungichua village	N-21^0 21' 36" E-86 18'18.58"	Sarisua	Sarisua	Kaptipada	Elephant death may be due to cardiae arrest and dehydration resulting from acute acidosis	UD case No-1K of 2019-20
32	17.06.2019	Female	40 years	Inside SRF Compt. No- Sl. 6 (P) II, Dhobighat near Balidar Beat (STR)	N-21^0 35' 10" E-86 20' 07"	Balidar	Podadiha	Kaptipada	Elephant death may be due to Multiple fracture of the left femur. Cuasing severe bleeding, Dehydration, toxemia	UD case No-2 K of 2019-20
33	01.10.2019	Male	4 years	Inside Morada RF near village Bhalughera	N-21^0 53' 18" E-86 58' 38"	Morada	Morada	R.G.Pur	Elephant death due to Anthrax	UD case No- 11R of 2019-20

Sl. No	Date of detection/ death of elephant			Place of Occurrence					Cause of death (Basing on report of PMR/ OUAT/ ADR, Phulnakhara & etc)	Offence cases booked
	Date	Sex	Age	Village/ RF/ PF/PA & Others	GPS Cordinate	Beat	Section	Range		
34	27.03.2020	Female	40 years	Inside Sukhuapata hill near Baunsagadia village	N-21^0 18' 31" E-86 21' 41"	Sarisua	Sarisua	Kaptipada	Death may be due to old age.	UD case No-54K of 2019-20
35	23.08.2020	Female	2 years	Inside Permanent Nursery, Baladia, near village Baladia,	N-21^0 51' 19" E-86 58' 47"	Morada	Morada	R.G.Pur	Death due to Respiratory Failure	UD case No-13R of 2020-21

Appendix – XIV

ANTI-POACHING CAMPS OF BARIPADA FOREST DIVISION

Name of Division	Name of Range	Sl. No.	Anti poaching camp		GPS reading
			Section	Location	
Baripada	Pithabata	1	Balidiha	Balidiha	N 21° 57' 42.7" E 86° 37' 15.2"
		2	Balidiha	Gendapokhari	N 22° 01' 54.9" E 86° 35 21.7"
		3	Balidiha	Kantasole	N 22 °01' 57.1" E 86° 32' 34.0"
		4	Balidiha	Champagarh	N 21° 56' 44.8" E 86° 34' 29.6"
	Kaptipada	5	Podadiha	Nalakhanja	N 21° 32' 06.8" E 86° 21' 53.3"
		6	Podadiha	Dangadiha	N 21° 30' 35.3" E 86° 19' 41.22"
		7	Podadiha	Dubigarh	N 21 °36' 24.5" E 86° 26' 04.4"
		8	Podadiha	Kiapata (Manchan)	N 21° 31' 59.9" E 86° 22' 23.1"
		9	Podadiha	Hudisahi (Temporary camp)	N 21°34' 28.5" E 86° 26' 27.9"
		10	Podadiha	Podadiha	N 21°33' 36.5" E 86° 25' 55.3"
		11	Sarat	Haridachua	N 21°30' 32.5" E 86° 24' 27.1"
		12	Sarat	Notto	N 21°26' 40.4" E 86° 16' 29.8"
		13	Sarat	Sarat	N 21° 26' 24.9" E 86° 20' 32.9"
		14	Sarat	Sanadei	N 21° 28' 57.2" E 86° 24' 22.7"
		15	Sarat	Aswakati (Temporary camp)	N 21° 30' 34.0" E 86° 24' 11.5"
	Dukura	16	Tadki	Bahalda	N 21° 46' 57.7" E 86° 32' 50.0"
		17	Tadki	Sapanchua	N 21° 48' 07.4" E 86° 34' 15.6"
		18	Tadki	Chandanchaturi	N 21° 50' 04.5" E 86° 35' 26.0"
	BANGIRIPOSI	19	Badgaon	Badgaon	N 22° 01' 23.6" E 86° 30' 44.5"
		20	Kusumbandh	Rangamatia	N 22° 05' 12.2" E 86° 27' 44.3"
		21	Kusumbandh	Jaldiha	N 22° 02' 43.2" E 86° 29' 04.2"
		22	Badgaon	Juha	N 22° 00' 23.6" E 86° 31' 30.5"
		23	Badgaon	Chakdi	N 22° 01' 07.4" E 86° 25' 04.4"
	Udala	24	Dengam	Baniabasa Camp	N 21° 40' 23.6" E 86° 28' 31.6"
		25	Dengam	Matihudi Camp	N 21° 40' 23.6" E 86° 28' 31.6"
		26	Dengam	Nuagaon Camp	N 21° 44' 56.2" E 86° 32' 45.8"
		27	Udala	Devkund Camp	N 21° 40' 23.6" E 86°28 '31.6"
		28	Udala	Balma Camp	N 21° 40' 17.6" E 86° 28' 06.7"
		29	Udala	Kutling Beat	N 21° 34' 33.1" E 86° 33' 55.9"

Appendix – XV

LIST OF ANR PLANTATION RAISED DURING THE PLAN PERIOD 1996-97 TO 2015-16

Name of Range	Name of site	Area in ha.	Seedling planted	Type of Plantation	Scheme
Pithabata	B.C.pur R.F.	25	7000	ANR	Economic Plantation
	Laxmiposi R.F	50	10000	ANR	EAS
	B.C. pur R.F	100	20000	ANR	EAS
	Manchabandha R.F	100	20000	ANR	EAS
Dukura	Kakarpani R.F.	50	10000	ANR	EAS
	Chakradhar pur R.F	50	10000	ANR	EAS
	Kanpur R.F.	50	10000	ANR	EAS
	Prativadeipur P.F.	50	10000	ANR	EAS
	Kanthalhudi P.F.	50	10000	ANR	EAS
Betnoti	K.C.pur R.F.	40	8000	ANR	EAS
	Khirpada R.F.	40	8000	ANR	EAS
	Badampur R.F.(S)I	50	10000	ANR	EAS
	Badampur R.F.II	40	8000	ANR	EAS
R.G. Pur	Amdihi south R.F.	40	8000	ANR	EAS
	Chitrada R.F.	40	8000	ANR	EAS
Deuli	Suliapada R.F.C-III	50	10000	ANR	EAS
	Kuliana R.F. C-I	100	20000	ANR	EAS
Udala	Fuljhari R.F.	100	20000	ANR	EAS
	Naupada R.F.	50	10000	ANR	EAS
	Dhaundiha R.F.	50	10000	ANR	EAS
Kaptipada	Jharanaghati R.F.	50	10000	ANR	EAS
	Natto R.F.	100	20000	ANR	EAS
R.G. Pur	Jamsola R.F.	40	8000	ANR	EAS
	Nichuapada R.F.	10	2000	ANR	EAS
	Jamsola R.F.	30	9000	ANR	Economic (tribal)
Pithabata	Hatikot	30	9000	ANR	Economic (tribal)
Udala	Dhaundiha R.F	50	15000	ANR	W.F.P.
Dukura	Khandihi R.F.	50	15000	ANR	W.F.P.
Deuli	Suliapada R.F.	50	15000	ANR	W.F.P.
Kaptipada	Sukhuapata P.F	80	24000	ANR	-do-
	Sukhuapata R.F.	24.017	8400	ANR	Comp. affn.
Bangiriposi	Thakurani R.F.	100	20000	ANR	IAEP
R.G. Pur	Jamsola R.F	50	10000	ANR	IAEP
Dukura	Badasahi R.F.	100	20000	ANR	IAEP
Betnoti	Amrda (s) R.F.	50	10000	ANR	IAEP
Kaptipada	Asanabani – (A) R.F.	50	10000	ANR	IAEP
	Jharanaghati P.R.F	50	10000	ANR	IAEP
Udala	Udala R.F.	100	20000	ANR	IAEP

Name of Range	Name of site	Area in ha.	Seedling planted	Type of Plantation	Scheme
Deuli	Deuli R.F. (IV)	50	10000	ANR	IAEP
	Suliapada R.F. (VII)	50	10000	ANR	IAEP
Pithabata	Hatikot R.F.	150	30000	ANR	IAEP
Betnoti	Chitrada R.F.	100	20000	ANR	IAEP
	Majana	25	5000	ANR	FDA
	Betnasia	20	4000	ANR	FDA
Kaptipada	Jhiliribani	15	3000	ANR	FDA
Kaptipada	Asokothi	60	12000	ANR	FDA
Dukura	Itamundia	25	5000	ANR	FDA
Bangiriposi	Balipani	15	3000	ANR	FDA
	Khadikasole	50	10000	ANR	FDA
Deuli	Ketunimari	30	6000	ANR	FDA
	Dhatika	30	6000	ANR	FDA
	Ghanaghana	30	6000	ANR	FDA
Betnoti	Chuapada	20	4000	ANR	FDA
	Masinasole	20	4000	ANR	FDA
	Salabani	25	5000	ANR	FDA
Udala	Jagabalia	15	3000	ANR	FDA
	Barakhanda	15	3000	ANR	FDA
Udala	Salmundali	15	3000	ANR	FDA
Pithabata	Kantasole	30	6000	ANR	FDA
	Hatikote	30	6000	ANR	FDA
Kaptipada	Tikarpada	25	5000	ANR	FDA
	Salghati	25	5000	ANR	FDA
	Purunapani	55	11000	ANR	FDA
Dukura	Kusumeswari	30	6000	ANR	FDA
	Itamundia	50	10000	ANR	FDA
Bangiriposi	Balikhani	5	1000	ANR	FDA
	Khadikasole	50	10000	ANR	FDA
Deuli	Jamjarki	30	6000	ANR	FDA
Betnoti	Jamugadha	25	5000	ANR	FDA
	Masinasole	25	5000	ANR	FDA
Rasgovindpur	Betnasia	49	9000	ANR	FDA
	Baghuasole	50	10000	ANR	FDA
Udala	Banasathi	15	3000	ANR	FDA
	Biratpat	40	8000	ANR	FDA
Pithabata	Nuadihi	30	6000	ANR	FDA
Deuli	Suliapada RF	25	7500	ANR	RWC
	Deuli RF	25	7500	ANR	RWC
Betnoti	Badampur RF	50	15000	ANR	RWC
Rasgovindpur	Moroda RF	50	15000	ANR	RWC
Rasgovindpur	Moroda RF	50	15000	ANR	Economic
Pithabata	Budhikhamari RF	50	15000	ANR	Economic

Name of Range	Name of site	Area in ha.	Seedling planted	Type of Plantation	Scheme
Deuli	Chandua RF	25	7500	ANR	Economic
	Deuli RF	25	7500	ANR	Economic
Rasgovindpur	Moroda RF	50	15000	ANR	Economic
Betnoti	Durgapur RF	50	15000	ANR	Economic
Udala	Dhaundia RF	52	15600	ANR	RWC
Kaptipada	Asanabani – (A) RF	52	15600	ANR	RWC
Dukura	Chakradharpur RF	30	9000	ANR	RWC
Rasgovindpur	Amarda RF	52	15600	ANR	RWC
	Balidiha RF	81	24300	ANR	RWC
	Moroda RF	36	10800	ANR	RWC
Betnoti	K.C.Pur RF	65	18000	ANR	RWC
	Merda RF	50	15000	ANR	RWC
	Kapai RF	50	15000	ANR	RWC
Deuli	Chandua RF	75	25500	ANR	RWC
	Suliapada RF	75	22500	ANR	RWC
	Deuli RF	50	15000	ANR	RWC
Pithabata	Hatikote RF	55	16500	ANR	RWC
	Manchabandha RF	70	21000	ANR	RWC
	Budhikhamari RF	44	13200	ANR	RWC
	B.C.Pur RF	58	17400	ANR	RWC
Udala	Patpur RF	75	15000	ANR	FDA
Dukura	Kaudikhani RF	15	3000	ANR	FDA
	Rangadiha PF	40	8000	ANR	FDA
Dukura	Chunudiha RF	25	5000	ANR	FDA
Kaptipada	Seleipokhari RF	50	10000	ANR	FDA
	Jharanaghati RF	50	10000	ANR	FDA
	Tangiria RF	40	8000	ANR	FDA
Deuli	Chakchakia RF	50	10000	ANR	FDA
	Dhansole RF	50	10000	ANR	FDA
	Bhurungasole RF	50	10000	ANR	FDA
Bangiriposi	Tangiabasa RF	50	10000	ANR	FDA
	Sarisopal RF	50	10000	ANR	FDA
	Ghiajodi RF	50	10000	ANR	FDA
Pithabata	Mundhabani RF	28	5600	ANR	FDA
	Kantasole RF	80	16000	ANR	FDA
	Hatikote RF	20	4000	ANR	FDA
	Nuadihi RF	20	4000	ANR	FDA
Rasgovindpur	Ramnagar RF	35	7000	ANR	FDA
	Madhuria RF	40	8000	ANR	FDA
Betnoti	Masinasole RF	50	10000	ANR	FDA
	Salabani RF	20	4000	ANR	FDA
	Kuchilakhunta RF	50	10000	ANR	FDA
	Agual RF	30	6000	ANR	FDA

Name of Range	Name of site	Area in ha.	Seedling planted	Type of Plantation	Scheme
	Tilda RF	50	10000	ANR	FDA
	Benasole RF	10	2000	ANR	FDA
Betnoti	Dalki RF	50	15000	ANR	Economic
Rasgovindpur	Moroda RF	50	15000	ANR	Economic
Dukura	Durgapur RF	50	15000	ANR	Economic
Pithabata	Manchabandha RF	50	15000	ANR	Economic
Udala	Nabra RF	50	10000	ANR	FDA
	Kuanrpal RF	75	15000	ANR	FDA
Dukura	Talanda RF	40	8000	ANR	FDA
	Guabehera RF	30	6000	ANR	FDA
	Barudihi RF	50	10000	ANR	FDA
Kaptipada	Badraikela RF	40	8000	ANR	FDA
Deuli	Sansorisaposi RF	35	7000	ANR	FDA
	Kathagahala RF	50	1000	ANR	FDA
Bangiriposi	Nafri RF	40	8000	ANR	FDA
	Netrapat RF	60	12000	ANR	FDA
Pithabata	Budhikhamari RF	50	10000	ANR	FDA
Betnoti	Salabani RF	30	6000	ANR	FDA
	Bartana RF	35	7000	ANR	FDA
Kaptipada	Notto RF	50	20000	ANR	Saraca asoca
Kaptipada	Nedak KF	10	3000	ANR	NREGS
Udala	Balma RF	50	20000	ANR	Saraca asoca
Rasgovindpur	Jamsole RF	198	59400	ANR	Comps. Afforestation
Rasgovindpur	Nohasole PF	147	44100	ANR	Comps. Afforestation
Rasgovindpur	Ramnagar RF	85	25500	ANR	Comps. Afforestation
Rasgovindpur	Nichuapada RF	25	7500	ANR	Comps. Afforestation
Deuli	Chandua RF	150	45000	ANR	Comps. Afforestation
Deuli	Tangasole PRF	50	15000	ANR	Comps. Afforestation
Deuli	Rathasole PF	50	15000	ANR	Comps. Afforestation
Deuli	Kuliana RF	150	45000	ANR	Comps. Afforestation
Kaptipada	Sukhuapata RF	50	15000	ANR	Comps. Afforestation
Dukura	Similipal RF (3 Km from Beldunguri)	10	1000	ANR	Bamboo Plantation in Forest land (NBM)
Udala	Similipal RF (Baniabasa)	5	500	ANR	Bamboo Plantation in Forest land (NBM)
	Similipal RF (Fulbadia)	5	500	ANR	Bamboo Plantation in Forest land (NBM)
Betnoti	Gothanida VF	100	20000	ANR	13th FCG (SP)
Bangiriposi	Joka-kapadia VF	100	20000	ANR	13th FCG (SP)
Deuli	Chakdar	50	10000	ANR	FDA
Betnoti	Hatijhuri	50	10000	ANR	FDA
Udala	Angikuari	40	8000	ANR	FDA
Bangiriposi	Bahalda	60	12000	ANR	FDA
Deuli	Suliapada RF	60	12000	ANR	13th FCG (SP)

Name of Range	Name of site	Area in ha.	Seedling planted	Type of Plantation	Scheme
Kaptipada	Haridachua RF	70	14000	ANR	13th FCG (SP)
Kaptipada	Nuagaon RF	50	10000	ANR	13th FCG (SP)
Rasgovindpur	Chitrada RF	50	10000	ANR	MGNREGS
Deuli	Chandua RF	50	10000	ANR	MGNREGS
Pithabata	BC pur RF	50	10000	ANR	MGNREGS
Pithabata	Purunapani RF	200	40000	ANR	MGNREGS
Betnoti	Dalki RF	50	10000	ANR	MGNREGS
Udala	Khunta RF	50	10000	ANR	MGNREGS
Udala	Dhaundia RF	100	20000	ANR	MGNREGS
Dukura	Deulia RF	100	20000	ANR	MGNREGS
Bangiriposi	Balikhani RF	100	20000	ANR	MGNREGS
Bangiriposi	Siliphudi RF	100	20000	ANR	MGNREGS
Betnoti	Nadpur RF	50	10000	ANR	FDA
Betnoti	Dumapada RF	20	4000	ANR	FDA
Pithabata	Hatikot RF	25	10000	ANR	13th FCG (RDF)
Rasgovindpur	Chitrada RF	25	10000	ANR	13th FCG (RDF)
Udala	Arpata	50	20000	ANR	13th FCG (RDF)
Udala	Palasa RF	25	10000	ANR	13th FCG (RDF)
Kaptipada	Sandei RF	50	20000	ANR	13th FCG (RDF)
Bangiriposi	Kandalia VF	50	20000	ANR	13th FCG (RDF)
Bangiriposi	Kapadiha VF	50	20000	ANR	13th FCG (RDF)
Dukura	Deulia RF	50	20000	ANR	13th FCG (RDF)
Dukura	Belpal RF	50	20000	ANR	13th FCG (RDF)
Betnoti	Bhalia PRF	25	10000	ANR	13th FCG (RDF)
Betnoti	Rautrai	25	10000	ANR	13th FCG (RDF)
Betnoti	Gandigadha	25	10000	ANR	13th FCG (RDF)
Betnoti	Dalki RF	25	10000	ANR	13th FCG (RDF)
Deuli	Suliapada RF	25	10000	ANR	13th FCG (RDF)
Dukura	Gadgadi VSS	50	10000	ANR	FDA-ANR
Dukura	Bahalada EDC	50	10000	ANR	FDA-ANR
Betnoti	Rautrai VSS	50	10000	ANR	FDA-ANR
Deuli	Gundiadiha VSS	50	10000	ANR	FDA-ANR
Rasgobindpur	Baghajharan	50	10000	ANR	MGNREGS-ANR
Rasgobindpur	Chitrada RF	125	25000	ANR	MGNREGS-ANR
Rasgobindpur	Baladia PRF	50	10000	ANR	MGNREGS-ANR
Rasgobindpur	Amrda RF	250	50000	ANR	MGNREGS-ANR
Rasgobindpur	Sarumula RF	125	25000	ANR	MGNREGS-ANR
Kaptipada	Natto RF	500	100000	ANR	MGNREGS-ANR
Dukura	Dukura RF	100	20000	ANR	MGNREGS-ANR
Dukura	Kerko RF	100	20000	ANR	MGNREGS-ANR
Dukura	Kanpur RF	100	20000	ANR	MGNREGS-ANR
Dukura	Badsahi	100	20000	ANR	MGNREGS-ANR
Udala	Rangamatia RF	125	25000	ANR	MGNREGS-ANR

Name of Range	Name of site	Area in ha.	Seedling planted	Type of Plantation	Scheme
Udala	Dabak RF	125	25000	ANR	MGNREGS-ANR
Udala	Kuamara RF	125	25000	ANR	MGNREGS-ANR
Udala	Bhandagaon RF	125	25000	ANR	MGNREGS-ANR
Deuli	Kuliana RF	100	20000	ANR	MGNREGS-ANR
Betnoti	Dalki RF	200	40000	ANR	MGNREGS-ANR
Betnoti	Patpur RF	25	5000	ANR	MGNREGS-ANR
Betnoti	Garudabasa RF	50	10000	ANR	MGNREGS-ANR
Betnoti	Jaganathpur VF	60	12000	ANR	MGNREGS-ANR
Betnoti	Badampur RF	30	6000	ANR	MGNREGS-ANR
Betnoti	Thakurtota RF	60	12000	ANR	MGNREGS-ANR
Betnoti	Machhapada RF	50	10000	ANR	MGNREGS-ANR
Betnoti	Purunapani RF	50	10000	ANR	MGNREGS-ANR
Betnoti	Khirpada RF	25	5000	ANR	MGNREGS-ANR
Betnoti	Bartana RF	50	10000	ANR	MGNREGS-ANR
Betnoti	Baisinga RF	75	15000	ANR	MGNREGS-ANR
Pithabata	Manchabandha RF	50	10000	ANR	MGNREGS-ANR
Pithabata	Budhikhamari RF	50	10000	ANR	MGNREGS-ANR
Pithabata	B.C pur RF	50	10000	ANR	MGNREGS-ANR
Pithabata	Hatikot RF	50	10000	ANR	MGNREGS-ANR
Bangiriposi	Dungurdiha RF	125	25000	ANR	MGNREGS-ANR
Bangiriposi	Pokharia RF	125	25000	ANR	MGNREGS-ANR
Bangiriposi	Kandalia VF	125	25000	ANR	MGNREGS-ANR
Bangiriposi	Thakurani RF	125	25000	ANR	MGNREGS-ANR
Betnoti	Gobarasole VSS	50	10000	ANR	NAP (FDA)-ANR
Rasgobindpur	Purunapani VSS	50	10000	ANR	NAP (FDA)-ANR
Udala	Rangamatia-Beguniadiha VSS	50	10000	ANR	NAP (FDA)-ANR
Udala	Kathuabedha VSS	50	10000	ANR	NAP (FDA)-ANR
Betnoti	Jugala RF (Tilda-50 ha.)	50	20000	ANR	MGNREGS
Betnoti	Merda RF (Benapura-25ha.)	25	40000	ANR	MGNREGS
Betnoti	Baisinga RF (Bhalubasa-25 ha.)	25	40000	ANR	MGNREGS
Udala	Khunta RF	100	40000	ANR	MGNREGS
Pithabata	Manchabandha RF	50	20000	ANR	MGNREGS
Dukura	Kanpura RF	50	20000	ANR	MGNREGS
Deuli	Suliapada RF	50	20000	ANR	MGNREGS
Bangiriposi	Thakurani RF-25 ha.	25	10000	ANR	MGNREGS
Bangiriposi	Kapadia-25 ha.	25	10000	ANR	MGNREGS
Rasgobindpur	Amarda RF(Ghagara & Bansuli-25 ha.)	25	10000	ANR	MGNREGS
Rasgobindpur	Morada RF (Dhireidihi & Kukudajodi-25 ha.)	25	10000	ANR	MGNREGS
Kaptipada	Nachipur RF	50	20000	ANR	MGNREGS

Appendix – XVI

DETAIL LIST OF AR PLANTATIONS RAISED DURING THE PLAN PERIOD FROM 1996-97 TO 2015-16

Name of Range	Name of site	Area in ha.	Seedlings planted	Type of plantation	Scheme
Jamsola Sabai	Jamsola R.F.	25	40000	AR	Economic Plantation
Jamsola Sabai	Jamsola R.F.	20	32000	AR	Economic (Nontribal)
Jamsola	Jamsola R.F.	25	40000	AR	Economic
Udala	Udala R.F.	20	32000	AR	Economic
Udala	Dhaundiha R.F	30	15000	AR	W.F.P.
Kaptipada	Sukhuapata P.F.	10	16000	AR	Com.Affn.
Deuli	Andhari R.F.	25	40000	AR	Economic Plant (N.tribal)
Udala	Kuamara R.F.	30	48000	AR	Economic Plant (N.tribal)
Udala	Marsigaon R.F.	20	32000	AR	Economic Plant (N.tribal)
Betnoti	Bhandarikula/	20	50000	AR	WFP welfare
Kaptipada	Sukhuapata R.F.	5	12500	AR	Comp. affn.
Udala	Khunta R.F.	60	96000	AR	F.F.W
Udala	Salmunduli P.R.F.	10	16000	AR	F.F.W
Udala	Chuliaposi R.F.	25	40000	AR	F.F.W
Udala	Dutikadeipur R.F	5	8000	AR	F.F.W
Deuli	Andhari R.F	20	32000	AR	Economic Plantation
Dukura	Badasahi R.F.	30	48000	AR	Economic Plantation
Betnoti	Badampur R.F	20	32000	AR	Economic Plantation
Pithabata	Bhagabat ch.PurR.F.	20	32000	AR	Economic Plantation
Udala	Udala R.F.	10	16000	AR	Economic Plantation
Betnoti	Purunia R.F.	30	48000	AR	Economic Plantation
Dukura	Kuldiha R.F.	20	32000	AR	Economic Plantation
Deuli	Amdiha R.F.	10	16000	AR	Economic Plantation
Rasgovindpur	Basantapur R.F.	6.15	9140	AR	Compn. Affn.
Betnoti	Bhimpur RF	20	32000	AR	Economic
Dukura	Badsahi RF	20	32000	AR	Economic
Bangiriposi	Upparbhadrasole RF	10.41	16656	AR	Compn. Affn.
Bangiriposi	Balikhani RF	15	4995	AR	FDA
Betnoti	Salabani RF	15	4995	AR	FDA

Name of Range	Name of site	Area in ha.	Seedlings planted	Type of plantation	Scheme
Rasgovindpur	Baghuasole	15	4995	AR	FDA
Betnoti	K.C.Pur RF	20	32000	AR	Economic
Udala	Bhandagaon RF	25	40000	AR	Economic
Deuli	Kuliana RF	30	48000	AR	PLWC
Deuli	Deuli RF	20	32000	AR	PLWC
Betnoti	Purunapani RF	30	48000	AR	PLWC
Betnoti	K.C.Pur RF	50	80000	AR	PLWC
Betnoti	Badampur RF	20	32000	AR	PLWC
Betnoti	Mantapal RF	50	80000	AR	PLWC
Pithabata	Manchabandha RF	20	32000	AR	PLWC
Pithabata	B.C.Pur RF	30	48000	AR	PLWC
Dukura	Khanua RF	25	40000	AR	PLWC
Dukura	Kanpura RF	25	40000	AR	PLWC
Dukura	Kerko RF	35	56000	AR	PLWC
Bangiriposi	Dighi RF	75	120000	AR	PLWC
Rasgovindpur	Sarumula RF	30	48000	AR	PLWC
Udala	Nabra RF	30	48000	AR	PLWC
Udala	Belakuti RF	10	11000	AR	FDA
Udala	Kaudikhani RF	10	11000	AR	FDA
Udala	Tangiria RF	10	11000	AR	FDA
Udala	Sansorisaposi RF	15	16500	AR	FDA
Udala	Tangiabasa RF	10	11000	AR	FDA
Udala	Nafri RF	10	11000	AR	FDA
Udala	Ghiajodi RF	10	11000	AR	FDA
Udala	Ghiajodi RF	5	1665	AR	FDA
Udala	Tarajodi RF	50	10000	AR	FDA
Udala	Madhuria RF	10	11000	AR	FDA
Udala	Tilda RF	15	16500	AR	FDA
Udala	Benasole RF	10	11000	AR	FDA
Betnoti	Mantapal RF	20	32000	AR	Economic
Bangiriposi	Dighi RF	45	72000	AR	Economic
Udala	Belakuti RF	20	32000	AR	Economic

Name of Range	Name of site	Area in ha.	Seedlings planted	Type of plantation	Scheme
Dukura	Belpal RF	15	24000	AR	Economic
Deuli	Suliapada RF	20	32000	AR	Economic
Betnoti	Nuagaon VF	25	10000	AR	Bamboo Mission
Betnoti	Kuchilakhunta RF	30	12000	AR	Bamboo Mission
Pithabata	B.C.Pur RF	20	32000	AR	Economic
Betnoti	Mantapal RF	10	16000	AR	Economic
Bangiriposi	Baunsiapat PF	30	48000	AR	Economic
Udala	Belakuti RF	10	16000	AR	Economic
Pithabata	Budhikhamari RF	10	4000	AR	OBDA
Rasgovindpur	Hemachandrapur PF	15	6000	AR	OBDA
Udala	Manikpur	10	16000	AR	Saraca asoca
Udala	Brundabana Ch. Pur	10	16000	AR	NREGS
Bangiriposi	Baunsiapat PF	60	96000	AR	Economic Plantation
Udala	Dhaundia RF (Arpata)	20	32000	AR	Economic Plantation
Deuli	Kuliana RF (Asonsole)	15	24000	AR	Economic Plantation
Deuli	Suliapada RF (Karatpal)	5	8000	AR	Economic Plantation
Bangiriposi	Dighi RF	15	24000	AR	Saraca asoca
Betnoti	Badampur RF	25	10000	AR	State Plan-Bamboo Plant.
Betnoti	Purunia RF	35	11655	AR	OBDA-Bamboo Plant.
Betnoti	K.C. Pur RF	15	4995	AR	OBDA-Bamboo Plant.
Pithabata	Asanabani	8	12800	AR	CAMPA
Pithabata	Pokharia	30	48000	AR	CAMPA
Udala	Kutling	25	40000	AR	CAMPA
Udala	Dhaundia	60	96000	AR	CAMPA
Udala	Realdah	50	80000	AR	CAMPA
Bangiriposi	Uchagaon-Katisole	50	80000	AR	CAMPA
Bangiriposi	Uchagaon-Katisole	30	48000	AR	CAMPA
Kaptipada	Nachipur	40	64000	AR	CAMPA
Kaptipada	Asanabani – (A) RF (Bhandaripal)	40	64000	AR	CAMPA
Kaptipada	Haridachua	20	32000	AR	CAMPA
Rasgovindpur	Shyamanandapur	20	32000	AR	CAMPA

Name of Range	Name of site	Area in ha.	Seedlings planted	Type of plantation	Scheme
Rasgovindpur	Sarusole Ghagara, Bhalughera	20	32000	AR	CAMPA
Rasgovindpur	Sankhabhanga	50	80000	AR	CAMPA
Betnoti	Badampur	27	43200	AR	CAMPA
Betnoti	Durgapur, Jambani, Karamsole	25	40000	AR	CAMPA
Betnoti	Sunahaja	40	64000	AR	CAMPA
Deuli	Uphalgadia	20	32000	AR	CAMPA
Deuli	Gadia	25	40000	AR	CAMPA
Deuli	Gunthurdihi	20	32000	AR	CAMPA
Deuli	Purunapani	25	40000	AR	CAMPA
Dukura	Chakradharpur	35	56000	AR	CAMPA
Dukura	Baligadia	25	40000	AR	CAMPA
Dukura	Chenguamangalpur	10	16000	AR	CAMPA
Dukura		15	24000	AR	CAMPA
Pithabata	Manchabandha RF	2	3200	AR	Comps. Afforestation
Bangiriposi	Dighi RF (Gohalmunda)	15	24000	AR	Economic Plantation
Betnoti	Dalki RF (Silpuria)	20	32000	AR	Economic Plantation
Udala	Dhaundia RF	15	24000	AR	Economic Plantation
Rasgovindpur	Jamsole PF	10	16000	AR	Economic Plantation
Rasgovindpur	Rangamatia PF	5	8000	AR	Economic Plantation
Betnoti	Tikayatpur RF (Jhilribani)	20	32000	AR	Economic Plantation
Betnoti	Dalki RF (Nuasahi)	20	8000	AR	Bamboo Plant (SP)
Betnoti	Bhalia PRF (Chilabasa)	40	16000	AR	13th FC Grant
Deuli	Chandua RF (Nuahamalia village)	6.76	10816	AR	Compensatory Afforeatation
Rasgovindpur	Nalagaja RF	14	22000	AR	Economic plantation
Rasgovindpur	Amarda RF	6	10000	AR	Economic plantation
Betnoti	Kalama RF	15	24000	AR	Economic plantation
Betnoti	Tikayatpur RF	15	24000	AR	Economic plantation
Udala	Nahara RF	20	32000	AR	Economic plantation
Bangiriposi	Umadeipur VF	15	24000	AR	Economic plantation
Bangiriposi	Kandalia VF	15	24000	AR	Economic plantation
Kaptipada	Debagaon VF	20	32000	AR	13th FCG (SP)

Name of Range	Name of site	Area in ha.	Seedlings planted	Type of plantation	Scheme
Kaptipada	Salagaon VF	4	6000	AR	13th FCG (SP)
Betnoti	Siliphudi VF	11	18000	AR	13th FCG (SP)
Betnoti	Kalama RF	5	8000	AR	13th FCG (SP)
Dukura	Itamundia RF	20	8000	AR	SP-Bamboo
Udala	Dhaundia RF	15	5000	AR	NBM-Bamboo
Udala	Bhandagaon RF	15	5000	AR	NBM-Bamboo
Betnoti	Raikama	10	11000	AR	FDA
Udala	Sindurgaoura	10	11000	AR	FDA
Udala	Arpata	10	11000	AR	FDA
Betnoti	Bhimpura RF	15	24000	AR	Economic plantation
Betnoti	Kalama RF	5	8000	AR	Economic plantation
Udala	Nabra RF	5	8000	AR	Economic plantation
Udala	Bhandagaon RF	10	16000	AR	Economic plantation
Rasgovindpur	Harinasole PRF	20	32000	AR	Economic plantation
Bangiriposi	Mahantipadasia	15	24000	AR	Economic plantation
Dukura	Kanpura RF	15	24000	AR	Economic plantation
Pithabata	Bhalubasa VF	10	16000	AR	13th FCG (SP)
Bangiriposi	Balikhani VF	6	9600	AR	13th FCG (SP)
Bangiriposi	Rajaloka V	14	22400	AR	13th FCG (SP)
Udala	Kuamara RF	20	32000	AR	13th FCG (SP)
Betnoti	Nuagaon RF	20	32000	AR	13th FCG (SP)
Betnoti	Balka RF	20	32000	AR	13th FCG (SP)
Rasgovindpur	Nakichua RF	20	32000	AR	13th FCG (SP)
Bangiriposi	Mahantipadasia VF	20	32000	AR	13th FCG (SP)
Udala	Silaghati RF	10	16000	AR	13th FCG (SP)
Dukura	Subarna manjari VF	20	8000	AR	SP-Bamboo plantation
Betnoti	Bartana RF	20	7000	AR	NBM-Bamboo
Kaptipada	Dugdha RF	5	1700	AR	NBM-Bamboo
Pithabata	BC pur RF	5	1700	AR	NBM-Bamboo
Rasgovindpur	Jamsole RF	15	24000	AR	MGNREGS
Udala	Marsigaon	15	24000	AR	Economic plantation
Udala	Nahara	10	16000	AR	Economic plantation

Name of Range	Name of site	Area in ha.	Seedlings planted	Type of plantation	Scheme
Dukura	Khanua RF	25	40000	AR	Economic plantation
Rasgovindpur	Sarumula RF	13	20800	AR	13th FCG (PLWC)
Rasgovindpur	Duarsuni PRF	11	17600	AR	13th FCG (PLWC)
Rasgovindpur	Betnasia RF	11	17600	AR	13th FCG (PLWC)
Dukura	Baincha VF	25	40000	AR	13th FCG (PLWC)
Udala	Kuamara RF	30	48000	AR	13th FCG (PLWC)
Udala	Dhaundia RF	20	32000	AR	13th FCG (PLWC)
Betnoti	Tungadhua RF	50	80000	AR	13th FCG (PLWC)
Bangiriposi	Sunamunhi VF	15	24000	AR	13th FCG (PLWC)
Bangiriposi	Dighi RF	5	8000	AR	13th FCG (PLWC)
Bangiriposi	Jogibanda VF	10	16000	AR	13th FCG (PLWC)
Bangiriposi	Kandalia VF	10	16000	AR	13th FCG (PLWC)
Udala	Arpata	20	8000	AR	SP-Bamboo
Kaptipada	Khadikhania VF	20	7000	AR	NBM-Bamboo
Kaptipada	Kusumpur VF	20	7000	AR	NBM-Bamboo
Kaptipada	Sarisua VF	10	3000	AR	NBM-Bamboo
Kaptipada	Dughda VF	10	3000	AR	NBM-Bamboo
Betnoti	Daldali RF	40	13000	AR	NBM-Bamboo
Dukura	Itamundia RF	20	7000	AR	NBM-Bamboo
Dukura	Matiahudi	15	24000	AR	Bald Hill Plantation
Bangiriposi	Hijili VF	10	16000	AR	Bald Hill Plantation
Deuli	Budhamara	10	16000	AR	Bald Hill Plantation
Kaptipada	Sukhuapata	15	24000	AR	Bald Hill Plantation
Pithabata	Budhikhamari RF	15	24000	AR	MGNREGS-AR
Rasgobindpur	Jamsole RF	10	16000	AR	MGNREGS-AR
Kaptipada	Natto	5	8000	AR	MGNREGS-AR
Dukura	Deulia RF	10	16000	AR	MGNREGS-AR
Betnoti	Bishrampur RF	10	16000	AR	MGNREGS-AR
Bangiriposi	Jaganathpur VF	10	16000	AR	MGNREGS-AR
Bangiriposi	Anlatota	5	8000	AR	MGNREGS-AR
Bangiriposi	Jaldiha	5	8000	AR	MGNREGS-AR
Udala	Bhandagaon RF	10	16000	AR	MGNREGS-AR
Udala	Kuamara RF	10	16000	AR	Economic plantation
Udala	Khunta RF	15	24000	AR	Economic plantation
Pithabata	Banatalapada	15	24000	AR	Economic plantation
Pithabata	Budhikhamari RF	10	16000	AR	Economic plantation
Kaptipada	Sukhuapata hill block	15	24000	AR	Bald hill Plantation
Udala	Rajabasa (Similipal RF)	10	16000	AR	Bald hill Plantation
Dukura	Sansole VF	10	16000	AR	Bald hill Plantation
Bangiriposi	Mahulisole	10	16000	AR	Bald hill Plantation

Name of Range	Name of site	Area in ha.	Seedlings planted	Type of plantation	Scheme
Deuli	Budamara hill	5	8000	AR	Bald hill Plantation
Deuli	Deuli RF	20	8000	AR	SP-Bamboo plantation
Dukura	Belpal RF	18	28800	AR	13th FCG (Block)
Dukura	Singtia VF	7	11200	AR	13th FCG (Block)
Betnoti	Balka RF	20	32000	AR	13th FCG (Block)
Betnoti	Kalama RF	5	8000	AR	13th FCG (Block)
Bangiriposi	Kalapani VF	25	40000	AR	13th FCG (Block)
Udala	Kendumundi	15	24000	AR	13th FCG (Block)
Udala	Surukuna	10	16000	AR	13th FCG (Block)
Deuli	Suliapada RF	5	8000	AR	WL- corridor
Rasgobindpur	Baghajharan PRF	5	8000	AR	WL- corridor
Kaptipada	Haridachua (Natto RF)	20	32000	AR	WL- corridor
Betnoti	Asanabani RF	5	8000	AR	WL- corridor
Betnoti	Agada VSS	20	22000	AR	NAP (FDA)-AR
Betnoti	Panisole VSS (Badampur RF)	30	33000	AR	NAP (FDA)-AR
Udala	Belakuti RF	15	24000	AR	MGNREGS
Betnoti	Bidukudia	10	16000	AR	MGNREGS
Bangiriposi	Mahulisole	15	24000	AR	MGNREGS
Total		**3990.32**	**5560012**		

ABSTRACT OF AFFORESTATION ACTIVITIES DURING THE PLAN PERIOD

Year	ANR with gap planting (in ha.)	AR (in ha.)
1996-97	1325	25
1997-98	60	20
1998-99	230	55
1999-2000	24.017	100
2000-01	850	0
2001-02	0	100
2002-03	0	100
2003-04	0	60
2004-05	470	6.15
2005-06	504	0
2006-07	150	95.41
2007-08	2173	680
2008-09	785	175
2009-10	60	115
2010-11	955	902
2011-12	20	151.76
2012-13	400	220
2013-14	1100	290
2014-15	4175	520
2015-16	700	375
Total	**13981.017**	**3990.32**

Appendix – XVII

SAMPLE PLOT WISE FOREST FLOOR DEBRISH

Sl. No	Name of the Range	Name of Forest Block	Name of the Section	Name of the Beat	SP I.D.	Longitude	Latitude	Weight of Debrish	
								NE	SW
1	Bangriposi	Thakurani PRF	Badgaon	Badgaon	467	86°31'19.8"	22°01'54.0"	3.200g.	3.400g.
2	Bangriposi	Maheshpur HB-9	Sirsha	Joka	193	86°30'07.1"	22°15'41.7"	2.300g.	2.400g.
3	Bangriposi	Rangahudi PRF	Badgaon	Dhabanisole	419	86°32'34.2"	22°05'29.8"	2.200g.	2 Kg.
4	Betnoti	Patpur RF	Betnoti	Betnoti	403	86°50'14.6"	21°42'23.8"	1.50g.	1 Kg.
5	Betnoti	Dalki RF	Betnoti	Nadpur	100	86°51'39.0"	21°40'12.3"	1.300g.	1 Kg.
6	Betnoti	Daldali RF	Baisinga	Baisinga-II	96	86°53'50.5"	21°38'08.8"	1.300g.	1.400 Kg.
7	Betnoti	Khirpada	Baisinga	Baisinga-I	231	86°52'49.0"	21°38'44.3"	1.200g.	1.500g.
8	Betnoti	Durgapur RF	Betnoti	Durgapur	151	86°52'05.4"	21°49'39.3"	1.500g.	1 Kg.
9	Betnoti	Ganigadha RF	K.C. Pur	K.C. Pur	162	86°50'10.2"	21°50'16.8"	1 Kg.	1.200g.
10	Betnoti	K. C. Pur RF	K.C. Pur	Tungadhua	245	86°48'48.1"	21°49'13.5"	1.800g.	1.700g.
11	Betnoti	K. C. Pur RF	K.C. Pur	Tungadhua	251	86°48'56.9"	21°48'11.2"	3.800g.	3.500g.
12	Betnoti	Badampur	Badampur	Badampur	24	86°58'48.5"	21°45'34.2"	1.400g.	1.200g.
13	Betnoti	Routrapur	Badampur	Sardiha	422	86°56'03.2"	21°44'01.6"	1.300g.	0.900g.
14	Betnoti	Purunia	Baisinga	Bamda	415	86°58'43.7"	21°37'53.9"	1.600g.	1.500g.
15	Betnoti	Ashanbani RF	Badampur	Gadigaon	20	86°55'58.9"	21°48'20.6"	2.500g.	2.300g.
16	Deuli	Suliapada	Suliapada	Baghada	439	86°57'16.6"	21°58'32.3"	0.700g.	0.670g.
17	Deuli	Suliapada	Suliapada	Kantisahi	448	86°58'03.8"	22°02'51.4"	1.700g.	2 Kg.
18	Deuli	Suliapada	Suliapada	Suliapada	442	86°58'42.0"	21°59'44.1"	1.500g.	1.800g.
19	Deuli	Deuli	Deuli	Kaliasole	125	86°53'20.9"	22°00'10.9"	2.500g.	2.300g.
20	Deuli	Deuli	Deuli	Kaliasole	117	86°53'54.7"	21°59'51.1"	1.700g.	1.200g.
21	Deuli	Tangasole	Chandua	Chandua	456	86°46'14.5"	22°06'19.9"	2.800g.	3 Kg.
22	Deuli	Chandua	Chandua	Jamjarki	81	86°44'42.8"	22°06'42.6"	2.300g.	2.800g.
23	Deuli	Chandua	Kuliana	Nuagaon	75	86°41'34.9"	22°08'.38.8"	1.500g.	1.700g.
24	Deuli	Kuliana	Kuliana	Kuliana	262	86°40'47.3"	22°05'31.8"	2.300g.	2.800g.
25	Dukura	Badsahi RF	Badasahi	Badasahi	35	86°43'52.4"	21°43'02.2"	0.700g.	0.900g.
26	Dukura	Chakradharpur RF	Badasahi	Badasahi	69	86°47'14.6"	21°41'04.9"	0.400g.	0.300g.
27	Dukura	Itamundia RF	Badasahi	Badasahi	195	86°43'26.0"	21°41'20.6"	0.900g.	1.400g.
28	Kaptipada	Notto RF	Sarat	Sanadei	379	86°24'30.8"	21°30'08.8"	1.900g.	2 Kg.
29	Kaptipada	Notto RF	Sarat	Notto	343	86°18'03.8"	21°27'39.0"	1.800g.	1.400g.
30	Kaptipada	Notto RF	Sarat	Notto	328	86°17'54.4"	21°28'18.1"	5.150g.	4 Kg.
31	Kaptipada	Notto RF	Sarat	Notto	350	86°18'45.8"	21°27'39.3"	8.200g.	7 Kg.
32	Kaptipada	Notto RF	Sarat	Notto	331	86°20'36.0"	21°30'17.6"	1.500g.	2 Kg.
33	Kaptipada	Notto RF	Sarat	Sanadei	386	86°24'42.0"	21°28'59.8"	2.500g.	2.200g.
34	Kaptipada	Notto RF	Sarat	Sanadei	376	86°24'14.1"	21°29'23.3"	6.400g.	5.200g.
35	Kaptipada	Notto RF	Sarat	Sarat	357	86°21'31.7"	21°29'43.5"	2.600g.	3 Kg.
36	Kaptipada	Notto RF	Sarat	Sarat	360	86°20'39.7"	21°28'23.4"	4.300g.	4.600g.
37	Pithabata	Balidiha	Balidiha	Khasadiha	110	86°36'44.8"	21°57'37.7"	1.200g.	1 Kg.
38	Pithabata	Manchabandha	Manchabandha	Manchabandha	285	86°45'07.2"	21°03'48.0"	0.900g.	1.100g.
39	Pithabata	Hatikote	Orachandabila	Hatikote	184	86°44'57.0"	21°51'35.4"	1 Kg.	1.500g.
40	Pithabata	Hatikote	Orachandabila	Hatikote	182	86°44'21.1"	21°52'16.3"	1.200g.	1.300g.
41	R.G.Pur	Amarda	Morada	Morada	32	86°58'34.7"	21°52'14.0"	2.800g.	3.200g.
42	R.G.Pur	Amarda	Rasgobindpur	Gaon Amarda	5	87°05'09.2"	21°49'08.0"	2.800g.	2.600g.
43	R.G.Pur	Amarda	Rasgobindpur	Nakichua	13	87°05'31.1"	21°45'44.5"	2.400g.	2.100g.
44	R.G.Pur	Sarumula	Rasgobindpur	Sarumula	431	87°04'04.0"	21°44'47.0"	2.300g.	2.200g.
45	R.G.Pur	Ganigadha RF	Sakhabhanka	Jamsole	171	86°49'45.8"	21°52'00.5"	3 Kg.	3.200g.
46	Udala	Udala RF	Udala	Udala	480	86°34'59.3"	21°35'09.7"	1.250g.	1.200g.
47	Udala	Khunta RF	Khunta	Khunta	239	86°38'30.3"	21°42'03.9"	1.700g.	1.400g.
48	Udala	Kanpur RF	Kuamara	Kuamara	217	86°44'53.6"	21°38'00.9"	0.700g.	0.500g.

Appendix – XVIII

LIST OF VSS IN BARIPADA FOREST DIVISION

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Whether Executive committee formed	Whether MoU signed	Whether Micro Plan Prepared	Whether registered under the Society Act by C.F as J.W.C
1	Kaptipada	Kaptipada	Kuanrapur	Kuanrapur	Mankadapada	Tangiria U.D.P.F	20	Formed	Signed	Prepared	Nil
2	Kaptipada	Podadiha	Asanbani	Asanbani	Pingu	Asanbani R.F. & U.D.P.F	150	-do-	-do-	Not	Nil
3	Kaptipada	Kaptipada	Khaladi	Khaladi	Khaladi	Nachipur R.F.	100	-do-	-do-	-do-	Nil
4	Kaptipada	Sarat	Aswakuti	Aswakuti	Labanyadeipur	Notto R.F.	150	-do-	Signed	Prepared	Nil
5	Kaptipada	Sarisua	Raipal	Raipal	Padmapokhari	Sukhuapata P.F.	100	-do-	-do-	-do-	Nil
6	Kaptipada	Kaptipada	Jhiliribani	Jhiliribani	Mankadapada	Sukhuapata P.F.	100	-do-	Signed	Prepared	Nil
7	Kaptipada	Sarat	Purunapani	Purunapani	Sarat	Notto R.F.	150	-do-	-do-	Prepared	Nil
8	Kaptipada	Kaptipada	Jharanghati	Jharanghati	Kaptipada	Jharanghati U.D.P.F	30	-do-	-do-	Not	Nil
9	Kaptipada	Podadiha	Nuhamalia	Nuhamalia	J.S.Jamudiha	Asanbani R.F. & U.D.P.F	50	-do-	-do-	-do-	Nil
10	Kaptipada	Podadiha	Kaliasole	Kaliasole	-do-	Asanbani R.F. & U.D.P.F	50	-do-	-do-	-do-	Nil
11	Kaptipada	Kaptipada	Salaghati	Salaghati	Kaptipada	Jharanghati U.D.P.F	30	-do-	-do-	Prepared	Nil
12	Kaptipada	Kaptipada	Tikarapada	Tikarapada	Mankadapada	Jharanghati U.D.P.F	30	-do-	-do-	-do-	Nil
13	Kaptipada	Kaptipada	Gayalmara	Gayalmara	-do-	Gayalmara U.D.P.F.	30	-do-	Signed	Not	Nil
14	Kaptipada	Kaptipada	Raikania	Raikania	Jodida	Nedam U.D.P.F	30	-do-	-do-	-do-	Nil
15	Kaptipada	Kaptipada	Tangaria	Tangaria	Mankadapada	Jharanghati U.D.P.F	30	-do-	-do-	-do-	Nil
16	Kaptipada	Sarat	Sandei	Sandei	Labanyadeipur	Notto R.F.	50	-do-	-do-	-do-	Nil
17	Kaptipada	Sarat	Notto	Notto	Notto	Notto R.F.	100	-do-	Not signed	Not	Nil

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Whether Executive committee formed	Whether MoU signed	Whether Micro Plan Prepared	Whether registered under the Society Act by C.F as J.W.C
18	Kaptipada	Sarat	Silei Pokhori	Silei Pokhori	Sarat	Notto R.F.	100	-do-	-do-	-do-	Nil
19	Kaptipada	Sarat	Khatuapada	Khatuapada	Sarat	Notto R.F.	100	-do-	-do-	-do-	Nil
20	Kaptipada	Sarat	Hudisahi	Hudisahi	Labanyadeipur	Notto R.F.	100	-do-	-do-	-do-	Nil
21	Kaptipada	Sarat	Katuria	Katuria	Labanyadeipur	Notto R.F.	100	-do-	-do-	-do-	Nil
22	Kaptipada	Sarat	Asurakhal	Asurakhal	Debla	Notto R.F.	100	-do-	-do-	-do-	Nil
23	Kaptipada	Sarisua	Sarisua	Sarisua	Kalamgodia	Sukhuapata U.D.P.F.	150	-do-	-do-	-do-	Nil
24	Kaptipada	Sarisua	Padam pokhari	Padam pokhari	Padam pokhari	Sukhuapata U.D.P.F.	100	-do-	-do-	-do-	Nil
25	Kaptipada	Podadiha	Kusanapur	Kusanapur	Koliolam	Notto R.F.	100	-do-	-do-	Prepared	Nil
26	Kaptipada	Podadiha	Gandidhar	Gandidhar	Debala	Notto R.F.	100	-do-	-do-	Not	Nil
27	kaptipada	kaptipada	khuntabil	khuntabil	Mankodapoda Village Forest	Khuntabil U.D.P.F	66	yes	Signed	yes	Nil
28	kaptipada	kaptipada	Bholaghati	BholaGhati	kaptipada	Bholaghati U.D.P.F	55	yes	Signed	yes	Nil
29	kaptipada	kaptipada	Dangarchua	Dangarchua	Debala	Dangarchua U.D.P.F	67	yes	Signed	yes	Nil
30	kaptipada	Sarat	Rajat Nagar	Rajat Nagar	Ranipokhari	Rajat Nagar U.D.P.F	54	yes	Signed	yes	Nil
31	kaptipada	kaptipada	Sarabasa	Sarabasa	J S Jamdiha	Asanbani R.F. & U.D.P.F	51	yes	Signed	yes	Nil
32	kaptipada	Sarisua	Sripadmanjari	Sripadmanjari	Kalamgodia	Sripadmanjari U.D.P.F	57	yes	Signed	yes	Nil
33	Kaptipada	Sarat	Hudisahi	Hudisahi	Labanyadeipur	Notto RF	65	yes	Signed	yes	Nil
34	Pithabata	Orachandabilla	Hatikot	Hatikot	Hatikot	Hatikot R.F.	200	-do-	Signed	-do-	Nil
35	Pithabata	Orachandabilla	Sibadurga	Sibadurga	-do-	BhagabatCh.Pur R.F. & U.D.P.F	200	-do-	-do-	-do-	Nil
36	Pithabata	Orachandabilla	Tasarda	Tasarda	-do-	BhagabatCh.Pur R.F. & U.D.P.F	200	-do-	-do-	-do-	Nil
37	Pithabata	Orachandabilla	Kanchi	Kanchi	-do-	BhagabatCh.Pur R.F. & U.D.P.F	200	-do-	-do-	-do-	Nil

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Whether Executive committee formed	Whether MoU signed	Whether Micro Plan Prepared	Whether registered under the Society Act by C.F as J.W.C
38	Pithabata	Manchabandha	Nayapurusattam	Nayapurusattam	Manchabandha	Manchabandha R.F.	200	-do-	-do-	-do-	Nil
39	Pithabata	Manchabandha	Mahulia & Gauddihi	Mahulia & Gauddihi	Mahulia	Manchabandha R.F.	150	-do-	-do-	-do-	Nil
40	Pithabata	Orachandabilla	Bhagabat Ch. Pur	Bhagabat Ch. Pur	Hatikot	BhagabatCh.Pur R.F. & U.D.P.F	200	-do-	-do-	-do-	Nil
41	Pithabata	Orachandabilla	Ahari & Nuadihi	Ahari & Nuadihi	Nuadihi	Hatikot R.F.	100	-do-	-do-	-do-	Nil
42	Pithabata	Manchabandha	Budhikhamari	Budhikhamari	Budhikhamari	Budhikhamari R.F.	200	-do-	-do-	Prepared	Nil
43	Pithabata	Haldibani	Mundhabani	Mundhabani	Gendapokhari	Mundhabani U.D.P.F	58.21	-do-	-do-	-do-	Nil
44	Pithabata	Manchabandha	Manchabandha	Manchabandha	Mahulia	Manchabandha R.F.	35	-do-	-do-	-do-	Nil
45	Pithabata	Balidiha	Kitadihi	Kitadihi	Kalapathar	Kitadihi U.D.P.F	150	-do-	-do-	Not	Nil
46	Pithabata	Orachandabilla	Sindurgoura	Sindurgoura	Bhagabat Ch. Pur	BhagabatCh.Pur R.F. & U.D.P.F	50	Formed	No	Not	Nil
47	Pithabata	Manchabandha	Baba dhaneswar	Baba dhaneswar	B.C. Pur	BhagabatCh.Pur R.F. & U.D.P.F	76	-do-	Signed	Prepared	Nil
48	Pithabata	Manchabandha	Purudihi	Purudihi	Rangamatia	Manchabandha R.F.	85	-do-	-do-	-do-	Nil
49	Pithabata	Manchabandha	Dhansole	Dhansole	B.C. Pur	BhagabatCh.Pur R.F. & U.D.P.F	52	-do-	-do-	-do-	Nil
50	Pithabata	Manchabandha	Sarusole	Sarusole	Badjole	Budhikhamari R.F.	100	-do-	-do-	-do-	Nil
51	Pithabata	Manchabandha	Badsole	Badsole	Badjole	Budhikhamari R.F.	122	-do-	-do-	-do-	Nil
52	Pithabata	Manchabandha	Ahari	Ahari	Budhikhamari	Manchabandha R.F.	174	-do-	-do-	-do-	Nil
53	Pithabata	Manchabandha	Batakata	Batakata	Hatikot	Hatikot R.F.	41	-do-	-do-	-do-	Nil
54	Pithabata	Manchabandha	Bhadusole	Bhadusole	Hatikot	Hatikot R.F.	54	-do-	-do-	-do-	Nil

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55	Pithabata	Manchabandha	Radhikasole	Radhikasole	Budhikhamari	Budhikhamari R.F.	100	-do-	-do-	-do-	Nil
56	Pithabata	Manchabandha	Maa Dwarsuni	Maa Dwarsuni	Badjole	Budhikhamari R.F.	103	-do-	-do-	-do-	Nil
57	Pithabata	Orachandabilla	Banatalapada	Banatalapada	Sialighati	BhagabatCh.Pur R.F. & U.D.P.F	100	-do-	-do-	-do-	Nil
58	Pithabata	Haldibani	Barudihi	Barudihi	Gendapokhari	Barudihi U.D.P.F	30	-do-	-do-	-do-	Nil
59	Pithabata	Haldibani	Baidikotha (Gandeburu)	Baidikotha (Gandeburu)	-do-	Baidikotha U.D.P.F	50	-do-	-do-	-do-	Nil
60	Pithabata	Haldibani	Kantasola	Kantasola	Kantasola	Kantasola U.D.P.F	50	-do-	-do-	-do-	Nil
61	Pithabata	Orachandabilla	Nuadihi	Nuadihi	Nuadihi	Hatikot R.F.	100	-do-	-do-	-do-	Nil
62	Pithabata	Pithabata	Baldiha	Baldiha	Baldiha	Baldiha RF & U.D.P.F	50	-do-	-do-	-do-	Nil
63	Pithabata	Baldiha	Hijalgadia	Hijalgadia	Kalapathar	Asanbani RF & U.D.P.F	141	-do-	-do-	-do-	Nil
64	Pithabata	Baldiha	Khasadiha	Khasadiha	Kuchilaghaty	Baldiha RF & U.D.P.F	79.4	-do-	-do-	-do-	Nil
65	Pithabata	Baldiha	Maa Banadurga	Kuchilaghaty	Kuchilaghaty	Purunapani RF	79.4	-do-	-do-	-do-	Nil
66	Pithabata	Haldibani	Ramharipur	Bhuasuni	Bhuasuni	Ramharipur U.D.P.F	50	-do-	-do-	-do-	Nil
67	Pithabata	Haldibani	Kantasola	Kantasola Mohantasahi	Badgaon	Kantasola U.D.P.F	52	-do-	-do-	-do-	Nil
68	Pithabata	Haldibani	Barudihi	Barudihi	Patihinja	Baudihi U.D.P.F	50	-do-	-do-	-do-	Nil
69	Pithabata	Haldibani	Gendapokhari	Gendapokhari	Gendapokhari	Gendapokhari U.D.P.F	116	-do-	-do-	-do-	Nil
70	Pithabata	Haldibani	Jhaliburu	Mudrajodi	Kalapathar	Mudrajodi U.D.P.F	113	-do-	-do-	-do-	Nil
71	Pithabata	Haldibani	Netaji	Jagannathpur	Gendapokhari	Jaganthpur U.D.P.F	51	-do-	-do-	-do-	Nil
72	Pithabata	Orachandabill	Banatalpada	Banatalpada	Sialighati	BhagabatCh.Pur R.F. & U.D.P.F	53.1	-do-	-do-	-do-	Nil
73	Pithabata	Orachandabill	Bhagabandha	Bhagabandha Dhabani	B.C. Pur	Bhagabandha RF	54	-do-	-do-	-do-	Nil

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74	Pithabata	Orachandabill	Dinabandhupur	Dinabandhupur	Sialighati	Dinabandhupur U.D.P.F	50	-do-	-do-	-do-	Nil
75	Pithabata	Orachandabill	Budheirana	Budheirana	Sialighati	Budheirana U.D.P.F	50	-do-	-do-	-do-	Nil
76	Udala	Udala	Patpur	Patpur	Khaladi	Udala R.F.	200	-do-	Signed	Not	Nil
77	Udala	Udala	Maa Banakanda Dutikadeipur	Maa Banakanda Dutikadeipur	Khaladi	Udala R.F.	100	-do-	-do-	Prepared	Nil
78	Udala	Udala	Jagabalia ,Kunrpal	Jagabalia ,Kunrpal	Udala	Udala R.F.	150	-do-	-do-	-do-	Nil
79	Udala	Udala	Nagpal	Nagpal	Udala	Udala R.F.	50	-do-	-do-	Not	Nil
80	Udala	Udala	Kutling	Kutling	Badsigharia	Fuljhari R.F.	159.15	-do-	-do-	Prepared	Nil
81	Udala	Udala	Kathuabasa	Kathuabasa	-do-	Fuljhari R.F.	59.15	Formed	Signed	Not	Nil
82	Udala	Udala	Dugudha	Dugudha	Badsingaria	Dugudha R.F.	35.29	-do-	-do-	-do-	Nil
83	Udala	Udala	Banasathi kendra Nabra	Banasathi kendra Nabra	Bahubandha	Nabra U.D.P.F	161	-do-	-do-	Prepared	Nil
84	Udala	Udala	Salmundali	Salmundali	-do-	Salmundali U.D.P.F	40	-do-	-do-	Not	Nil
85	Udala	Khunta	Belakuti	Belakuti	Pasuda	Belakuti R.F. & U.D.P.F	223.38	-do-	-do-	-do-	Nil
86	Udala	Khunta	Naupada	Naupada	Churuni	Naupada R.F.	324.88	-do-	-do-	-do-	Nil
87	Udala	Khunta	Dimagodia	Dimagodia	-do-	Dimagodia R.F	6.96	-do-	-do-	-do-	Nil
88	Udala	Khunta	Surukuma	Surukuma	Khunta	Khunta R.F.	50	-do-	-do-	-do-	Nil
89	Udala	Khunta	Kenduamundi	Kenduamundi	-do-	Khunta R.F.	50	-do-	-do-	-do-	Nil
90	Udala	Khunta	Silghati	Silghati	-do-	Khunta R.F.	100	-do-	-do-	-do-	Nil
91	Udala	Khunta	Bhandagaon	Bhandagaon	Churuni	Bhandagaon R.F.	122.21	-do-	-do-	-do-	Nil
92	Udala	Kuamara	Dhaudia	Dhaudia	Arpata	Dhaudia R.F. & U.D.P.F	100	-do-	-do-	-do-	Nil

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93	Udala	Kuamara	Palasa	Palasa	-do-	Dhaudia R.F. & U.D.P.F	100.2	-do-	-do-	-do-	Nil
94	Udala	Kuamara	Arapata	Arapata	-do-	Dhaudia R.F. & U.D.P.F	80	-do-	-do-	Not	Nil
95	Udala	Kuamara	Puruna Baripada	Puruna Baripada	Puruna Baripada	Kuamara R.F. & U.D.P.F	50	-do-	-do-	-do-	Nil
96	Udala	Kuamara	Chilima	Chilima	Kuamara	Kuamara R.F. & U.D.P.F	100	-do-	-do-	-do-	Nil
97	Udala	Kuamara	Kuamara	Kuamara	Kuamara	Kuamara R.F. & U.D.P.F	79.53	-do-	-do-	-do-	Nil
98	Udala	Kuamara	Mersigaon	Mersigaon	Kusalda	Mersigaon R.F.	100	-do-	-do-	-do-	Nil
99	Udala	Khunta	Nahara	Nahara	Nahara	Nahara R.F.	161.87	-do-	-do-	-do-	Nil
100	Udala	Kuamara	Angargadia	Angargadia	Puruna Baripada	Angargadia Plantation	20	-do-	Not signed	-do-	Nil
101	Udala	Kuamara	Kusumia	Kusumia	Kuamara	Dhaudia R.F. & U.D.P.F	100	-do-	-do-	-do-	Nil
102	Udala	Kuamara	Patua	Patua	Puruna Baripada	Kuamara R.F. & U.D.P.F	30	-do-	-do-	-do-	Nil
103	Udala	Udala	Bahubandha	Bahubandha	Bahubandha	Bahubandha U.D.P.F	57.9	yes	Signed	yes	Nil
104	Udala	Kuamara	Parchhipur	Parchhipur	Arpata	Dhaudia R.F. & U.D.P.F	50	Yes	Signed	yes	Nil
105	Udala	Khunta	Tentulia	Tentulia	Ranibandh	Belakuti R.F. & U.D.P.F	50	yes	Signed	yes	Nil
106	Udala	Kuamara	Pancha Pali	Karda	Kuamara	Kuamara R.F. & U.D.P.F	55	yes	Signed	yes	Nil
107	Bangriposi	Badgaon	Tangiabasa	Tangiabasa	Badgaon	Thakurani R.F.	100	-do-	-do-	-do-	Nil
108	Bangriposi	Badgaon	Khadikasole	Khadikasole	Budhikhamari	Thakurani R.F.	100	-do-	-do-	-do-	Nil
109	Bangriposi	Badgaon	Nafri & Jhinkpahadi	Nafri	Nafri	Nafri U.D.P.F.	100	-do-	-do-	-do-	Nil
110	Bangriposi	Sirsa	Purunapani	Purunapani	Sorispal	Dighi R.F.	50	-do-	-do-	-do-	Nil

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111	Bangriposi	Sirsa	Digarisole	Digarisole	Joka	Digarisole U.D.P.F	50	-do-	-do-	-do-	Nil
112	Bangriposi	Sirsa	Uchagoan	Uchagoan	Bagbuda	Baunsiapat U.D.P.F	100	-do-	Signed	-do-	Nil
113	Bangriposi	Badgaon	Kandalia	Kandalia	Bhuasuni	Rangahudi R.F.	86.67	-do-	-do-	-do-	Nil
114	Bangriposi	Badgaon	Matikhani	Matikhani	-do-	Matikhani U.D.P.F	80	-do-	-do-	-do-	Nil
115	Bangriposi	Badgaon	Balikhani	Balikhani	Dhabanisole	Tulia U.D.P.F	200	-do-	-do-	-do-	Nil
116	Bangriposi	Badgaon	Paktia VSS	Paktia VSS	Saroskona	Dahipahadi U.D.P.F	50	-do-	Signed	Prepared	Nil
117	Bangriposi	Bangriposi	Ghiajodi	Ghiajodi	Puani	Dighi R.F.	60	-do-	Signed	Not	Nil
118	Bangriposi	Badgaon	Jhinkpahadi	Jhinkpahadi	Nafri	Jinkpahadi D.P.F	56.3	-do-	Signed	Prepared	Nil
119	Bangriposi	Badgaon	Purusattampur	Purusattampur	Bhuasuni	Purusatampur U.D.P.F	63	-do-	Signed	Prepared	Nil
120	Bangriposi	Badgaon	Kankadajharan	Hill Block-II, Kankadajharan	Bhuasuni	Kankadajharan D.P.F	66.9	-do-	Signed	Prepared	Nil
121	Bangriposi	Kusumbandh	Palasbani	Palasbani	Saraisapal	Palasbani D.P.F	90.2	-do-	Signed	Prepared	Nil
122	Bangriposi	Kusumbandh	Sannedam	Sannedam	Sarispal	Sannedam D.P.F	60.2	-do-	Signed	Prepared	Nil
123	Bangriposi	Kusumbandh	Sulisahi, Bhalubasa	Sulisahi, Bhalubasa	Budkhikhamari	Sulisahi, Bhalubasa D.P.F	85	-do-	Signed	Prepared	Nil
124	Bangriposi	Sirsa	Uparbeda	Uparbeda	Joka	Uparbeda U.D.P.F	51.3	-do-	Signed	Prepared	Nil
125	Dukura	Tadki	Itamundia	Itamundia	Itamundia	Itamundia R.F.	110	-do-	Signed	Prepared	Nil
126	Dukura	Badsahi	Guhaldihi	Guhaldihi	Suhagpur	Badsahi R.F.	60	-do-	-do-	Not	Nil
127	Dukura	Tadki	Chakrabarty	Chakrabarty	Dukura	Dukura R.F.	100	-do-	-do-	-do-	Nil
128	Dukura	Badsahi	Maitrapur	Maitrapur	Barasahi	Purunapani R.F. & U.D.P.F	25	-do-	-do-	Not	Nil
129	Dukura	Badsahi	Badasahi	Badasahi	Badasahi	Badasahi R.F. & U.D.P.F	122	-do-	-do-	-do-	Nil
130	Dukura	Digdiga	Talanda	Talanda	Sankerko	Kerko R.F.	40	-do-	-do-	-do-	Nil

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131	Dukura	Badsahi	Kaudikhani	Kaudikhani	Suhagpura	Bidyadharpur R.F.	25	Formed	Signed	Prepared	Nil
132	Dukura	Digdiga	Dalkisole	Dalkisole	Khasadihi	Prativadeipur U.D.P.F	75	-do-	-do-	-do-	Nil
133	Dukura	Digdiga	Khasadiha	Khasadiha	-do-	Khasadiha U.D.P.F	50	-do-	-do-	Not	Nil
134	Dukura	Digdiga	Sirish Ch. Pur	Sirish Ch. Pur	Sirish Ch. Pur	Sirish Ch. Pur U.D.P.F	50	-do-	-do-	-do-	Nil
135	Dukura	Badsahi	Maa Mangala	Maa Mangala	Deulia	Deulia R.F.	100	-do-	-do-	-do-	Nil
136	Dukura	Badsahi	Maa Kusumeswari	Maa Kusumeswari	Kanpura	Kanpura R.F.	100	-do-	-do-	-do-	Nil
137	Dukura	Badsahi	Maa Bharati	Maa Bharati	Barasahi	Barasahi R.F.	100	-do-	-do-	-do-	Nil
138	Dukura	Badsahi	Palasa	Palasa	Suhagpura	Purunapani R.F. & U.D.P.F	25	-do-	-do-	-do-	Nil
139	Dukura	Badsahi	Kuradiha	Kuradiha	Chandanpur	Chakradharapur R.F.	25	-do-	-do-	-do-	Nil
140	Dukura	Badsahi	Guhaldihi	Guhaldihi	Suhagpura	Purunapani R.F. & U.D.P.F	35	-do-	-do-	Not	Nil
141	Dukura	Badsahi	Ratanpur	Ratanpur	Ratanpur	Kanpura R.F.	50	-do-	Not signed	Not	Nil
142	Dukura	Badsahi	Rangadiha	Rangadiha	Suhagpura	Badsahi R.F.	45	-do-	Not signed	Not	Nil
143	Dukura	Tadki	Nuasahi-Khanua	Nuasahi	Khanua	Khanua R.F.	10	-do-	Signed	Not	Nil
144	Dukura	Tadki	Dhansola-Nischintpur	Dhansola	Khanua	Khanua R.F.	70	-do-	Signed	Not	Nil
145	Dukura	Dukura	Chundiha	Chundiha	Chundiha	Dukura R.F.	50	-do-	Signed	Not	Nil
146	Dukura	Badsahi	Guabehera	Guabehera	Badasahi	Badsahi R.F.	45	-do-	Signed	Not	Nil
147	Dukura	Badsahi	Barudihi	Barudihi	Badasahi	Badsahi R.F.	50	-do-	Signed	Not	Nil

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148	Dukura	Tadki	Maa Mathamani (Tilasahi-Mankdapal)	Tilasahi	Purnachandrapur	V.F. & Patita	50	-do-	Signed	Not	Nil
149	Dukura	Badsahi	Maa Gadachandi VSS	Badsahi	Bhimda	Chenguamangal RF	75	-do-	Signed	NOt	Nil
150	Dukura	Badasahi	Chakradharpur	Chakradharpur	Kendudiha	Chakradharpur RF	57.4	yes	Signed	yes	Nil
151	Dukura	Badasahi	Maa Solobhouni	Chellia (A)	Chelia	Bidhyadharpur RF	216	yes	Signed	yes	Nil
152	Dukura	Badasahi	Patisari	Patisari	Patisari	Kanpura RF	66	yes	Signed	yes	Nil
153	Dukura	Badasahi	Belpal	Belpal	Badsahi	Belpal RF	73.9	yes	Signed	yes	Nil
154	Dukura	Digdiga	Godipokhari	Godipokhari	Kochilaghati	Khasadiha U.D.P.F	75.7	yes	Signed	yes	Nil
155	Dukura	Digdiga	Maa Ambika	Besarpani	Kendua	Konthalhudi U.D.P.F	52	yes	Signed	yes	Nil
156	Dukura	Digdiga	Baghuahudi	Sansole	Rangamatia	Baghuadudi U.D.P.F	50	yes	Signed	yes	Nil
157	Dukura	Tadki	Maa kanyanagari	Hatikot	Jadunathpur	Kanthalhudi U.D.P.F	105	yes	Signed	yes	Nil
158	Dukura	Tadki	Maa Kanthalu	Jadunathpur	Jadunathpur	Kanthalhudi U.D.P.F	75	yes	Signed	yes	Nil
159	Dukura	Badasahi	Tikayatpur	Tikayatpur	Tikayatpur	Kanpura RF	104	yes	Signed	yes	Nil
160	Deuli	Kuliana	Bhurusani Nuhamalia	Nuhamalia	Bhurusani	Chandua R.F.	100	-do-	Signed	Not	Nil
161	Deuli	Kuliana	Nuhamalia	Nuhamalia	Bhurusani	Chandua R.F.	100	-do-	-do-	-do-	Nil
162	Deuli	Kuliana	Biridihi	Biridihi	Bhurusani	Chandua R.F.	60	-do-	-do-	-do-	Nil
163	Deuli	Kuliana	Kanjia	Kanjia	Purunapani	Kuliana R.F.	150	-do-	-do-	-do-	Nil
164	Deuli	Chandua	Baidpur	Baidpur	Purunapani	Chandua R.F.	93.65	-do-	-do-	Not	Nil
165	Deuli	Suliapada	Bori	Bori	Kantisahi	Suliapada R.F.	200	-do-	-do-	Not	Nil

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166	Deuli	Deuli	Dhenkinanjia Katarikata.	Dhenkinanjia	Kujidihi	Katarikata U.D.P.F	111.2	-do-	-do-	-do-	Nil
167	Deuli	Suliapada	Chandabila Dhabonisole	Chandabila	Uphalgaria	Suliapada R.F.	90	-do-	-do-	Not	Nil
168	Deuli	Deuli	Salasahi Mundakata	Salasahi	Phania	Deoli R.F.	192	Formed	-do-	Not	Nil
169	Deuli	Deuli	Patharnesa	Patharnesa	Chuhat	Patharnesa U.D.P.F	96.6	Formed	-do-	Not	Nil
170	Deuli	Deuli	Chenaposi	Chenaposi	Chuhat	Chenaposi U.D.P.F	75.25	Formed	-do-	Not	Nil
171	Deuli	Deuli	Rainda	Rainda	Kanimahuli	Rainda U.D.P.F	58.4	-do-	-do-	-do-	Nil
172	Deuli	Deuli	Sandhenkia	Sandhenkia	Phania	Deoli R.F.	50	-do-	-do-	-do-	Nil
173	Deuli	Deuli	Badadhenkia	Badadhenkia	-do-	Deoli R.F.	26	-do-	-do-	-do-	Nil
174	Deuli	Deuli	Kadapatia Budhamara	Kadapatia	Deoli	Badsole P.R.F. & U.D.P.F	90.7	-do-	-do-	-do-	Nil
175	Deuli	Deuli	Pachanimara	Pachanimara	Phania	Deoli R.F.	57	-do-	-do-	-do-	Nil
176	Deuli	Deuli	Badaboincha	Badaboincha	-do-	Deoli R.F.	102	-do-	-do-	-do-	Nil
177	Deuli	Deuli	Dudhiasole	Dudhiasole	Kujidihi	Dudhiasole U.D.P.F	25	-do-	-do-	-do-	Nil
178	Deuli	Deuli	Badasukilakhal	Badasukilakhal	-do-	Kaliasole P.R.F.	20	-do-	Signed	Not	Nil
179	Deuli	Kuliana	Banakati	Banakati	Bharasani	Chandua R.F.	100	-do-	-do-	-do-	Nil
180	Deuli	Deuli	Bholesole	Bholesole	Kanimahuli	Bholesole U.D.P.F	40.25	-do-	-do-	-do-	Nil
181	Deuli	Deuli	Tentaposi	Tentaposi	Phania	Deoli R.F.	44	-do-	Signed	-do-	Nil
182	Deuli	Deuli	Phania	Phania	Phania	Deoli R.F.	95.3	-do-	-do-	-do-	Nil
183	Deuli	Suliapada	Hatimada	Hatimada	Badbhalia	Suliapada R.F.	70	-do-	-do-	-do-	Nil
184	Deuli	Deoli	Dharampura	Dharampura	Mohabilla	Deoli R.F.	159.25	-do-	Signed	-do-	Nil

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185	Deuli	Suliapada	Surki-Jalghati	Surki-Jalghati	Chuhat	Surki U.D.P.F	180	-do-	-do-	Not	Nil
186	Deuli	Kuliana	Banadurga J.S.C. Bhrungasole	Bhrungasole	Purunapani	Kuliana R.F.	50	-do-	-do-	Not	Nil
187	Deuli	Kuliana	BanadurgaJ.S.C. Sansorasposi	Sansorasposi	Purunapani	Kuliana R.F.	50	-do-	-do-	Not	Nil
188	Deuli	Deuli	Kundiasole	Kundiasole	Phania	Deoli R.F.	30	Formed	Signed	Prepared	Nil
189	Deuli	Deuli	Rakhnisole	Rakhnisole	Phania	Rakhnisole U.D.P.F	18.89	-do-	-do-	Not	Nil
190	Deuli	Suliapada	Badbhalia	Badbhalia	Badbhalia	Suliapada R.F.	75	-do-	-do-	-do-	Nil
191	Deuli	Deuli	Chakdhar	Chakdhar	Phania	Deoli R.F.	43.5	-do-	-do-	-do-	Nil
192	Deuli	Suliapada	Sosasole	Sosasole	Uphalgaria	Suliapada R.F.	100	-do-	-do-	Not	Nil
193	Deuli	Suliapada	Darudihi	Darudihi	Baghra	Darudihi U.D.P.F	30	-do-	-do-	-do-	Nil
194	Deuli	Suliapada	Tadki	Tadki	Kantisahi	Suliapada R.F.	100	-do-	-do-	-do-	Nil
195	Deuli	Suliapada	Bhandarisole	Bhandarisole	Uphalgaria	Suliapada R.F.	50	-do-	-do-	-do-	Nil
196	Deuli	Deuli	Raghunathpur	Raghunathpur	Phania	Deoli R.F.	148	-do-	-do-	Not	Nil
197	Deuli	Kuliana	Banadurga	Banadurga	Nudhana	Kuliana R.F.	150	-do-	-do-	Prepared	Nil
198	Deuli	Suliapada	Uphalgadia	Uphalgadia	Uphalgadia	Suliapada R.F.	100	-do-	-do-	Not	Nil
199	Deuli	Kuliana	Nimai sahi	Nimai sahi	Purunapani	Kuliana R.F.	30	-do-	-do-	-do-	Nil
200	Deuli	Deuli	Jhaliamara	Jhaliamara	Kostha	Deoli R.F.	200	-do-	-do-	-do-	Nil
201	Deuli	Suliapada	Bilash	Bilash	Mahabila	Deoli R.F.	200	-do-	-do-	Not	Nil
202	Deuli	Deuli	Dhatika	Dhatika	Kujidihi	Kaliasole P.R.F.	40	-do-	-do-	Prepared	Nil
203	Deuli	Deuli	Kathosirsi South	Kathosirsi South	Kostha	Deoli R.F.	50	-do-	-do-	Not	Nil

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204	Deuli	Deuli	Kathosirsi North	Kathosirsi North	Kostha	Deoli R.F.	200	-do-	-do-	-do-	Nil
205	Deuli	Deuli	Bhuskunda	Bhuskunda	Mahabila	Deoli R.F.	200	-do-	-do-	-do-	Nil
206	Deuli	Deuli	Chakchakia	Chakchakia	Phania	Deoli R.F.	200	-do-	-do-	-do-	Nil
207	Deuli	Suliapada	Dhansole	Dhansole	Kantisahi	Suliapada R.F.	200	-do-	-do-	-do-	Nil
208	Deuli	Deuli	Badsole	Badsole	Deoli	Badsole P.R.F. & U.D.P.F	200	-do-	-do-	Not	Nil
209	Deuli	Suliapada	Badsole	Badsole	Kantisahi	Suliapada R.F.	100	-do-	-do-	Not	Nil
210	Deuli	Suliapada	Keutinimari(Ukasole)	Keutinimari	Paktia	Suliapada R.F.	140	-do-	-do-	-do-	Nil
211	Deuli	Suliapada	Kankini	Kankini	Uphalgaria	Suliapada R.F.	175	-do-	-do-	-do-	Nil
212	Deuli	Suliapada	Nodhakundia	Nodhakundia	Kantisahi	Suliapada R.F.	50	-do-	-do-	-do-	Nil
213	Deuli	Chandua	Kathagondia	Kathagondia	Nodhana	Chandua R.F.	100	-do-	-do-	-do-	Nil
214	Deuli	Kuliana	Madanasahi	Madanasahi	Purunapani	Kuliana R.F.	30	-do-	-do-	Not	Nil
215	Deuli	Deuli	Juruka	Juruka	Kostha	Deoli R.F.	100	-do-	-do-	-do-	Nil
216	Deuli	Deuli	Maa Andharibudhi	Andharisole	Kostha	Deoli R.F.	25	-do-	-do-	-do-	Nil
217	Deuli	Kuliana	Purunapani	Purunapani	Purunapani	Purunapani U.D.P.F	55.5	-do-	-do-	Not	Nil
218	Deuli	Kuliana	Kasibeda	Kasibeda	Chandua	Chandua R.F.	100	-do-	-do-	Not	Nil
219	Deuli	Deuli	Gendakhal	Gendakhal	Kostha	Deoli R.F.	50	-do-	-do-	-do-	Nil
220	Deuli	Deuli	Kaliasole	Kaliasole	Kujidihi	Kaliasole P.R.F.	40	-do-	-do-	-do-	Nil
221	Deuli	Kuliana	Sanbadtelia	Sanbadtelia	Purunapani	Kuliana R.F.	50	-do-	-do-	-do-	Nil
222	Deuli	Deuli	Badadamahila	Badadamahila	Kujidihi	Badada U.D.P.F	25	-do-	-do-	-do-	Nil
223	Deuli	Suliapada	Pallo	Pallo	Mahabila	Suliapada R.F.	50	-do-	-do-	-do-	Nil

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224	Deuli	Kuliana	Asanasole	Asanasole	Dhangirisole	Kuliana R.F.	30	-do-	-do-	-do-	Nil
225	Deuli	Deuli	Kathogohola	Kathogohola	Mahabila	Deoli R.F.	150	-do-	-do-	-do-	Nil
226	Deuli	Kuliana	Satpantia	Satpantia	Nadhona	Kuliana R.F.	50	-do-	-do-	-do-	Nil
227	Deuli	Chandua	Rambha kakharusole	kakharusole	Chandua	Kakharusole U.D.P.F	100	Formed	Signed	-do-	Nil
228	Deuli	Deuli	Mahabila	Mahabila	Mahabila	Deoli R.F.	25	-do-	-do-	-do-	Nil
229	Deuli	Kuliana	Hadabadi banagan	Hadabadi banagan	Nudhana	Kuliana R.F.	30	-do-	-do-	-do-	Nil
230	Deuli	Kuliana	Tikayatpur	Tikayatpur	Purunapani	Kuliana R.F.	30	-do-	-do-	-do-	Nil
231	Deuli	Suliapada	Ghanghana(Laxmi club)	Ghanghana	Uphalgaria	Suliapada R.F.	100	-do-	-do-	-do-	Nil
232	Deuli	Deuli	Dahanimara	Dahanimara	Anlakuda	Badsole P.R.F. & U.D.P.F	10	-do-	-do-	-do-	Nil
233	Deuli	Chandua	Radhasole	Radhasole	Keutunimari	Chandua R.F.	50	-do-	-do-	-do-	Nil
234	Deuli	Chandua	Kalikasole	Kalikasole	-do-	Chandua R.F.	50	-do-	-do-	-do-	Nil
235	Deuli	Chandua	Bhaliatelue	Bhaliatelue	-do-	Chandua R.F.	50	-do-	-do-	-do-	Nil
236	Deuli	Chandua	Baghuasole	Baghuasole	Saragchida	Tangasole P.R.F & U.D.P.F	50	-do-	-do-	-do-	Nil
237	Deuli	Chandua	Dudhiasole	Dudhiasole	Nudhana	Chandua R.F.	100	-do-	-do-	-do-	Nil
238	Deuli	Chandua	Chalunia	Chalunia	Saragchida	Tangasole P.R.F & U.D.P.F	50	-do-	-do-	-do-	Nil
239	Deuli	Chandua	Pandasole	Pandasole	Keutunimari	Chandua R.F.	50	-do-	-do-	-do-	Nil
240	Deuli	Chandua	Badpalasia-Kaladem	Badpalasia-Kaladem	Saragchida	Tangasole P.R.F & U.D.P.F	80	-do-	-do-	-do-	Nil
241	Deuli	Chandua	Tangasole	Tangasole	-do-	Tangasole P.R.F & U.D.P.F	50	-do-	-do-	-do-	Nil

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242	Deuli	Chandua	Baunsabani	Baunsabani	-do-	Tangasole P.R.F & U.D.P.F	50	-do-	-do-	-do-	Nil
243	Deuli	Chandua	Sunaposi	Sunaposi	Keutunimari	Chandua R.F.	50	-do-	-do-	-do-	Nil
244	Deuli	Chandua	Keutunimari	Keutunimari	-do-	Chandua R.F.	80	-do-	-do-	-do-	Nil
245	Deuli	Kuliana	Ramchandrapur	Ramchandrapur	Dhangirisole	Kuliana R.F.	30	-do-	-do-	-do-	Nil
246	Deuli	Suliapada	Bankati	Bankati	Uphalgaria	Suliapada R.F.	50	-do-	-do-	-do-	Nil
247	Deuli	Kuliana	Nudhana	Nudhana	Nudhana	Kuliana R.F.	30	-do-	-do-	-do-	Nil
248	Deuli	Deuli	Khalapada	Khalapada	Garia	Khalapada D.P.F	100	-do-	-do-	-do-	Nil
249	Deuli	Deuli	Chitakhala	Chitakhala	Kujidihi	Chitakhala U.D.P.F	50	-do-	-do-	-do-	Nil
250	Deuli	Suliapada	Maa Gandharipat Gandhasahi	Gandhasahi	Uphalgaria	Suliapada R.F.	50	-do-	-do-	-do-	Nil
251	Deuli	Deuli	Manda	Manda	Manda	Deuli R.F. & U.D.P.F	95.3	-do-	-do-	Not	Nil
252	Deuli	Deuli	Andhari-I	Andhari	Jharpokharia	Andhari R.F.	116.55	-do-	-do-	Not	Nil
253	Deuli	Kuliana	Jamjarki	Jamjarki	Jamjarki	Chandua R.F.	150	-do-	-do-	Not	Nil
254	Deuli	Deuli	Chakchakia	Chakchakia	Fania	Deuli R.F. & U.D.P.F	50	-do-	-do-	Not	Nil
255	Deuli	Kuliana	Andhari-II	Andhari	Jharpokharia	Andhari R.F.	100	-do-	-do-	Not	Nil
256	Deuli	Kuliana	Sauri	Sauri	Sauri	Revenu Forest	50	-do-	-do-	Not	Nil
257	Deuli	Suliapada	Kadakotha	Kadakotha	Uphalgoda	Suliapada RF	100	No	No	No	No
258	Deuli	Suliapada	Tilakpal	Tilakpal	Uphalgoda	Suliapada RF	100	No	No	No	No
259	Deuli	Suliapada	Badsole	Badsole	Kantisahi	Suliapada RF	100	No	No	No	No
260	Deuli	Suliapada	Kuladahani	Kuladahani	Badbhalia	Kuladahani VF	155	No	No	No	No
261	Deuli	Suliapada	Bada Bhalia	Bada Bhalia	Bada Bhalia	Bada Bhalia U.D.P.F	120	No	No	No	No

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262	Deuli	Deuli	Andharisole	Andharisole	Fania	Deuli R.F. & U.D.P.F	50	No	No	No	No
263	Deuli	Deuli	Manda	Manda	Fania	Deuli R.F. & U.D.P.F	100	No	No	No	No
264	Deuli	Deuli	Tentoposi	Tentoposi	Fania	Deuli R.F. & U.D.P.F	85	No	No	No	No
265	Deuli	Deuli	Dumurdiha	Dumurdiha	Fania	Deuli R.F. & U.D.P.F	25	No	No	No	No
266	Deuli	Deuli	Purnapani	Purnapani	Chuat	Purunapani U.D.P.F	50	No	No	No	No
267	Deuli	Deuli	Jalghati	Jalghati	Chuat	Jalghati U.D.P.F	50	No	No	No	No
268	Deuli	Kuliana	Sanbadtalia	Sanbadtalia	Purunapani	Kuliana RF	100	No	No	No	No
269	Deuli	Kuliana	Ramchandrapur	Ramchandrapur	Tangasole	Kuliana RF	150	No	No	No	No
270	Deuli	Chandua	Kathagandia	Kathagandia	Chandua	Chandua RF	150	No	No	No	No
271	Deuli	Chandua	Tangasole	Tangasole	Chandua	Tangasole P.R.F & U.D.P.F	50	No	No	No	No
272	Rasgovindpur	Rasgobindapur	Bhaliapada	Bhaliapada	Nakichua	Sarumula R.F	25	Formed	-do-	Not	Nil
273	Rasgovindpur	Rasgobindapur	Nakichua	Nakichua	Nakichua	Sarumula R.F	50	-do-	-do-	-do-	Nil
274	Rasgovindpur	Rasgobindapur	Uchhabsahi	Uchhabsahi	Kumardihi	Sarumula R.F	50	-do-	-do-	-do-	Nil
275	Rasgovindpur	Rasgobindapur	Khenkasahi	Khenkasahi	Nakichua	Betnasia U.D.P.F	30	-do-	-do-	-do-	Nil
276	Rasgovindpur	Rasgobindapur	Kusadiha	Kusadiha	Nalagaja	Amarda (N) R.F.	120	-do-	-do-	-do-	Nil
277	Rasgovindpur	Rasgobindapur	Kanpura	Kanpura	Nakichua	Amarda (S) R.F.	125	-do-	-do-	-do-	Nil
278	Rasgovindpur	Rasgobindapur	Betnasia	Betnasia	-do-	Betnasia R.F.	55	-do-	-do-	-do-	Nil
279	Rasgovindpur	Morada	Palasabandha	Palasabandha	Morada	Moroda R. F. & U.D.P.F	100	-do-	-do-	Prepared	Nil
280	Rasgovindpur	Morada	Baladiha	Baladiha	-do-	Baladiha R.F.	95.83	-do-	-do-	Not	Nil
281	Rasgovindpur	Morada	Brahmanmara	Brahmanmara	Nalagaja	Moroda R. F. & U.D.P.F	267.93	-do-	-do-	-do-	Nil

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282	Rasgovindpur	Morada	Suradiha	Suradiha	Nalagaja	Moroda R. F. & U.D.P.F	157.5	-do-	-do-	-do-	Nil
283	Rasgovindpur	Morada	Majana	Majana	Sanmundhabani	Moroda R. F. & U.D.P.F	232	-do-	-do-	-do-	Nil
284	Rasgovindpur	Morada	Bhalughera	Bhalughera	-do-	Moroda R. F. & U.D.P.F	100	-do-	-do-	-do-	Nil
285	Rasgovindpur	Morada	Nuhajhalia	Nuhajhalia	Nuhajhalia	Moroda R. F. & U.D.P.F	50.5	-do-	-do-	-do-	Nil
286	Rasgovindpur	Morada	Bhagighara	Bhagighara	Sanmundhabani	Moroda R. F. & U.D.P.F	147.95	-do-	-do-	-do-	Nil
287	Rasgovindpur	Morada	Bhatchhatar	Bhatchhatar	Gadigoan	Moroda R. F. & U.D.P.F	252	-do-	-do-	-do-	Nil
288	Rasgovindpur	Morada	Phulajhari	Phulajhari	-do-	Moroda R. F. & U.D.P.F	260.12	-do-	-do-	-do-	Nil
289	Rasgovindpur	Sankhabhanga	Bhanjabiramati, Ramnagar	Ramnagar	Sureidiha	Jamsole-Nakichua R.F.	162.28	Formed	Signed	Prepared	Nil
290	Rasgovindpur	Morada	Purunapani	Purunapani	Chitrada	Chitrada RF	125	-do-	-do-	-do-	Nil
291	Rasgovindpur	Rasgobindapur	Bharadasole	Bharadasole	Rasgovidapur	Amarda(N)RF	100	-do-	-do-	Not	Nil
292	Rasgovindpur	Rasgobindapur	Dhansole	Dhansole	Kanpur	Amarda(N)RF	100	Formed	Signed	-do-	Nil
293	Rasgovindpur	Morada	Astia	Astia	Rasgovidapur	Amarda(N)RF	100	-do-	-do-	-do-	Nil
294	Rasgovindpur	Morada	Samaidihi	Samaidihi	Chitrada	Chitrada RF	100	-do-	-do-	-do-	Nil
295	Rasgovindpur	Morada	Sukhilakhali	Sukhilakhali	Chitrada	Sukhilakhali RF	200	-do-	-do-	-do-	Nil
296	Rasgovindpur	Rasgobindapur	Andhari	Andhari	Rasgovidapur	Betnasia RF	55	-do-	-do-	-do-	Nil
297	Rasgovindpur	Rasgobindapur	Ukasole	Ukasole	Nalgaja	Nalgaja RF	260.29	-do-	-do-	-do-	Nil
298	Rasgovindpur	Morada	Baghajharan	Baghajharan	Parkuli	Baghajharan RF	147.96	-do-	-do-	-do-	Nil
299	Rasgovindpur	Rasgobindapur	Sunakania	Sunakania	Nalgaja	Sanchatia U.D.P.F	148.27	-do-	-do-	-do-	Nil

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300	Rasgovindpur	Chitrada	Maa Bhiarabi Bana samrakhyana Samiti, Chitrada	Chitrada	Chitrada	Chitrada RF	125	-do-	-do-	-do-	Nil
301	Rasgovindpur	Rasgobindapur	Sarumula	Sarumula	Rasgovidapur	Sarumula R.F.	200	-do-	-do-	-do-	Nil
302	Rasgovindpur	Rasgobindapur	Kadamsole	Kadamsole	Kanpur	Amarda(N)RF	100	-do-	-do-	-do-	Nil
303	Rasgovindpur	Rasgobindapur	Baghasahi	Baghasahi		Amarda(N)RF	100	-do-	-do-	-do-	Nil
304	Rasgovindpur	Morada	Choul dahani	Choul dahani	Moroda	Moroda R. F. & U.D.P.F	210.59	-do-	-do-	-do-	Nil
305	Rasgovindpur	Rasgovindpur	Marangburu	Marangburu	Amarda	Amarda RF	200	-do-	-do-	-do-	Nil
306	Rasgovindpur	Rasgobindapur	Madhuria	Madhuria	Madhuria	Amarda (N) R.F.	100	-do-	-do-	-do-	Nil
307	Rasgovindpur	Rasgobindapur	Ghasmari-Kaptipada	Ghasmari	Jhatioda	Revenu Land	150	-do-	-do-	-do-	Nil
308	Rasgovindpur	Rasgobindapur	Mahalaxmi	Mahalaxmi	Nuagaon	Revenu Land	20	-do-	-do-	-do-	Nil
309	Betnoti	Badampur	Merda(Benapura)	Merda	Merda	Merda R.F.	100	-do-	-do-	-do-	Nil
310	Betnoti	Baisinga	Khejuria	Khejuria	Bhaliadiha	Gandigadha R.F.	50	-do-	-do-	Not	Nil
311	Betnoti	Badampur	Purikhunta	Purikhunta	Purikhunta	P.C.Pur U.D.P.F	100	-do-	-do-	-do-	Nil
312	Betnoti	Badampur	Gadigan	Gadigan	Gadigan	Asanbani R.F.	200	-do-	-do-	-do-	Nil
313	Betnoti	Betnoti	Tikarbati	Tikarbati	Nadpur	Dalki R.F.	100	-do-	-do-	Prepared	Nil
314	Betnoti	Betnoti	Khunta	Khunta	Nadpur	Dalki R.F.	100	-do-	-do-	Not	Nil
315	Betnoti	Betnoti	Tikargadia	Tikargadia	Nadpur	Dalki R.F.	100	-do-	-do-	-do-	Nil
316	Betnoti	Baisinga	Bachuripada	Bachuripada	Purunia	Purunia R.F.	100	-do-	-do-	-do-	Nil
317	Betnoti	Betnoti	Silipuria	Silipuria	Patalipura	Dalki R.F.	100	-do-	-do-	-do-	Nil
318	Betnoti	Betnoti	Bhalukchua	Bhalukchua	Dantiamunha	Bhalukchua R.F.	199	-do-	-do-	-do-	Nil

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319	Betnoti	Betnoti	Badjambani	Badjambani	Dantiamunha	Durgapur R.F.	200	-do-	-do-	-do-	Nil
320	Betnoti	Betnoti	Nuagoan	Nuagoan	Nadpur	Dalki R.F.	100	-do-	-do-	-do-	Nil
321	Betnoti	Betnoti	Godgadia	Godgadia	Jugal	Phuljhari R.F. & U.D.P.F	117	-do-	-do-	Prepared	Nil
322	Betnoti	Betnoti	Kainfulia	Kainfulia	Jugal	Phuljhari R.F. & U.D.P.F	50	-do-	-do-	Not	Nil
323	Betnoti	Betnoti	Durgapur	Durgapur	Durgapur	Durgapur R.F.	200	-do-	-do-	-do-	Nil
324	Betnoti	Betnoti	Agada	Agada	Bhalia	Bhalia PRF	150	-do-	-do-	-do-	Nil
325	Betnoti	Betnoti	Bhalia	Bhalia	-do-	Bhalia PRF	150	-do-	-do-	-do-	Nil
326	Betnoti	Betnoti	Salbani	Salbani	Jugal	Mantapal RF	100	-do-	-do-	-do-	Nil
327	Betnoti	Betnoti	Nuagoan-Angargadia	Nuagoan	Nadpur	Dalki R.F.	100	-do-	-do-	-do-	Nil
328	Betnoti	Badampur	Baghabosa	Baghabosa	Merda	Merda R.F.	100	-do-	-do-	-do-	Nil
329	Betnoti	Badampur	Benasole	Benasole	Badampur	Badampur RF & U.D.P.F	100	-do-	-do-	-do-	Nil
330	Betnoti	K.C.Pur	Khadisole	Khadisole	Khadisole	Dumapada RF	120	-do-	-do-	-do-	Nil
331	Betnoti	K.C.Pur	Nahasole	Nahasole	Sureidihi	Gandigadha R.F.	50	-do-	-do-	-do-	Nil
332	Betnoti	K.C.Pur	Jhikiriasole	Jhikiriasole	Bhaliadiha	Gandigadha R.F.	50	-do-	-do-	-do-	Nil
333	Betnoti	K.C.Pur	Sagadabhanga	Sagadabhanga	Kuchilakhuna	Mahulia U.D.P.F	50	-do-	-do-	-do-	Nil
334	Betnoti	Baisinga	Sankhirpada	Sankhirpada	Patalipura	Khirpada RF & U.D.P.F	150	-do-	-do-	-do-	Nil
335	Betnoti	K.C.Pur	Gandigodha	Gandigodha	Dantiamunha	Gandigodha RF	50	-do-	-do-	-do-	Nil
336	Betnoti	K.C.Pur	Masinasole	Masinasole	Bhalidiha	Gandigodha RF	150	-do-	-do-	-do-	Nil
337	Betnoti	Baisinga	Daldali	Daldali	Baisingha	Daldali RF & U.D.P.F	95	-do-	-do-	-do-	Nil
338	Betnoti	Baisinga	Sankhirpada	Sankhirpada	Patalipura	Khirpada RF & U.D.P.F	150	-do-	-do-	Prepared	Nil

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Whether Executive committee formed	Whether MoU signed	Whether Micro Plan Prepared	Whether registered under the Society Act by C.F as J.W.C
339	Betnoti	Baisinga	Bartana	Bartana	Merda	Bartana RF	190	-do-	-do-	Not	Nil
340	Betnoti	Baisinga	Ajadiha	Ajadiha	Baisingha	Khirpada RF & U.D.P.F	100	-do-	-do-	-do-	Nil
341	Betnoti	Baisinga	Gangpura	Gangpura	Gaddeulia	Gaddeulia RF & U.D.P.F	50	-do-	-do-	-do-	Nil
342	Betnoti	Badampur	Mohulbani	Mohulbani	Balibhanga	Asanbani R.F.	200	-do-	-do-	-do-	Nil
343	Betnoti	Baisinga	Hatijhuri	Hatijhuri	Jugal	Hattijhari RF	100	-do-	-do-	-do-	Nil
344	Betnoti	K.C.Pur	Bandhasahi	Bandhasahi	Bhaliadiha	Gandigadha R.F.	100	-do-	-do-	-do-	Nil
345	Betnoti	Baisinga	Chuapada	Chuapada	Baisingha	Baisingha RF	50	-do-	-do-	Prepared	Nil
346	Betnoti	Baisinga	Mohanpur	Mohanpur	Baisingha	Mohanpur RF	35	-do-	-do-	-do-	Nil
347	Betnoti	Betnoti	Jugal	Jugal	Jugal	Jugal RF	200	-do-	-do-	-do-	Nil
348	Betnoti	Betnoti	Dalki	Dalki	Nadpur	Dalki R.F.	100	-do-	-do-	-do-	Nil
349	Betnoti	K.C.Pur	Nuasahi	Nuasahi	Dantiamunha	Gandigadha R.F.	30	-do-	-do-	-do-	Nil
350	Betnoti	Betnoti	Satsole	Satsole	-do-	Durgapur R.F.	100	-do-	-do-	-do-	Nil
351	Betnoti	Betnoti	Chhadakota	Chhadakota	-do-	Durgapur R.F.	100	-do-	-do-	-do-	Nil
352	Betnoti	Badampur	Rangada	Rangada	Badampur	Raikoma RF	80	-do-	-do-	-do-	Nil
353	Betnoti	Badampur	Panisole	Panisole	-do-	Badampur RF & U.D.P.F	100	-do-	-do-	-do-	Nil
354	Betnoti	Badampur	Sunahaja	Sunahaja	Idar	Durgapur R.F.	200	-do-	-do-	-do-	Nil
355	Betnoti	Badampur	Kunchibania	Kunchibania	Badampur	Badampur RF & U.D.P.F	200	-do-	-do-	-do-	Nil
356	Betnoti	Badampur	Mugusria-Purunapani	Mugusria	Chanchipada	Badampur RF & U.D.P.F	100	-do-	-do-	-do-	Nil
357	Betnoti	Badampur	Chuasole	Chuasole	Dahikuthi	Durgapur R.F.	160	-do-	-do-	-do-	Nil
358	Betnoti	Badampur	Kapoi	Kapoi	Chhatana	Badampur RF & U.D.P.F	80	-do-	-do-	-do-	Nil

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Whether Executive committee formed	Whether MoU signed	Whether Micro Plan Prepared	Whether registered under the Society Act by C.F as J.W.C
359	Betnoti	Badampur	Dembudahar	Dembudahar	Anla	Haripur RF & U.D.P.F	80	-do-	-do-	-do-	Nil
360	Betnoti	Badampur	Asanbani	Asanbani	Gadigan	Asanbani R.F.	200	-do-	-do-	-do-	Nil
361	Betnoti	Badampur	Karatapada	Karatapada	Badampur	Badampur RF & U.D.P.F	150	-do-	-do-	-do-	Nil
362	Betnoti	Badampur	Khadikapada	Khadikapada	Anla	Khadikapada RF	75.11	-do-	-do-	-do-	Nil
363	Betnoti	K.C.Pur	Jhinkiriasole	Jhinkiriasole	Sureidihi	Gandigadha R.F.	50	-do-	-do-	-do-	Nil
364	Betnoti	Badampur	Saria	Saria	Saria	Asanbani R.F.	210.17	-do-	Not signed	Not	Nil
365	Betnoti	Betnoti	Phuljhari	Phuljhari	Jugal	Phuljhari R.F. & U.D.P.F	50	-do-	-do-	-do-	Nil
366	Betnoti	Badampur	Ketakisole	Ketakisole	Sanamanida	Ketakisole RF	39.33	-do-	-do-	-do-	Nil
367	Betnoti	Badampur	Rautra	Rautra	Rautra	Rautra RF	119.46	-do-	-do-	-do-	Nil
368	Betnoti	Badampur	Beldiha	Beldiha	Ratikama	Beldiha RF	41.6	-do-	-do-	-do-	Nil
369	Betnoti	Badampur	Badguma	Badguma	Badguma	Badguma RF	28.97	-do-	-do-	-do-	Nil
370	Betnoti	Badampur	Machhapada	Machhapada	Machhapada	Machhapada RF	62.81	-do-	-do-	-do-	Nil
371	Betnoti	K.C.Pur	Jamugadha	Jamugadha	Dantiamunha	Gandigadha RF	50	-do-	-do-	Prepared	Nil
372	Betnoti	K.C.Pur	Dumapada	Dumapada	Khadisole	Dumapada RF	100	-do-	Not signed	Not	Nil
373	Betnoti	Betnoti	Tilda	Tilda	Jugal	Jugal RF	100	-do-	Signed	-do-	Nil
374	Betnoti	Betnoti	Aguad	Aguad	Durgapur	Patpur R.F. & U.D.P.F	141.48	-do-	-do-	-do-	Nil
375	Betnoti	Betnoti	Nadipur	Nadipur	Nadipur	Dalki R.F.	100	-do-	-do-	-do-	Nil
376	Betnoti	Betnoti	Dantiamunha	Dantiamunha	Dantiamunha	Krushna Ch Pur R.F.	100	-do-	-do-	-do-	Nil
377	Betnoti	Baisinga	Purunia	Purunia	Purunia	Purunia R.F.	100	-do-	Not signed	-do-	Nil
378	Betnoti	Baisinga	Mahisasole	Mahisasole	Mahisasole	Tikayatpur R.F.	50	-do-	-do-	-do-	Nil

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Whether Executive committee formed	Whether MoU signed	Whether Micro Plan Prepared	Whether registered under the Society Act by C.F as J.W.C
379	Betnoti	Baisinga	Bhudrubani	Bhudrubani	Baisinga	Khirpada RF & U.D.P.F	50	-do-	-do-	-do-	Nil
380	Betnoti	Baisinga	Khirabani	Khirabani	Baisinga	Khirpada RF & U.D.P.F	50	-do-	-do-	-do-	Nil
381	Betnoti	Baisinga	Gaddeulia	Gaddeulia	Baisinga	Gaddeulia RF & U.D.P.F	50	-do-	Signed	-do-	Nil
382	Betnoti	K.C.Pur	Jaganathpur	Jaganathpur	Sialighati	K.C.Pur R.F.	100	-do-	-do-	Prepared	Nil
383	Betnoti	K.C.Pur	Bhandarikula	Bhandarikula	-do-	K.C.Pur R.F.	100	-do-	-do-	-do-	Nil
384	Betnoti	K.C.Pur	Kanimohuli	Kanimohuli	Paunsia	Gandigadha R.F.	100	-do-	-do-	Not	Nil
385	Betnoti	K.C.Pur	Paunsia	Paunsia	Paunsia & Sialighati	Jaganathpur R.F.	100	-do-	-do-	-do-	Nil
386	Betnoti	K.C.Pur	Ghusuria	Ghusuria	-do-	Jaganathpur R.F.	150	-do-	-do-	Prepared	Nil
387	Betnoti	K.C.Pur	Kuchilakhunta	Kuchilakhunta	Kuchilakhunta	Kuchilakhunta R.F.	150	-do-	-do-	Not	Nil
388	Betnoti	Badampur	Phuljhari	Phuljhari	Sahitpur	Badampur RF & U.D.P.F	210	-do-	-do-	-do-	Nil
389	Betnoti	Badampur	Makunda	Makunda	Jualibhanga	Chhatna R.F.	100	-do-	-do-	-do-	Nil
390	Betnoti	Badampur	Bodhi	Bodhi	Badampur	Badampur RF & U.D.P.F	100	-do-	-do-	-do-	Nil
391	Betnoti	Badampur	Merda	Merda	Merda	Merda R.F.	200	-do-	-do-	Prepared	Nil
392	Betnoti	K.C.Pur	Naya kendukhal	Naya kendukhal	Dantiamunha	K.C.Pur R.F.	50	-do-	-do-	Not	Nil
393	Betnoti	Betnoti	Karamsole	Karamsole	-do-	Gandigadha R.F.	100	-do-	-do-	-do-	Nil
394	Betnoti	Betnoti	Gobarasole	Gobarasole	Durgapur	Patpur R.F. & U.D.P.F	50	-do-	-do-	-do-	Nil
395	Betnoti	K.C.Pur	Banadurga	Banadurga	Gandigodha	Gandigadha R.F.	50	-do-	-do-	-do-	Nil
396	Betnoti	K.C.Pur	Kalapata Thakurani	Kalapata Thakurani	Gandigodha	Gandigadha R.F.	40	-do-	-do-	-do-	Nil
397	Betnoti	K.C.Pur	Bagalpur (Salabani)	Bagalpur (Salabani)	Phuljhari	Phuljhari R.F. & U.D.P.F	50	-do-	-do-	-do-	Nil

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Whether Executive committee formed	Whether MoU signed	Whether Micro Plan Prepared	Whether registered under the Society Act by C.F as J.W.C
398	Betnoti	Betnoti	Dhabanisole	Dhabanisole		Gorudabasa R.F.	71.86	-do-	-do-	-do-	Nil
399	Betnoti	Betnoti	Dahikata	Dahikata		Gandigodha R.F.	40	-do-	-do-	-do-	Nil
400	Betnoti	Betnoti	Garudabasa	Garudabasa		Gandigodha R.F.	50	-do-	-do-	-do-	Nil
401	Betnoti	Betnoti	Sankhajod & Bhudrubani	Sankhajod		Kochilakhunta R.F.	100	-do-	-do-	-do-	Nil
402	Betnoti	Betnoti	Dahisahi	Dahisahi		Bhalia RF	100	-do-	-do-	Not	Nil
TOTAL							**37436.55**				

Appendix – XIX

List of Sacred Grooves Developed in Baripada Forest Division

Year	Name of the Forest Range	Sl No.	Name of Sacred Grove	Name of CD Block.
2014-15	Betnoti	1	SindurgauraJahiraPatpur	Betnoti
		2	MarangburuJahiraSilipuria	Betnoti
		3	SindurgauraJahiraAsanabani	Morada
		4	BalichhakJahiraJambani	Morada
		5	MarangburuJahiraBhalubasa	Betnoti
		6	MaaDudhibadanJahiraRangamatia	Betnoti
		7	MarangburuJahiraSikharghati	Morada
		8	JaherAayoJahiraMasinasole	Morada
		9	MarangburuJahiraPuljhari	Betnoti
		10	MarangburuJahiraChanchipada	Betnoti
	Udala	11	PatsahanipurJahira	Udala
		12	BudhamaraJahira	Udala
		13	ManikpurJahira	Udala
		14	KhandachiraJahira	Udala
		15	AmbicadeipurJahira	Udala
		16	DutikadeipurJahira	Udala
		17	NuagaonJahira	Khunta
		18	NaharaJahira	Khunta
		19	MahuladihiJahira	Khunta
		20	DengamJahira	Khunta
	Dukura	21	TirilidihiJahira	Khunta
		22	MaachintamaniJahira, Astajharan	Khunta
		23	MarangburuJahira, Basipitha	Khunta
		24	MarangburuJahira, Belpahadi	Badsahi
		25	MarangburuJahira, Badkerko	Badsahi
		26	BudhipataJahira, Rangibhole	Shyamakhunta
		27	MarangburuJahira,Suhagpura	Badsahi
		28	MarangburuJahira,Kaudikhani	Badsahi
		29	MarangburuJahira, Rangadiha	Badsahi
		30	MarangburuJahira, Guhaldihi	Badsahi
	Kaptipada	31	TangiriaJahira	Kaptipada
		32	RaikaliaJahira	Udala
		33	TalsariJahira	Udala
		34	ChakradharpurJahira	Kaptipada
		35	HadisahiJahira	Kaptipada
		36	MarangburuSileipokhariJahira	Kaptipada
		37	JagatJahira, Sileipokhari	Kaptipada
		38	BiratpatJahira, Sileipokhari	Kaptipada
		39	UparbadagaonJahira	Udala
		40	PurunapaniJahira	Kaptipada
	BANGIRIPOSI	41	BhuasuniJahira	BANGIRIPOSI
		42	Rayan Jahira	BANGIRIPOSI
		43	BadamdihiJahira	BANGIRIPOSI
		44	TangiabasaJahira	BANGIRIPOSI
		45	ChakdarJahira	BANGIRIPOSI
		46	TulasibaniJahira	BANGIRIPOSI
		47	AstabedaJahira	BANGIRIPOSI
		48	GhatidubaJahira	BANGIRIPOSI
		49	GedrasahiJahira	BANGIRIPOSI
		50	KurkutiaJahira	BANGIRIPOSI
	R.G pur	51	BrahmanamaraJahira	Morada
		52	SamaidihiJahira	Rasgovindpur
		53	SukhilakhaliJahira	Morada

Year	Name of the Forest Range	Sl No.	Name of Sacred Grove	Name of CD Block.
		54	JamsoleJahira	Morada
		55	SankhabhangaJahira	Morada
		56	RaisoleJahira	Rasgovindpur
		57	SubandihiJahira	Rasgovindpur
		58	KC purJahira	Rasgobindpur
		59	SukhilakhaliJahira	Morada
		60	NalagajaJahira	Rasgobindpur
	Deuli	61	ChakchakiaJahira	Suliapada
		62	PondusoleJahira	Suliapada
		63	SandhenkiaJahira	Suliapada
		64	GendakhalJahira	Suliapada
		65	RaghunathpurJahira	Suliapada
		66	DudiasoleJahira	Suliapada
		67	NedasoleJahira	Suliapada
		68	MurgapahadiJahira	Suliapada
		69	ChandabilaJahira	Suliapada
		70	DhansoleJahira	Suliapada
2014-15	Pithabata	71	Kalapathara	Kuliana
		72	Alubani	Kuliana
		73	Mudrajodi	Kuliana
		74	Mundhabani	Kuliana
		75	Gendapokhari	Kuliana
		76	Kitadihi	Shyamakhunta
		77	Asanbani	Shyamakhunta
		78	Khasadiha	Shyamakhunta
		79	Ambadali	Shyamakhunta
		80	Tarajodi	Shyamakhunta
2015-16	BANGIRIPOSI	1	Nedam	BANGIRIPOSI
		2	Tulasibani	BANGIRIPOSI
		3	Dungurdiha	Saraskana
		4	Paktia (Kalapani)	Saraskana
		5	Pathbeda	BANGIRIPOSI
		6	Gedrasahi	BANGIRIPOSI
	Pithabata	7	Benasole	Baripada
		8	Hatikot	Baripada
		9	Balipal	Baripada
		10	Batakata	Baripada
		11	Chhadakota	Shyamakhunta
		12	Bhaluki	Shyamakhunta
		13	Fatudihi	Shyamakhunta
	Udala	14	Talagothasahi	Udala
		15	Thungusahi	Udala
		16	Uparmatihudi	Udala
		17	Talamatihudi	Udala
		18	Ambikadeipur (Gothadihi)	Udala
		19	Banakati	Khunta
	Betnoti	20	Gobarasole	Badsahi
		21	Nayakendukhala	Baripada
		22	Bidukudia	Betnoti
		23	Angaria	Morada
		24	Bhandarikula	Badsahi
		25	Gandigadha	Baripada
		26	Sribastapur	Betnoti
	Rasgobindpur	27	Baladia	Morada
		28	Jamirdiha	Baripada
		29	Praharajpur	Rasgobindpur
		30	Mirdapur	Rasgobindpur
		31	Marudihi	Morada

Year	Name of the Forest Range	Sl No.	Name of Sacred Grove	Name of CD Block.
		32	Baghuasole	Baripada
		33	Dhansole	Rasgobindpur
	Dukura	34	Lakhansahi	Khunta
		35	Sirisbani	Shyamakhunta
		36	Nischintapur	Badsahi
		37	Guabehera	Badsahi
		38	Badasorisbilla	Badsahi
		39	Prativadeipur	Badsahi
	Deuli	40	Kuabuda	Kuliana
		41	Chalunia	Kuliana
		42	Gandiadiha	Suliapada
		43	Surki	Suliapada
		44	Tilakchhaka	Suliapada
	Kaptipada	45	Jhiliribani	Kaptipada
		46	Mandasahi	Kaptipada
		47	Bangalisahi	Udala
		48	Baidakhali	Udala
		49	Mirichisahi	Kaptipada
		50	Petasole	Udala
2016-17	Udala	1	Nagpal	Udala
		2	Raikali	Udala
		3	Jharanasahi	Udala
		4	Langodihi	Udala
		5	Goddiha	Udala
		6	Damusahi	Udala
		7	Sanolia	Khunta
		8	Dabak	Khunta
		9	Banakati	Khunta
2016-17	Betnoti	10	Benasole	Betnoti
		11	Unapura	Betnoti
		12	Kuradhika	Betnoti
		13	Bhalukchua	Betnoti
		14	Dhadasahi	Betnoti
		15	Mantapal	Betnoti
		16	Bhanupur	Betnoti
		17	Haripur	Betnoti
		18	Kunchisole	Badsahi
		19	Guhaldihi	Baripada
	BANGIRIPOSI	20	Bhuasuni	BANGIRIPOSI
		21	Matikhani	BANGIRIPOSI
		22	Balikhani	BANGIRIPOSI
		23	Tangiabasa	BANGIRIPOSI
		24	Ghatiduba	BANGIRIPOSI
		25	Jaldiha	BANGIRIPOSI
		26	Heseldihi	BANGIRIPOSI
		27	Jualikota	BANGIRIPOSI
		28	Pokharidiha	Saraskana
	Rasagobindpur	29	Shyamanandapur	Rasgobindpur
		30	Khenkasahi	Rasgobindpur
		31	Durgasahi	Rasgobindpur
		32	Nuasahi	Rasgobindpur
		33	Ramanagar	Baripada
		34	Sikharghati	Baripada
		35	Chikitamatia	Morada
		36	Bhalukchua	Morada
		37	Madandihi	Morada
		38	Gadipokhari	Shyamakhunta
		39	Mathabeda	Shyamakhunta

Year	Name of the Forest Range	Sl No.	Name of Sacred Grove	Name of CD Block.
	Dukura	40	Sonpokhari	Khunta
		41	Subarnamanjari	Khunta
		42	Kusumghati	Khunta
		43	Singtia	Badsahi
		44	Patisari	Badsahi
		45	Gaudamunduli	Badsahi
		46	Sansorisbilla	Badsahi
	Kaptipada	47	Nudurasahi	Kaptipada
		48	Nedam	Kaptipada
		49	Thakursahi	Kaptipada
		50	Tulasigotha	Kaptipada
		51	Sarabasa	Kaptipada
		52	Dangadiha	Kaptipada
		53	Deuanbahali	Kaptipada
		54	Sarat	Kaptipada
		55	Bindhanisahi	Kaptipada
	Deuli	56	Baura	Baripada
		57	San-brahmanamara	Baripada
		58	Badtilau	Kuliana
		59	Banakati	Suliapada
		60	Ghanaghana	Suliapada
		61	Andhari	Saraskana
		62	Goyalakota	Kuliana
		63	Maranaghati	Kuliana
		64	Tadki	kuliana
	Pithabata	65	Madhusahi	Shyamakhunta
		66	Ambadali	Shyamakhunta
		67	Badkuldiha	Shyamakhunta
		68	Kochiamora	Shyamakhunta
		69	Sankuldiha	Shyamakhunta
		70	Jamsole	Shyamakhunta
		71	Bhalubasa	Kuliana
		72	Tilou	BANGIRIPOSI
		73	Jagannathpur	Kuliana
	Total-	**203**		

Appendix – XX

Table A. STATEMENT SHOWING THE OFFENCE CASES BOOKED UNDER BARIPADA FOREST DIVISION FROM 2003-04 TO 2014-15

Year	No of case Booked		No of case compound	No of person involved	No of cases booked in Wildlife		No of cases booked u/s- 56 of O.F.A-1972 (Motorise)
	OR cases	UD cases			OR cases	UD cases	
2003-04	1912	1262	1849	2007	4	6	18
2004-05	1028	1160	-	1078	5	0	13
2005-06	1344	1043	1177	1419	0	3	17
2006-07	1407	895	1266	1496	1	5	24
2007-08	1234	586	1121	1325	5	1	17
2008-09	991	536	1031	1013	3	0	12
2009-10	1034	494	1078	913	0	12	11
2010-11	997	540	900	1041	1	10	35
2011-12	942	743	802	1105	5	8	4
2012-13	965	726	884	1002	8	5	28
2013-14	1175	713	1097	1208	69	87	50
2014-15	1351	786	1228	1408	21	34	33

Table B. Forest Cases Booked except WL for the period from 2011-12, 2012-13 and 2013-14

Name of Division	Name of Ranges comes under Buffer area	Year	No. of Forest cases booked					
			OR	UD	No. of Person involved	Name of Cases Compounded	No. of cases sent to Court	No. of accused arrested
Baripada	Bangiriposi, Kaptipada, Udala, Dukura, Pithabata	2011-12	239	279	187	225	13	18
		2012-13	217	351	178	203	16	23
		2013-14	264	299	214	255	7	9
Total			720	929	579	683	36	50

Table C. Wildlife cases booked for the period from 2011-12, 2012-13 and 2013-14

Name of Division	Name of Ranges comes under Buffer area	Year	No. of Forest cases booked				
			OR	UD	No. of Person involved	No. of cases sent to Court	No. of accused arrested
Baripada	Bangiriposi, Kaptipada, Udala, Dukura, Pithabata	2011-12	2	8	35	2	35
		2012-13	14	15	20	14	20
		2013-14	13	25	25	17	23
Total			29	48	80	33	78

Table D. REPORT ON SEIZURE OF WILD LIFE ARTICLES

Sl. No	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief description of articles seized	
1	17.08.11	Suliapada Police Station	Rana Snake	Banded Krait	1 no Banded Karit rescued on dt. 17.08.2011 from Suliapada Police Station and released inside Similipal sanctuary on same date.	48D of 2011-12, U/S-39 (2,3) Punishable, U/S-51 of Wildlife Protection Act-1972
2	05.08.13	Inside Similipal R.F. Compt. No-BLE-3	Lagre IndianCivet	Viverra Zibetha	02 Nos dead Viverra zibetha	26BP of 2013-14, FIR- No-314118/1454 & U/S-2,8,9,11 of Wildlife Protection Act-1972
3	02.12.12	Near village road Dhobanisole	Wild Boar	Sus scrofa	Fresh cut meat-7kg	49BP of 2012-13, FIR No-332466/ 1451 & U/S- 2, 8, 9,11 of Wildlife ProtectionAct-1972
4	03.02.07	In the Similipal R.F near Village Agnikuanri	Barking Deer	Muntiacus muntjac	Flesh of Barking Deer- 1Kg 350 gm, Bow-2 Nos, Arrow-6 Nos, Plastic Bag-1 No	90DK of 2006-07, F.I.R No-382949/1080 & U/S-27,29, 31 & 9 of WL (P) Act-1972

Sl. No	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief description of articles seized	
5	31.05.08	Near the village Gundihudi	Leopard Skin	Acinonyx jubatus	Lepard Skin-2 nos, 1.L-6'9"XW-1'9", 2. L-6'0"X W-1'6"	OR Case No 27Dk of 2008-09, F.I.R. No-230756/1337 & U/s- 9, 27, 29, 31, 49 (b) WL (P) Act-1972
6	02.05.09	Inside Champagarh (Lodhasahi)	Wild Boar	Sus scrofa	Dry flesh of wild Boar-500 gm(appx) tied in a polythene bag, Bow-3 nos, Arrow-10 Nos	OR Case No 7DK of 2009-10, F.I.R. No-230769/1337 & U/s-51 of the WL (P) Act-1972
7	02.05.09	Inside Champagarh (Lodhasahi)	Wild Boar	Sus scrofa	Dry flesh of wild Boar-500 gm(appx) tied in a polythene bag, Bow-4 nos, Arrow-12 Nos	OR Case No. 8DK of 2009-10, F.I.R. No-230770/1337 & U/s-51 of the WL (P) Act-1972
8	24.05.09	In the nala of Khandabuda near the village Mahilibasa	Barking Deer	Muntiacus muntjac	Flesh with Skin of femal Barking Deer 400 gm (appx), Bow-1 no, Arrow-2 no	OR Case No-18Dk of 2009-10, F.I.R. No- 226382/1249 & U/s-27, 29, 31, of WL (P)Act-1972
9	15.06.10	In the house premises fo Sri Ramachandra Soren of Upor Bangara	Barking Deer	Muntiacus muntjac	Flesh of Barking Deer-5 Kg, Horn of Bisow-2 nos, Cut head of male Barking Deer Head, 1 no-4.5 kg, cut head of female barking Deer- 1.5 Kg, Arrow-16 nbos, Bow-3 nos.	OR No-22DK of 2010-11, F.I.R. No-230782/1337 & U/s-29,31 of the WL (P) Act-1972
10	06.10.12	Near Bahalda hatasahi	Sambara	Cervus unicolor	Sambara meat-1 Kg, plastic Bag-1 no.	OR Case No- 64DK of 2012-13, F.I.R. No-299877/1399 & u/s-9, 39, 49 (b) (v) of the WL (P)Act-1972.

Sl. No	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief description of articles seized	
11	01.02.13	Near Chauliasole village road side	Pati Mankada	Rhesus macaque (macuca mulata)	1 no male & 1 no of female live monkeys	OR Case No- 136 DK of 2012-13, F.I.R. No- 299828/1398 & u/s-39, (2) (3), 40, 43 (1), 44 (1) (iv) & 48 (a) (i) (ii), 48 (b) (i) of the WL (P) Act-1972,. Punishable under-51 of the above Act.
12	21.02.13	Inside house premises of Sri Ganeswar Bhakta	Horn Bill	Accipitridae	One old beak of HornBill, 3 bundle gum stick (120 pcs), 8 set traps prepared with bamboo straw & nylon thread-80 pcs, Bow-1 no,Arrow-2 nos.	OR No-142 DK of 2012-13, F.I.R. No- 234751/1502 & u/s-9,39,40,42,44, of the WL (P) Act-1972 & punishiable under -51 of the above act.
13	02.03.13	On the footpath from Jodibaru village to Titiajhari Kalipahada near Baleda Sahi under Baripada PS.	Languor & Indian Giant Squirrel	Presbytis entellus & Ratufa indica.	2 nos of dead common Languor with tail & leg attached, 1 no of dead Indian giant squirrel, monkey trap net 5 sets, axe- 6 nos, knife-1 no	OR Case No- 143 DK of 2012-13, F.I.R. No-234753/1502 & u/s- 9,39, 40, 42, 44, of the WL (P) Act-1972 & punishiable under-51 of the above act.
14	11.11.13	Inside Similipal R.F.S.J-6 near Bahalda	Wild Boar	Sus scrofa	Wild Boar Meat- 5 Kg, weighing scale- 1 no, 1 Kg weighter, Bill hook 1no, Axe-1 no	OR Case No-135DK of 2013-14, F.I.R. No- 281383/1499 & u/s-9,39, 40, 42, 44 of WL (P) Act-1972 & punishable under-51 of the above act.
15	12.12.13	In the house premises of Sri Chamuram Singh,	Leopard Skin		Lepark skin or Panther, L-180cm,B-48cm, 2 nos of Nokia Mobile, 1 No LG mobilie	OR Case No-158DK of 2013-14, F.I.R. No- 281386/1499 & U/s-9, 39,40,42,44, of the WL (P) Act- 1972 & punishible under-51 of the above act.

Sl. No	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief description of articles seized	
16	20.01.14	Inside Similipal R.F Compt. No. S.J.-6 near Tunkinala	Monkey	Macaca mulata	Trap net-2 nos, axe- 2 nos, silve Honda-1 no, bella-1 no, dry monkey meat along with leg& flesh.	OR Case No- 199 DK of 2013-14, F.I.R. No-281395/1499 & U/s-2,9,27,31,39 of the WL (P) Act-1972 & punishable under-51 of the above act
17	12.10.14	Inside House premises of Sri Bhaju Murmu of Rangamatia Village	Sambara	Cervus unicolor	Sambara meat- 7 Kg (appx) front leg 1 no of dead Sambara, Blood 1 ltr (appx) tied in a polythene bag, small cut pcs of Sambara meat-41 pcs, axe-1 no, aluminum container-1 no, steel plate-1 no , steel pot-1 no, bird trap net-7 nos, ladybicycle-1 no	OR Case No-95 DK of 2014-15, F.I.R. No-039461/1581 & U/s-51 of WL (P) Act-1972.
18	13.09.06	On the road of Tentuligaon village	Gendalia	Open bill Stork	One no of dead Open bill Strok	OR Case No-141B of 2006-07, F.I.R. No- 225669/1235 & U/s-2, 8, 9, 11 of W.L (P) Act- 1972.
19	05.09.11	Durgapur village Chhaka on the Road	Snake Tampa	Naja Naja Kaouthia	4 nos of Naja Naja Kaouthia seized on dt. 05.09.2011 from Sri Dhushasan Sing of Haludbari, PS- Khejuri, Dist- East medinapur and released to the nature inside Dalki R.F	OR Case No- 81B of 2011-12, F.I.R. No- 269508/1352 & U/s-2, 8, 9, 11 of W.L. (P) Act-1972

Sl. No	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief description of articles seized	
20	30.09.11	Haripur to Panasia Road (Near Khadikapada village)	Gendalia	Open bill Stork	One no of dead Open bill Stork, Weight-1 Kg (Approx)	OR Case No-95B of 2011-12, F.I.R. No- 269669/1355 & U/s-2, 8,9,11 of W.L. (P) Act-1972
21	23.12.12	Chhatna R.F	Elephant	Elephant maximus	One broken tusk seized weight-368 gm.	UD case No-27B of 2012-13 & FIR No-68376/1469
22	28.05.13	On the NH-18 near village Dhanpur	Indian Wolf	Canis Lupis	One no of Indian Wolf at on the NH-18 near village Dhanpur on dt. 28.05.2013	UD case No-07B of 2013-14 & F.I.R. No- 269480/1351
23	05.11.13	Asanbani R.F. near Dhabanisole village	Elephant Calf	Elephant maximus	One no of Elephant Calf seized at Asanbani R.F. near Dhabanisole village ondt. 05.11.2013.	UD case NO-41B of 2013-14 & F.I.R. No-269290/1347
24	06.11.14	On the road of Dantiamuhan to Chitrada near Harinasole village	Wild Boar	Sus scrofa	One no of wildboar seized at on the road from Dantiamuhan to Chitrada near Harinasole village on dt. 06.11.2013.	UD case No-33B of 2014-15 & F.I.R. No-68587/1473
25	10.04.10	Inside Amarda RF	Wild Cat	Felis Chaus	2 nos of dead wild cat	OR 1R of 2010-11, U/S- 27 of OFA-1972
26	04.03.13	On the road near village Sureidihi	Barn owl	Tyto alba	1 no	OR 84R of 2013-14, u/s-39(2), 86 of Wildlife Protection Act-1972, U/s-51
27	15.09.10	Inside Similipal Sanctuary near Saguanbadi Comp.TK-9	Barking Deer	Muntiacus muntjac	Barking deer flesh with skin -30 Kg, Arrow 1 no, Plastic Bag-4 no	OR Case No-67K of 2010-11, U/s- 9, 27, 29, 30, 31 ,32, 39 & 51 of wildlife protection act-1972

Sl. No	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief description of articles seized	
28	24.02.12	Inside Similipal Sanctuary Comp. No- TK- 10 near Nahubudanala	Sambara	Cervus unicolor	Fresh cut wildanimal meat- 70 Kg with blood and 03 nos Sambar head, Arrow-40 nos, Bows-25 nos, Axe-10 nos, hand made Gun-13 nos	169K of 2011-12, u/s- 2, 9, 17 (A) , (D), (H), 27,29,30,31, 39, 50, & 51 of Wildlife Protection Act-1972
29	27.01.13	near chhtraamba Chhak of Padmapokhari	Saliapatin		Saliapatin meat 300 gm, old bicycle-3 nos, Bow-2 no, Arrow- 9 nos, Torch light- 2 no, Poisonpot-1 nos	OR case No. 81K of 2012-13, u/s- 9, 30, 31, 32, 39, 49(B), punishable - u/s-51 of Wildlife Protection Act-1972.
30	23.01.13	in the house of Dasaratha Marndi of Nedam	Samar and Spotted Deer	Cervus unicolor & Muntjac	Sambar Horn Spotted deer horn 1 no	OR case No. 82K of 2012-13 , u/s-49(b) & 51 of Wildlife Protection Act-1972
31	15.02.13	in the house Varandah of Nursingha Ch. Majhi	Wild Boar	Sus scrofa	Pig meat	OR case No. 96K of 2012-13, u/s- 2, 9,26, 29, 39, 49, 49 (B) & punishable u/s-51 of wildlife Protection Act-1972
32	15.02.13	in Kuldihi village in side Similipal Sanctuary	Wild Boar	Sus scrofa	Pig meat - 1 Kg	OR case NO. 7K of 2013-14, u/s- 2, 9,26, 29, 39, 49, 49 (B) & punishable u/s-51 of wildlife Protection Act-1972
33	14.03.14	in the open field of Pahanda village Radho	Leopard Skin	Panther Uncia	Leopard Skin	OR case No. 99K of 2013-14 punishable u/s-51 of wildlife protection act-1972
34	21.03.14	Aswakuti Village	Dead birds	-	Dead Birds- 53 Nos	OR case NO-100K of 2013-14 punishable u/s-51 of Wildlife Protection Act-1972
35	26.07.14	in the house premises of the Barju Sidhu	Barking Deer	Muntiacus muntjac	Barking deer meat and Skin- 1 no	OR 39K of 2014-15, punishable u/s-51 of wildlife protection act - 1972

Sl. No	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief description of articles seized	
36	15.10.14	Inside house premises of Khuduram Tudu of Majhisahi	Wild Boar	Sus scrofa	Boar meat-100 gm, meat attached Jaw of Wild Boar- 100 gm, Bamboo Bow- 1 no, Arrow-3 nos	OR case No. 79K of 2014-15, u/s-9,27,29,31,32 & 39
37	14.06.10	In the house premises of Laxmikanta Mohanta of Ambadali	Barking Deer, Gurandi, Sambar & Kuchilakhai	Sus scrofa, Muntiacus Muntjac etc	Barking deer-7 kg, Barking deer leg-20 nos, Skin-5 nos, Gurandi skin with head- 1 no old barking deer skin-3 nos old sambar skin-1 no, kuchial khai beak- 1 no	OR case No. 5P of 2010-11, FIR No. 230456/1331 & section-9, 27, 29,30, 31 and 49 of Wildlife protection Act-1972 which is punishable u/s-51, of wildlife Proctection Act-1972
38	02.09.12	Inside room NO. 204 of Baripada Guest House, Baripada	Royal Bengal Tiger		One old processed skin of Royal Bengal Tiger	OR case No. 35P of 2012-13, FIR No. 134248/1426 & sub-Section- (2) (16), (C), (19), (30), (31) & (36) of section-2 of the wildlife (Protection Act-1972. Under Section-9 of the Wildlife Protection Act-1972, Section-44,48 (A), 49-A, 49-B,49-c, 51 (1), 57, 58-A, 58-C of the Wildlife Protection Act-1972.
39	02.09.12	Inside the house premises of Sri Nishakara Mohanta	Spotted Deer		5 pairs trophy of old spotted deer horns, 5 pairs old barking deer horns & 1 skinof spotted deer	OR case No-60P of 2012-13, FIR No-281150/1494 & Section-39, 40, 42, 44, 48, 49 (B)(C) of the Wildlife Protection Act 1972 and punishable under Section-51 of the Wildlife Protection Act-1972
40	20.11.12	Near Budhabalanga River at Chipat Astia Village	Elephant		Death of Elephant	UD case No. 188P of 2012-13, FIR No.- 230569/1333
41	08.02.11	In the river back of sanjo near Baniabasa	Elephant	-	Elephant bone 2 pcs-7.00 Kg & one plastic bag	OR case No-43U of 2010-11, F.I.R. No-296184/1365 & u/s-9, 17, 27,29, 31, 39, 49, 50 & 51 of WL (P) Act-1972.

Sl. No	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief description of articles seized	
42	15.07.11	Narpada Chhak near Narpada Village	Banded Krait	-	One alive Banded Krait	OR case No-5U of 2011-12, FIR No- 296113/1304 & u/s51 of the WL(P) Act-1972.
43	03.11.12	On the PMGSY road near Ghuntibani Chhak	Leopard	Panther Paradas	Leopard Skin- 1 no, L-118cm, W-57 cm & one plastic gunny bag.	OR case No-31U of 2012-13, F.I.R. No- 269759/1357 & u/s-2,9,27,29,31,32,39,48,49,50&51 of the WL(P) Act-1972
44	01.02.13	On the road near Sahadagadi Chhak	Leopard, Spotted Deer, Elephant	Panthera Paradas, Axis Axis,	Leopard skin-1 no L-174 cm, W-38cm, one spotted deer skin L-160 cm, W-63 cm, Elephant Tusk- 1 pc 38 gm,one plasticbag	OR case No-49U of 2012-13, F.I.R. No- 133432/1410 & u/s-51 of the WL(P) Act-1972
45	27.06.13	At the end of village Sainkula near Sono river under Kunta Police Station	Leopard	Panthera Paradas	Leopard Skin 2 nos, Plastic bag- 1 no & one Hero Honda Motorcycle Regd. No-OR-01N_1892	OR case NO-14U of 2013-14, F.I.R. No-68857/1479 & u/s-51 of the WL (P) Act-1972
46	24.03.14	on the road side near village Baniabasa near Baniabasa UP	Leopard	Panthera Paradas	Leopard Skin one no, L-200 cm, W-83 cm, plastic bag 1 no	OR case NO- 105U of 2013-14, F.I.R. No-261459/1521 & u/s-51 the WL(P) Act-1972

Table E. REPORT ON SEIZURE OF WILD LIFE ARTICLES

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
1	13.09.06	On the road of Tentuligaon village	Gendalia	Open bill Stork	One no of dead Open bill Strok	OR Case No-141B of 2006-07, F.I.R. No- 225669/1235 & U/s-2, 8, 9, 11 of W.L (P) Act-1972.
2	03.02.07	In the Similipal R.F near Village Agnikuanri	Barking Deer	Muntiacus muntjac	Flesh of Barking Deer-1Kg 350 gm, Bow-2 Nos, Arrow-6 Nos, Plastic Bag-1 No	90DK of 2006-07, F.I.R No-382949/1080 & U/S-27,29, 31 & 9 of WL (P) Act-1972
3	31.05.08	Near the village Gundihudi	Leopard Skin	Acinonyx jubatus	Lepard Skin- 2 nos, 1.L-6'9"XW-1'9", 2. L-6'0"X W-1'6"	OR Case No 27Dk of 2008-09, F.I.R. No-230756/1337 & U/s-9, 27, 29, 31, 49 (b) WL (P) Act-1972
4	02.05.09	Inside Champagarh (Lodhasahi)	Wild Boar	Sus scrofa	Dry flesh of wild Boar-500 gm(appx) tied in a polythene bag, Bow-3 nos, Arrow-10 Nos	OR Case No 7DK of 2009-10, F.I.R. No-230769/1337 & U/s-51 of the WL (P) Act-1972
5	02.05.09	Inside Champagarh (Lodhasahi)	Wild Boar	Sus scrofa	Dry flesh of wild Boar-500 gm(appx) tied in a polythene bag, Bow-4 nos, Arrow-12 Nos	OR Case No. 8DK of 2009-10, F.I.R. No-230770/1337 & U/s-51 of the WL (P) Act-1972
6	24.05.09	In the nala of Khandabuda near the village Mahilibasa	Barking Deer	Muntiacus muntjac	Flesh with Skin of femal Barking Deer 400 gm (appx), Bow-1 no, Arrow-2 no	OR Case No-18Dk of 2009-10, F.I.R. No- 226382/1249 & U/s-27, 29, 31, of WL (P)Act-1972
7	10.04.10	Inside Amarda RF	Wild Cat	Felis Chaus	2 nos of dead wild cat	OR 1R of 2010-11, U/S- 27 of OFA-1972
8	15.06.10	In the house premises fo Sri Ramachandra Soren of Upor Bangara	Barking Deer	Muntiacus muntjac	Flesh of Barking Deer-5 Kg, Horn of Bisow-2 nos, Cut head of male Barking Deer Head, 1 no-4.5 kg, cut head of female barking Deer-1.5 Kg, Arrow-16 nbos, Bow-3 nos.	OR No-22DK of 2010-11, F.I.R. No-230782/1337 & U/s-29,31 of the WL (P) Act-1972

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
9	14.06.10	In the house premises of Laxmikanta Mohanta of Ambadali	Barking Deer, Gurandi, Sambar & Kuchilakhai	Sus scrofa, Muntiacus Muntjac etc	Barking deer-7 kg, Barking deer leg-20 nos, Skin-5 nos, Gurandi skin with head- 1 no old barking deer skin-3 nos old sambar skin-1 no, kuchial khai beak- 1 no	OR case No. 5P of 2010-11, FIR No. 230456/1331 & section-9, 27, 29,30, 31 and 49 of Wildlife protection Act-1972 which is punishable u/s-51, of wildlife Proctection Act-1972
10	15.09.10	Inside Similipal Sanctuary near Saguanbadi Comp. TK-9	Barking Deer	Muntiacus muntjac	Barking deer flesh withskin -30 Kg,Arrow 1 no, Plastic Bag-4 no	OR Case No-67K of 2010-11, U/s- 9, 27, 29, 30, 31 ,32, 39 & 51 of wildlife protection act-1972
11	08.02.11	In the river back of sanjo near Baniabasa	Elephant	-	Elephant bone 2 pcs- 7.00 Kg & one plastic bag	OR case No-43U of 2010-11, F.I.R. No-296184/1365 & u/s-9, 17, 27,29, 31, 39, 49, 50 & 51 of WL (P) Act-1972.
12	15.07.11	Narpada Chhak near Narpada Village	Banded Krait	-	One alive Banded Krait	OR case No-5U of 2011-12, FIR No- 296113/1304 & u/s51 of the WL(P) Act-1972.
13	17.08.11	Suliapada Police Station	Rana Snake	Banded Krait	1 no Banded Karit rescued on dt. 17.08.2011 from Suliapada Police Station and released inside Similipal sanctuary on same date.	48D of 2011-12, U/S-39 (2,3) Punishable, U/S-51 of Wildlife Protection Act-1972
14	05.09.11	Durgapur village Chhaka on the Road	Snake Tampa	Naja Naja Kaouthia	4 nos of Naja Naja Kaouthia seized on dt. 05.09.2011 from Sri Dhushasan Sing of Haludbari, PS-Khejuri, Dist-East medinapur and released to the nature inside Dalki R.F	OR Case No- 81B of 2011-12, F.I.R. No- 269508/1352 & U/s-2, 8, 9, 11 of W.L. (P) Act-1972

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
15	30.09.11	Haripur to Panasia Road (Near Khadikapada village)	Gendalia	Open bill Stork	One no of dead Open bill Stork, Weight-1 Kg(Approx)	OR Case No-95B of 2011-12, F.I.R. No- 269669/1355 & U/s-2, 8,9,11 of W.L. (P) Act-1972
16	24.02.12	Inside Similipal Sanctuary Comp. No-TK-10 near Nahubudanala	Sambara	Cervus unicolor	Fresh cut wildanimal meat- 70 Kg with blood and 03 nos Sambar head, Arrow-40 nos, Bows-25 nos, Axe-10 nos, hand made Gun-13 nos	169K of 2011-12, u/s- 2, 9, 17 (A) , (D), (H), 27,29,30,31, 39, 50, & 51 of Wildlife Protection Act-1972
17	02.09.12	Inside room NO. 204 of Baripada Guest House, Baripada	Royal Bengal Tiger		One old processed skin of Royal Bengal Tiger	OR case No. 35P of 2012-13, FIR No. 134248/1426 & sub-Section- (2) (16), (C), (19), (30), (31) & (36) of section-2 of the wildlife (Protection Act-1972. Under Section-9 of the Wildlife Protection Act-1972, Section-44,48 (A), 49-A, 49-B,49-c, 51 (1), 57, 58-A, 58-C of the Wildlife Protection Act-1972.
18	02.09.12	Inside the house premises of Sri Nishakara Mohanta	Spotted Deer		5 pairs trophy of old spotted deer horns, 5 pairs old barking deer horns & 1 skin of spotted deer	OR case No-60P of 2012-13, FIR No-281150/1494 & Section-39, 40, 42, 44, 48, 49 (B)(C) of the Wildlife Protection Act 1972 and punishable under Section-51 of the Wildlife Protection Act-1972
19	06.10.12	Near Bahalda hatasahi	Sambara	Cervus unicolor	Sambara meat-1 Kg, plastic Bag-1 no.	OR Case No- 64DK of 2012-13, F.I.R. No-299877/1399 &u/s-9, 39, 49 (b) (v) of the WL(P) Act-1972.
20	03.11.12	On the PMGSY road near Ghuntibani Chhak	Leopard	Panther Paradas	Leopard Skin-1 no, L-118cm,W-57 cm & one plastic gunny bag.	OR case No-31U of 2012-13, F.I.R. No- 269759/1357 & u/s-2,9,27,29,31,32,39,48,49,50&51 of the WL(P) Act-1972
21	20.11.12	Near Budhabalanga River at Chipat Astia Village	Elephant		Death of Elephant	UD case No. 188P of 2012-13, FIR No.- 230569/1333
22	02.12.12	Near village road Dhobanisole	Wild Boar	Sus scrofa	Fresh cut meat-7kg	49BP of 2012-13, FIR No-332466/ 1451 & U/S- 2, 8, 9,11 of Wildlife ProtectionAct-1972
23	23.12.12	Chhatna R.F	Elephant	Elephant maximus	One broken tusk seized weight-368 gm.	UD case No-27B of 2012-13 & FIR No-68376/1469

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
24	27.01.13	near chhtraamba Chhak of Padmapokhari	Saliapatin		Saliapatin meat 300 gm, old bicycle-3 nos, Bow-2 no, Arrow- 9 nos, Torch light- 2 no, Poisonpot-1 nos	OR case No. 81K of 2012-13, u/s- 9, 30, 31, 32, 39, 49(B), punishable - u/s-51 of Wildlife Protection Act-1972.
25	01.02.13	Near Chauliasole village road side	Pati Mankada	Rhesus macaque (macuca mulata)	1 no male & 1 no of female live monkeys	OR Case No- 136 DK of 2012-13, F.I.R. No- 299828/1398 & u/s-39, (2) (3), 40, 43 (1), 44 (1) (iv) & 48 (a) (i) (ii), 48 (b) (i) of the WL (P) Act-1972,. Punishable under-51 of the above Act.
26	23.01.13	In the house of Dasaratha Marndi of Nedam	Samar and Spotted Deer	Cervus unicolor & Muntjac	Sambar Horn Spotted deer horn 1 no	OR case No. 82K of 2012-13 , u/s-49(b) & 51 of Wildlife Protection Act-1972
27	01.02.13	On the road near Sahadagadi Chhak	Leopard, Spotted Deer, Elephant	Panthera Paradas, Axis Axis,	Leopard skin- 1 no L-174 cm, W-38cm, one spotted deer skin L-160 cm, W-63 cm, Elephant Tusk- 1 pc 38 gm, one plastic bag	OR case No-49U of 2012-13, F.I.R. No- 133432/1410 & u/s-51 of the WL(P) Act-1972
28	15.02.13	in Kuldihi village in side Similipal Sanctuary	Wild Boar	Sus scrofa	Pig meat - 1 Kg	OR case NO. 7K of 2013-14, u/s- 2, 9,26, 29, 39, 49, 49 (B) & punishable u/s-51 of wildlife Protection Act-1972
29	15.02.13	in the house Varandah of Nursingha Ch. Majhi	Wild Boar	Sus scrofa	Pig meat	OR case No. 96K of 2012-13, u/s- 2, 9,26, 29, 39, 49, 49 (B) & punishable u/s-51 of wildlife Protection Act-1972
30	21.02.13	Inside house premises of Sri Ganeswar Bhakta	Horn Bill	Accipitridae	One old beak of Horn Bill, 3 bundle gum stick (120 pcs), 8 set traps prepared with bamboo straw & nylon thread-80 pcs, Bow-1 no, Arrow-2 nos.	OR No-142 DK of 2012-13, F.I.R. No- 234751/1502 & u/s-9,39,40,42,44, of the WL (P) Act-1972 & punishiable under - 51 of the above act.

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
31	02.03.13	On the footpath from Jodibaru village to Titiajhari Kalipahada near Baleda Sahi under Baripada PS.	Languor & Indian Giant Squirrel	Presbytis entellus & Ratufa indica.	2 nos of dead common Languor with tail & leg attached, 1 no of dead Indian giant squirrel, monkey trap net 5 sets, axe-6 nos, knife-1 no	OR Case No- 143 DK of 2012-13, F.I.R. No-234753/1502 & u/s- 9,39, 40, 42, 44, of the WL (P) Act-1972 & punishiable under-51 of the above act.
32	04.03.13	On the road near village Sureidihi	Barn owl	Tyto alba	1 no	OR 84R of 2013-14, u/s-39(2), 86 of Wildlife Protection Act-1972, U/s-51
33	28.05.13	On the NH-18 near village Dhanpur	Indian Wolf	Canis Lupis	One no of Indian Wolf at on the NH-18 near village Dhanpur on dt. 28.05.2013	UD case No-07B of 2013-14 & F.I.R. No- 269480/1351
34	27.06.13	At the end of village Sainkula near Sono river under Kunta Police Station	Leopard	Panthera Paradas	Leopard Skin 2 nos, Plastic bag- 1 no & one Hero Honda Motorcycle Regd. No-OR-01N_1892	OR case NO-14U of 2013-14, F.I.R. No-68857/1479 & u/s-51 of the WL (P) Act-1972
35	05.08.13	Inside Similipal R.F. Compt. No-BLE-3	Lagre Indian Civet	Viverra Zibetha	02 Nos dead Viverra zibetha	26BP of 2013-14, FIR- No-314118/1454 & U/S-2,8,9,11 of Wildlife Protection Act-1972
36	05.11.13	Asanbani R.F. near Dhabanisole village	Elephant Calf	Elephant maximus	One no of Elephant Calf seized at Asanbani R.F. near Dhabanisole village ondt. 05.11.2013.	UD case NO-41B of 2013-14 & F.I.R. No-269290/1347
37	11.11.13	Inside Similipal R.F.S.J-6 near Bahalda	Wild Boar	Sus scrofa	Wild Boar Meat- 5 Kg, weighing scale- 1 no, 1 Kg weighter, Bill hook 1no, Axe-1 no	OR Case No-135DK of 2013-14, F.I.R. No- 281383/1499 & u/s- 9,39, 40, 42, 44 of WL (P) Act-1972 & punishable under-51 of the above act.
38	12.12.13	In the house premises of Sri Chamuram Singh,	Leopard Skin		Lepark skin or Panther, L-180cm, B-48cm, 2 nos of Nokia Mobile, 1 No LG mobilie	OR Case No-158DK of 2013-14, F.I.R. No- 281386/1499 & U/s- 9, 39,40,42,44, of the WL (P) Act- 1972 & punishible under- 51 of the above act.

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
39	20.01.14	Inside Similipal R.F Compt. No. S.J.-6 near Tunkinala	Monkey	Macaca mulata	Trap net- 2 nos, axe- 2 nos, silve Honda-1 no, bella-1 no, dry monkey meat along with leg & flesh.	OR Case No- 199 DK of 2013-14, F.I.R. No-281395/1499 & U/s-2,9,27,31,39 of the WL (P) Act-1972 & punishable under-51 of the above act
40	14.03.14	in the open field of Pahanda village Radho	Leopard Skin	Panther Uncia	Leopard Skin	OR case No. 99K of 2013-14 punishable u/s-51 of wildlife protection act-1972
41	21.03.14	Aswakuti Village	Dead birds	-	Dead Birds-53 Nos	OR case NO-100K of 2013-14 punishable u/s-51 of Wildlife Protection Act-1972
42	24.03.14	on the road side near village Baniabasa near Baniabasa UP school	Leopard	Panthera Paradas	Leopard Skin one no, L-200 cm, W-83 cm, plastic bag 1 no	OR case NO- 105U of 2013-14, F.I.R. No-261459/1521 & u/s-51 the WL(P) Act-1972
43	26.07.14	In thehouse premises of the Barju Sidhu	Barking Deer	Muntiacus muntjac	Barking deer meat and Skin- 1 no	OR 39K of 2014-15, punishable u/s-51 of wildlife protection act -1972
44	12.10.14	Inside House premises of Sri Bhaju Murmu of Rangamatia Village	Sambara	Cervus unicolor	Sambara meat- 7 Kg (appx) front leg 1 no of dead Sambara, Blood 1 ltr (appx) tied in a polythene bag, small cut pcs of Sambara meat-41 pcs, axe-1 no, aluminum container-1 no, steel plate-1 no , steel pot-1 no, bird trap net-7 nos, ladybicycle-1 no	OR Case No-95 DK of 2014-15, F.I.R. No-039461/1581 & U/s-51 of WL (P) Act-1972.
45	15.10.14	Inside house premises of Khuduram Tudu of Majhisahi	Wild Boar	Sus scrofa	Boar meat-100 gm, meat attached Jaw of Wild Boar-100 gm, Bamboo Bow-1 no, Arrow-3 nos	OR case No. 79K of 2014-15, u/s-9,27,29,31,32 & 39

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
46	06.11.14	On the road of Dantiamuhan to Chitrada near Harinasole village	Wild Boar	Sus scrofa	One no of wildboar seized at on the road from Dantiamuhan to Chitrada near Harinasole village on dt. 06.11.2013.	UD case No-33B of 2014-15 & F.I.R. No-68587/1473
47	14.12.14	Inside Similipal Santury near Marebasa Nala	Wild Boar	Sus scrofa	Wild boar meat-4 Kg (apprx.), Wild boar skin-1 no Plastic Bag-1 no, Hand made Thusa Gun- 1 no	OR case No-126 K of 2014-15 & F.I.R. No-133879/1419 & u/s-9,27,29,31,39 of WL (P) Act-1972
48	26.11.14	Inside Similipal RF, Compt. No-SJ-5, near Agnikuanri teak plantation, PS- Khunta, Dist-Mayurbhanj	Wild Boar	Sus Scrofa	Wild Pig Meat- 10 Kg (Approx), Steel Plate-2 nos, Knief- 1 no, Contry made gun- 1 no, Aluminium Dekchi- 1no, Axe- 1 no	OR case No- 170 Dk of 2014-15,FIR No-237790/1507 & u/s-2, 15, 16, 16-a, 20, 21, 22, 23, 26, 32, 35 of WL (P) Act-1972
49	12.01.15	Inside Similipal RF compt. No-ED-4	Wild Rabbit	Hispid Hear	one dead wild Rabit & Trap 6 nos.	OR case No-88U of 2014-15, F.I.R. No- 133284/1407 & u/s-51 of the WL (P) Act-1972
50	05.02.15	Inside Similipal Sanctuary near Kenduchua Nala	Samar, Kutari, Gurani	Cervus unicolor, Muntiacus Muntijak, Tragulus meminna	Sambar Meat-5 Kg, Gurandi meat- 3kg, Kutari meat-2 kg	OR case NO-94U of 2014-15, FIR No- 261656/1525 & u/s- 51 of WL (P) Act-1972
51	05.03.15	On the road NH-18 in between God-Deulia to Kalama near Kalama village	Leopard	-	Leopard Skin, L-207 cm,W-60 cm , Hero Honda CD Delux motor cycle bearing Regd.No-OR-01A-1205	OR case No-167B of 2014-15, F.I.R. No-68662/1475 &u/s-16 ©m 19, 30, 31,36, u/s-9, 39(b) (d), 44 (a) (III), 48 (A) (II), 49-A, B,C of WL (P) Act-1972
52	09.04.15	Inside Kanthalhudi PF, near village Hatikot, Uder PS-Badasahi, Dist-Mayurbhanj	Wildboar	Sus Scrofa	Wild Boar skin-1 no, Leg-4 nos, Poniki 1 no, Axe- 1 no, Meat- 5 kg, Bill hook- 1 no, Bow & Arrow- 1 no	OR case No- 1 DK of 2015-16, F.I.R. No-039368/1579 &u/s- 2, 5, 16, 16-a, 20, 21, 22, 23, 26, 32, 35, of WL (P) Act- 1972

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
53	15.05.15	Rangamatia Chhak,	Barking Deer, Leopard		1. Leopard Skin- 1 no, L-5'4",W-1'7" Tail sieze-2'1" 2. Spotted Deer skin- 2 (1)L-3'10" W-1"7" (2)L-4'7", W-1'10", One Hero Passion Pro M. cycle-1 no- OD- 11B-2826 & one Plastic bag	OR case No-14^{BP} of 2015-16, under section (2), (9), (29), (31), (32), (39), (49-a) (49-b)of Wildlife Protection Act-1972 & punishable under sec-51 of the Wildlife Protection Act-1972
54	18.05.15	Rangamatia to Lulung RD Road	Leopard		Leopard skin-1 no	OR case No-20P of 2015-16, Sub-section-(2), (16)©(19), (30) (31) & (36) of section-2, under section-9, under sub-section-(b) (d) of section-39, under sub- section-(a) of section-44, under sub-section-48(A), of section-48, under sub-section- 49-A, 49-B, 49-C of section-49 punishable under section-51(1) clause-3 under section-57, under section58-A & 58-C of section-58 ofthe Wildlife (Protection) Act- 1972
55	22.06.15	Sai Hospital Chhak To Sungadia, Baripada Municipality road	Chemeleon		Live Chameleon	OR case No-35^{P} of 2015-16, under section-9,10,39,40, 42, 43, 47, 49 & punishable under section-51 of Wildlife (Protection) Act- 1972
56	25.07.15	Inside Similipal SanctuaryArea	Mounse deer (Gurandi)		Bow-3Nos.Arrow-12Nos.Axe-1No. Fresh Gurandi Skin-1No.(1'1" X 4") Trap-20Nos. Knife-1No. Matchbox-2Nos.	OR case No-22^{U} of 2015-16, under section 9,27,29,31, of WL (Protection) Act 1972, Punishable U/S 51 of said act. Inside Similipal Sanctuary Compartment No. ED 14
57	23.08.15	Inside Similipal SanctuaryArea	-	-	Hande made gun- 1 no, Bow-2 nos , Arrows-10 nos, trap-12 nos	OR case No-28^{U} of 2015-16, u/s-9,27,29,31 of Wildlife (Protection)Act-1972 & Punishable u/s-51 of said act., Inside Similipal Sanctuary Compartment No- ED-04 near Kasikundal village

Sl. No.	Date	Place of seizure	Details of wildlife articles, tools etc seized			Case FIR/ OR No. Date, Section of Law
			Common name of the species	Scientific name of the species	Quantity and brief descriptionof articlesseized	
58	01.09.15	Bus stand Baripada	Binocellate Cobra, Monocellate Cobra, Forsten's Cat Snake, Common Indian Cat		Binocellate Cobra-5 nos, Monocellate Cobra-3 nos, Forsten's Cat Snake-2, Common Indian Cat-3	OR case No-60^{P} of 2015-16 / under Section- 9, 39(3), & 44 (c) respectively of Wildlife Protection Act-1972 and punishable under Section-51 of said Act
59	29.09.2015	Inside Similipa Sanctuary Area	Mouse Deer		Cut & dried mouse deer meat- 3 Kg, (Approx) Plastic bag-1 no, Handmade Thusa Gun- 4 nos, Old Torch Light-2 nos, Bill hook- 2 nos	OR case No-34^{U} of 2015-16/ under section-9, 27,29,31 of wildlife protection Act-1972, Punishable u/s-51 of said Act/ Inside Similipal Sanctuary Compartment No- ED 14 near Kenduchua Nal
60	12.01.15	Inside Similipa Sanctuary Area	-	-	Handmade Thusa gun loaded manually with lead and explosive-1 no	OR case No-173K of 2015-16/ under section-27 & 31 of Wildlife (Protection) Act-1972 & Punishable u/s-51 of the same
61	13.10.15	Inside Similipa Sanctuary Area	Barking Deer		Barking deer meat- 10 Kg alongwith Skurll with horn	OR case No-79BP of 2015-16, u/s-2, 9, 27, 29,31, 32, 33,39 (d) of Wildlife (Protection) Act-1972 & punishable u/s-51 of said act
62	02.11.15	Inside Similipa Sanctuary Area	-	-	Handmade Thusa gun loaded -1 no , Old torch light-1 no	OR case 38U of 2015-16, u/s-9, 27, 29, and 31 of Wildlife (Protection) Act-1972 & Punishable u/s-51 of said Act / inside Similipal Sanctuary Compartment no. ED.04 near Mareda
63	14.11.15	Inside Similipa Sanctuary Area near Sijupani nala of SJ-5	Wild boar		Wild pig meat-10 Kg (approx), Skin- 4 pcs, leg-2 nos, tail1 no, clutch wire trap net-1 no, knife-1 no, Bill hook-1 no,Aluminum Kodei-1 no	OR case No-192Dk of 2015-16/ u/s-2, 9, 27, 31, 39 of Wildlife Protection Act-1972, punishable u/s-51 of the said Act/ inside Similipal Sanctuary near Sijupani Nala of SJ-5 Compart. Near village Subarnamanjari of Tadki Section
64	15.11.15	Inside Similipa Sanctuary Area near Sijupani nala of SJ-5	-	-	Handmade Thusa gun loaded -1 no , Old torch light-1 no	OR case 39U of 2015-16/ u/s-9, 27, 29, 31 of Wildlife (Protection) Act-1972 & punishable u/s-51 of said Act/ inside Similipal Sanctuary Compt. No. ED.14 near Kenduchua Nala

Appendix – XXI

VACANCY OF STAFF IN BARIPADA FOREST DIVISION			
Rank	**Sanctioned Strength of staff**	**Men in Position**	**Vacancy position**
Dy. Conservator of Forests	1	1	0
Asst. Conservator Forests (Affn.)	1	1	0
Asst. Conservator of Forests (Enf.)	1	1	0
Asst. Conservator of Forests (Admn.)	1	1	0
Forest Ranger (Affn.)	1	0	1
Forest Ranger (Enf.)	1	0	1
Forest Ranger (Ch)	0	0	0
Forest Ranger (Range)	7	6	1
Dy. Ranger	7	4	3
Forester (Enf.)	1	3	-2
Forester (Affn.)	1	3	-2
Forester (Ch.)	1	1	0
Forester (Sec)	29	29	0
V.F.W. merged to Forester cadre	4	4	0
Forest Guard (Beat)	84	70	14
Forest Guard (Ch)	5	5	0
Forest Guard (Affn/Enf.)	3	2	1
Head Clerk	1	0	1
Jr. Accountant	8	5	3
Jr. Stenographer	1	0	1
Jr. Clerk	9	5	4
Driver (H.V.)	1	0	1
Driver (L.V.)	2	1	1
Dak Runner	1	1	0
Chowkidar	9	8	1
Mali	1	0	1
TOTAL	**181**	**151**	**30**

Appendix – XXII

Forest Block wise Area & Distribution of Working Circle

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC	Total RWC	Total IWC	NTFP (O) WC	Wildlife (O) WC	JFM (O) WC
				Under FRA	Under FC Act.							
PITHABATA	1	Baldiha R.F.	110.130	0.000	1.000	109.130	36.722	72.408	0.000	70.130	70.130	0.000
	2	Bhagabat Chandrapur R.F.	806.280	0.000	10.800	795.480	460.525	334.955	0.000	661.280	661.280	795.480
	3	Budhikhamari R.F.	863.100	0.480	6.000	856.620	326.632	529.988	0.000	683.100	525.670	625.000
	4	Dungurusahi R.F.	10.950	0.000	0.000	10.950	10.950	0.000	0.000	10.950	10.950	0.000
	5	Hatikote R.F.	556.840	0.000	3.120	553.720	174.788	378.932	0.000	168.410	356.840	495.000
	6	Lulung-Purunapani R.F.	223.310	0.000	0.000	223.310	84.041	139.269	0.000	133.310	133.310	79.400
	7	Manchabandha R.F.	1020.920	0.000	6.960	1013.960	242.435	771.525	0.000	95.790	95.790	644.000
	8	Asanabani P.R..F	57.030	0.000	0.000	57.030	57.030	0.000	0.000	57.030	57.030	57.030
	9	Goplapur V.F.	4.000	0.000	0.000	4.000	4.000	0.000	0.000	0.000	0.000	4.000
	10	Srirampur V.F.	3.140	0.000	0.000	3.140	3.140	0.000	0.000	0.000	0.000	3.140
	11	Gadadharapur V.F.	0.840	0.000	0.000	0.840	0.840	0.000	0.000	0.000	0.000	0.840
	12	Baunsda V.F.	0.940	0.000	0.000	0.940	0.940	0.000	0.000	0.000	0.000	0.940
	13	Dumuria V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
		Sub-total	**3662.480**	**0.480**	**27.880**	**3634.120**	**1407.043**	**2227.077**	**0.000**	**1880.000**	**1911.000**	**2709.830**
DUKURA	14	Aghasole R.F.	37.550	0.000	0.000	37.550	32.987	4.563	0.000	0.000	0.000	0.000
	15	Badsahi R.F.	340.740	0.040	0.000	340.700	203.868	136.832	0.000	0.000	0.000	340.700
	16	Bidhyadharpur R.F.	238.760	0.000	0.000	238.760	113.842	124.918	0.000	0.000	0.000	238.760

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC	Total RWC	Total IWC	NTFP (O) WC	Wildlife (O) WC	JFM (O) WC
				Under FRA	Under FC Act.							
	17	Chakradharpur R.F.	141.310	0.000	0.000	141.310	87.711	53.599	0.000	71.310	71.310	82.400
	18	Chengua-Mangalpur R.F.	79.640	0.000	0.000	79.640	79.640	0.000	0.000	0.000	0.000	75.000
	19	Deulia R.F.	241.670	0.000	0.000	241.670	136.581	105.089	0.000	37.570	37.570	100.000
	20	Gojodi-Damodarpur R.F.	33.020	0.000	0.000	33.020	19.049	13.971	0.000	33.020	33.020	0.000
	21	Haldia R.F.	52.000	0.000	0.000	52.000	46.909	5.091	0.000	0.000	0.000	0.000
	22	Itamundia R.F.	111.370	0.000	0.000	111.370	74.954	36.416	0.000	81.370	81.370	110.000
	23	Jarkani R.F.	10.680	0.000	0.000	10.680	1.564	9.116	0.000	0.000	0.000	0.000
	24	Kanpura R.F.	533.850	0.890	0.000	532.960	355.504	177.456	0.000	53.670	155.150	320.000
	25	Kuldiha R.F.	25.250	0.000	0.000	25.250	25.250	0.000	0.000	0.000	0.000	0.000
	26	Pundala R.F.	17.970	0.000	0.000	17.970	17.970	0.000	0.000	0.000	0.000	0.000
	27	Purunapani R.F.	42.730	0.000	0.000	42.730	17.214	25.516	0.000	0.000	0.000	42.730
	28	Belpal R.F.	110.600	0.000	0.000	110.600	110.600	0.000	0.000	30.600	30.600	73.900
	29	Dukura R.F.	162.750	0.000	0.000	162.750	36.665	126.085	0.000	122.750	122.750	150.000
	30	Itamundia-Jamuna R.F.	111.250	0.000	0.000	111.250	111.250	0.000	0.000	0.000	0.000	0.000
	31	Khanua R.F.	113.680	0.000	0.000	113.680	113.680	0.000	0.000	0.000	0.000	80.000
	32	Kerko R.F.	110.070	0.000	0.000	110.070	110.070	0.000	0.000	0.000	0.000	40.000
	33	Nigirdha (A) P.R.F.	15.750	0.000	0.000	15.750	15.750	0.000	0.000	15.750	15.750	0.000
	34	Nigirdha (B) P.R.F.	37.120	0.000	0.000	37.120	6.809	30.311	0.000	37.120	37.120	0.000
	35	Kukurbhuka (1)P.R.F.	122.820	0.000	0.000	122.820	21.056	101.764	0.000	22.820	122.820	0.000
	36	Kukurbhuka (2)P.R.F.	124.580	0.000	0.000	124.580	54.308	70.272	0.000	24.580	124.580	0.000

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				Under FRA	Under FC Act.							
	37	Sanamakabadi P.R.F.	129.000	0.000	0.000	129.000	19.704	109.296	0.000	29.000	129.000	0.000
	38	Budhabalang (A) P.R.F.	46.560	0.000	0.000	46.560	6.120	40.440	0.000	46.040	46.560	0.000
	39	Budhabalang (B) P.R.F.	76.000	0.000	0.000	76.000	6.971	69.029	0.000	76.000	76.000	0.000
	40	Gopinathpur P.R.F.	566.400	0.000	0.000	566.400	260.820	305.580	0.000	68.400	366.400	0.000
	41	Manatri V.F.	6.400	0.000	0.000	6.400	6.400	0.000	0.000	0.000	0.000	6.400
	42	Bhupad V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	43	Manatri V.F.	3.480	0.000	0.000	3.480	3.480	0.000	0.000	0.000	0.000	3.480
	44	Rangahidi V.F.	4.588	0.000	0.000	4.588	4.588	0.000	0.000	0.000	0.000	4.588
	45	Ranibandha V.F.	3.440	0.000	0.000	3.440	3.440	0.000	0.000	0.000	0.000	3.440
	46	Khanua V.F.	6.000	0.000	0.000	6.000	6.000	0.000	0.000	0.000	0.000	6.000
	47	Basipitha V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	48	Basipitha V.F.	8.120	0.000	0.000	8.120	8.120	0.000	0.000	0.000	0.000	8.120
		Sub-total	**3680.148**	**0.930**	**0.000**	**3679.218**	**2133.874**	**1545.344**	**0.000**	**750.000**	**1450.000**	**1700.518**
R.G.PUR	49	Amarda R.F.	1512.200	0.000	0.648	1511.552	388.733	1122.819	0.000	678.009	641.009	1045.000
	50	Betnasia R.F.	110.230	0.000	0.000	110.230	48.285	61.945	0.000	109.883	109.883	110.000
	51	Baghajharan R.F.	147.950	0.000	2.400	145.550	111.406	34.144	0.000	63.583	63.583	145.550
	52	Baladia R.F.	95.830	0.000	0.000	95.830	52.380	43.450	0.000	0.000	0.000	95.830
	53	Chitrada R.F.	422.640	0.000	12.800	409.840	139.984	269.856	0.000	169.004	169.004	350.000
	54	Jamsole R.F.	434.300	0.000	215.250	219.050	219.050	0.000	0.000	0.000	0.000	162.280
	55	Moroda R.F.	1479.140	0.000	14.850	1464.290	320.236	1144.054	0.000	576.555	538.555	1464.290
	56	Nalagaja R.F.	260.290	0.000	0.000	260.290	134.245	126.045	0.000	210.290	210.290	260.290
	57	Nichuapada R.F.	52.280	0.000	0.000	52.280	34.509	17.771	0.000	12.200	12.200	0.000

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				Under FRA	Under FC Act.							
	58	Nuhajhalia R.F.	50.500	0.000	0.000	50.500	50.500	0.000	0.000	33.103	33.103	0.000
	59	Nunchatia R.F.	148.270	0.000	0.000	148.270	44.893	103.377	0.000	90.270	90.270	148.270
	60	Sarumula R.F.	330.220	0.380	0.000	329.840	129.490	200.350	0.000	107.000	107.000	325.000
	61	Sukhilakhali R.F.	231.310	0.000	0.750	230.560	76.231	154.329	0.000	150.103	150.103	200.000
	62	Chikitamatia V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	63	Sarajharan V.F.	7.344	0.000	0.000	7.344	7.344	0.000	0.000	0.000	0.000	7.344
	64	Pharajpur V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	65	Duarsuni V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	66	Nahiasoli V.F.	2.940	0.000	0.000	2.940	2.940	0.000	0.000	0.000	0.000	2.940
	67	Jhatiada V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	68	Nalagaja V.F.	2.000	0.000	0.000	2.000	2.000	0.000	0.000	0.000	0.000	2.000
	69	Chandanpur V.F.	3.500	0.000	0.000	3.500	3.500	0.000	0.000	0.000	0.000	3.500
		Sub-total	**5315.944**	**0.380**	**246.698**	**5068.866**	**1790.726**	**3278.140**	**0.000**	**2200.000**	**2125.000**	**4347.294**
UDALA	70	Anantasahi R.F.	7.120	0.000	0.000	7.120	7.120	0.000	0.000	7.120	7.120	0.000
	71	Belakuti R.F.	223.380	0.000	0.000	223.380	192.558	30.822	0.000	93.380	93.380	223.380
	72	Bhandagaon R.F.	122.210	0.000	0.000	122.210	122.210	0.000	0.000	122.210	122.210	122.210
	73	Charada R.F.	7.120	0.000	0.000	7.120	7.120	0.000	0.000	7.120	7.120	0.000
	74	Dhaundia R.F.	524.790	0.800	0.000	523.990	317.268	206.722	0.000	369.850	369.850	380.200
	75	Dimgadia R.F.	6.960	0.000	0.000	6.960	6.960	0.000	0.000	6.960	6.960	6.960
	76	Dugdha R.F.	35.290	0.000	0.000	35.290	17.760	17.530	0.000	17.290	17.290	35.290
	77	Ghantasila R.F.	5.340	0.000	0.000	5.340	5.340	0.000	0.000	105.340	5.340	0.000
	78	Jaypur R.F.	27.800	0.000	0.000	27.800	17.823	9.977	0.000	27.800	27.800	0.000
	79	Khunta R.F.	427.990	0.000	4.590	423.400	289.412	133.988	0.000	259.990	259.990	200.000
	80	Kuamara R.F.	229.530	0.000	0.000	229.530	229.530	0.000	0.000	139.530	139.530	229.530
	81	Kuriakhunta R.F.	7.450	0.000	0.000	7.450	4.673	2.777	0.000	107.450	109.180	0.000

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				Under FRA	Under FC Act.							
	82	Marsigaon R.F.	263.320	0.000	0.000	263.320	263.320	0.000	0.000	93.320	93.320	100.000
	83	Nahara R.F.	161.870	0.000	0.000	161.870	161.870	0.000	0.000	101.870	101.870	161.870
	84	Nuapada R.F.	324.380	0.000	0.000	324.380	157.150	167.230	0.000	182.380	182.380	324.380
	85	Mundhakata R.F.	20.400	0.060	0.000	20.340	20.340	0.000	0.000	120.340	20.340	0.000
	86	Phuljhari R.F.	315.650	0.000	0.000	315.650	65.533	250.117	0.000	95.650	95.650	218.300
	87	Purunabaripada R.F.	25.850	0.000	0.000	25.850	24.409	1.441	0.000	82.580	25.850	0.000
	88	Sialia R.F.	34.320	0.000	0.000	34.320	34.320	0.000	0.000	134.320	34.320	0.000
	89	Sunduria R.F.	2.430	0.000	0.000	2.430	2.430	0.000	0.000	102.403	102.430	0.000
	90	Sirathali R.F.	74.140	0.000	0.000	74.140	74.140	0.000	0.000	152.167	52.140	0.000
	91	Udala R.F.	533.930	0.000	0.000	533.930	274.811	259.119	0.000	375.930	375.930	500.000
	92	Purunabaripada mankadakenda V.F.	0.648	0.000	0.000	0.648	0.648	0.000	0.000	0.000	0.000	0.648
	93	Kusunia Patpur V.F.	0.320	0.000	0.000	0.320	0.320	0.000	0.000	0.000	0.000	0.320
	94	Bhalimunduli V.F.	3.900	0.000	0.000	3.900	3.900	0.000	0.000	0.000	0.000	3.900
	95	Salabani V.F.	2.960	0.000	0.000	2.960	2.960	0.000	0.000	0.000	0.000	2.960
	96	Sialia V.F.	2.880	0.000	0.000	2.880	2.880	0.000	0.000	0.000	0.000	2.880
	97	Raghunathpur V.F.	4.660	0.000	0.000	4.660	4.660	0.000	0.000	0.000	0.000	4.660
	98	Jamudiha V.F.	2.000	0.000	0.000	2.000	2.000	0.000	0.000	0.000	0.000	2.000
	99	Nuagaon V.F.	13.324	0.000	0.000	13.324	13.324	0.000	0.000	0.000	0.000	13.324
	100	Bahanada V.F.	1.300	0.000	0.000	1.300	1.300	0.000	0.000	0.000	0.000	1.300
	101	Jalda V.F.	1.124	0.000	0.000	1.124	1.124	0.000	0.000	0.000	0.000	1.124
	102	Murari V.F.	0.992	0.000	0.000	0.992	0.992	0.000	0.000	0.000	0.000	0.992
	103	Gohira V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000

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				Under FRA	Under FC Act.							
	104	Jogibandha V.F.	2.000	0.000	0.000	2.000	2.000	0.000	0.000	0.000	0.000	2.000
	105	Jajpur`V.F.	14.884	0.000	0.000	14.884	14.884	0.000	0.000	0.000	0.000	14.884
	106	Kochiladiha V.F.	15.000	0.000	0.000	15.000	15.000	0.000	0.000	0.000	0.000	15.000
	107	Khunta V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	108	Khunta V.F.	3.756	0.000	0.000	3.756	3.756	0.000	0.000	0.000	0.000	3.756
	109	Khunta V.F.	0.096	0.000	0.000	0.096	0.096	0.000	0.000	0.000	0.000	0.096
	110	Khunta V.F.	6.148	0.000	0.000	6.148	6.148	0.000	0.000	0.000	0.000	6.148
	111	Khunta V.F.	0.400	0.000	0.000	0.400	0.400	0.000	0.000	0.000	0.000	0.400
	112	Khunta V.F.	12.600	0.000	0.000	12.600	12.600	0.000	0.000	0.000	0.000	12.600
	113	Sridamchandrapur V.F.	1.376	0.000	0.000	1.376	1.376	0.000	0.000	0.000	0.000	1.376
		Sub-total	**3486.638**	**0.860**	**4.590**	**3481.188**	**2401.465**	**1079.723**	**0.000**	**2705.000**	**2250.000**	**2607.488**
BETNOTI	114	Asanbani R.F.	810.170	0.400	5.100	804.670	804.670	0.000	0.000	306.230	506.230	804.670
	115	Asankhali R.F.	12.950	0.120	0.000	12.830	9.956	2.874	0.000	0.000	0.000	0.000
	116	Badampur R.F.	952.290	0.039	0.000	952.251	437.149	515.102	0.000	287.290	287.290	940.000
	117	Badguma R.F.	28.970	0.000	0.000	28.970	21.309	7.661	0.000	0.000	0.000	28.970
	118	Baisinga R.F.	108.440	0.128	0.000	108.312	108.312	0.000	0.000	0.000	0.000	50.000
	119	Balka R.F.	23.960	0.000	0.000	23.960	23.960	0.000	0.000	0.000	0.000	0.000
	120	Bartana R.F.	194.890	0.000	0.000	194.890	126.955	67.935	0.000	94.890	94.890	190.000
	121	Basantapur R.F.	113.800	0.000	0.000	113.800	39.384	74.416	0.000	0.000	0.000	0.000
	122	Beldiha R.F.	41.600	0.000	0.000	41.600	19.504	22.096	0.000	0.000	0.000	41.600
	123	Bhimpur R.F.	18.290	0.000	0.000	18.290	18.290	0.000	0.000	0.000	0.000	0.000
	124	Bishrampur R.F.	42.250	0.000	0.000	42.250	35.679	6.571	0.000	0.000	0.000	0.000
	125	Chhatnna R.F.	393.510	0.000	2.050	391.460	124.091	267.369	0.000	143.510	143.510	100.000
	126	Daldali R.F.	71.220	0.000	6.000	65.220	65.220	0.000	0.000	0.000	0.000	65.220

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				Under FRA	Under FC Act.							
	127	Dalki R.F.	827.970	0.000	0.000	827.970	387.077	440.893	0.000	500.000	333.000	800.000
	128	Dumapada R.F.	224.350	0.000	4.800	219.550	61.532	158.018	0.000	219.550	219.550	219.550
	129	Durgapur R.F.	961.840	0.000	4.300	957.540	441.260	516.280	0.000	763.840	661.840	957.540
	130	Gad-deulia R.F.	58.730	0.000	0.000	58.730	58.730	0.000	0.000	0.000	0.000	58.730
	131	Gandigadha R.F.	1085.180	0.999	17.800	1066.381	441.091	625.290	0.000	765.664	565.664	960.000
	132	Garudabasa R.F.	71.870	0.000	0.000	71.870	21.960	49.910	0.000	0.000	0.000	71.870
	133	Gopalpur R.F.	10.880	0.000	0.000	10.880	10.880	0.000	0.000	0.000	0.000	0.000
	134	Gobindapur R.F.	11.820	0.000	0.000	11.820	11.820	0.000	0.000	0.000	0.000	0.000
	135	Haripur R.F.	41.280	0.040	0.300	40.940	40.940	0.000	0.000	0.000	0.000	40.940
	136	Hatijhuri R.F.	109.110	0.000	0.000	109.110	80.473	28.637	0.000	59.110	59.110	100.000
	137	Hempur R.F.	290.790	0.000	0.000	290.790	290.790	0.000	0.000	134.949	34.949	0.000
	138	Ajadiha R.F.	2.100	0.000	0.000	2.100	2.100	0.000	0.000	0.000	0.000	0.000
	139	Jagannathpur R.F.	452.590	0.000	1.350	451.240	259.679	191.561	0.000	451.240	451.240	250.000
	140	Jarka R.F.	6.630	0.000	0.000	6.630	6.630	0.000	0.000	0.000	0.000	0.000
	141	Jugal R.F.	305.290	0.500	0.000	304.790	86.330	218.460	0.000	255.290	255.290	300.000
	142	Kalma R.F.	24.360	0.120	0.000	24.240	24.240	0.000	0.000	0.000	0.000	0.000
	143	Kapoi R.F.	109.260	0.000	0.000	109.260	11.010	98.250	0.000	0.000	0.000	0.000
	144	Ketakisole R.F.	39.330	0.000	0.000	39.330	27.690	11.640	0.000	0.000	0.000	39.330
	145	Khadikapada R.F.	75.110	0.000	0.000	75.110	56.930	18.180	0.000	0.000	0.000	75.110
	146	Khetrapatana R.F.	4.210	0.000	0.000	4.210	4.210	0.000	0.000	0.000	0.000	0.000
	147	Khiripada R.F.	420.540	0.580	0.000	419.960	419.960	0.000	0.000	320.540	320.540	419.960
	148	Krushnachandrapur R.F.	1272.070	1.160	18.000	1252.910	481.200	771.710	0.000	1047.054	647.054	350.000
	149	Kochilakhunta R.F.	259.320	0.000	0.000	259.320	30.000	229.320	0.000	159.320	159.320	250.000

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	150	Machhapada R.F.	62.810	0.000	0.000	62.810	62.810	0.000	0.000	0.000	0.000	62.810
	151	Mamtapal R.F.	222.730	0.000	0.000	222.730	222.730	0.000	0.000	172.730	172.730	100.000
	152	Merda R.F.	495.820	0.000	0.000	495.820	171.095	324.725	0.000	395.820	395.820	400.000
	153	Mohanpur R.F.	35.130	0.000	0.000	35.130	21.619	13.511	0.000	0.000	0.000	35.130
	154	Nuagaon R.F.`	39.330	0.000	0.000	39.330	39.330	0.000	0.000	0.000	0.000	0.000
	155	Phuljhari R.F.	217.420	0.000	0.000	217.420	50.000	167.420	0.000	117.420	117.420	217.420
	156	Purunia R.F.	442.300	1.350	0.000	440.950	440.950	0.000	0.000	0.000	0.000	200.000
	157	Raikama R.F.	191.340	0.000	10.000	181.340	78.299	103.041	0.000	181.340	181.340	80.000
	158	Rautra R.F.	119.460	0.000	0.300	119.160	53.075	66.085	0.000	0.000	0.000	119.160
	159	Sarbana R.F.	41.120	0.000	0.000	41.120	37.058	4.062	0.000	0.000	0.000	0.000
	160	Thakurtota R.F.	73.330	0.000	0.000	73.330	73.330	0.000	0.000	0.000	0.000	0.000
	161	Bharadasole R.F.	50.670	0.000	0.000	50.670	17.777	32.893	0.000	35.623	35.623	50.670
	162	Bhalukchua R.F.	199.430	0.000	0.000	199.430	35.027	164.403	0.000	149.430	149.430	199.000
	163	Totapada R.F.	65.070	0.000	0.000	65.070	65.070	0.000	0.000	0.000	0.000	0.000
	164	Tikayatpur R.F.	160.960	0.000	0.870	160.090	160.090	0.000	0.000	0.000	0.000	50.000
	165	Patpur RF	141.480	0.000	0.600	140.880	91.857	49.023	0.000	0.000	0.000	140.880
	166	Kochilakhunta P.R.F.	99.000	0.000	0.000	99.000	26.801	72.199	0.000	99.000	99.000	0.000
	167	Bhalia P.R.F.	340.160	0.000	0.000	340.160	339.162	0.998	0.000	340.160	340.160	300.000
	168	Kathapal V.F.	0.240	0.000	0.000	0.240	0.240	0.000	0.000	0.000	0.000	0.240
	169	Chakulia V.F.	3.000	0.000	0.000	3.000	3.000	0.000	0.000	0.000	0.000	3.000
	170	Karatpata V.F.	0.780	0.000	0.000	0.780	0.780	0.000	0.000	0.000	0.000	0.780
	171	Chakulia V.F.	4.000	0.000	0.000	4.000	4.000	0.000	0.000	0.000	0.000	4.000
	172	Analagadia (Matidahi) V.F.	3.060	0.000	0.000	3.060	3.060	0.000	0.000	0.000	0.000	3.060

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC	Total RWC	Total IWC	NTFP (O) WC	Wildlife (O) WC	JFM (O) WC
				Under FRA	Under FC Act.							
	173	Jhinkiria V.F.	1.600	0.000	0.000	1.600	1.600	0.000	0.000	0.000	0.000	1.600
	174	Singida Munduli V.F.	3.320	0.000	0.000	3.320	3.320	0.000	0.000	0.000	0.000	3.320
	175	Athabahia V.F.	1.700	0.000	0.000	1.700	1.700	0.000	0.000	0.000	0.000	1.700
	176	Mendhamundia V.F.	2.100	0.000	0.000	2.100	2.100	0.000	0.000	0.000	0.000	2.100
	177	Anbagadia V.F.	12.664	0.000	0.000	12.664	12.664	0.000	0.000	0.000	0.000	12.664
	178	Kalana V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	179	Rautrapur V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	180	Kalana V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	181	Tulajhuri V.F.	8.000	0.000	0.000	8.000	8.000	0.000	0.000	0.000	0.000	8.000
	182	Asukanda V.F.	3.300	0.000	0.000	3.300	3.300	0.000	0.000	0.000	0.000	3.300
	183	Angaria V.F.	0.560	0.000	0.000	0.560	0.560	0.000	0.000	0.000	0.000	0.560
	184	Tikayatpur V.F.	0.800	0.000	0.000	0.800	0.800	0.000	0.000	0.000	0.000	0.800
	185	Purunia V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	186	Purunia V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	187	Purunia V.F.	3.880	0.000	0.000	3.880	3.880	0.000	0.000	0.000	0.000	3.880
	188	Purunia V.F.	6.560	0.000	0.000	6.560	6.560	0.000	0.000	0.000	0.000	6.560
	189	Balaka V.F.	2.000	0.000	0.000	2.000	2.000	0.000	0.000	0.000	0.000	2.000
	190	Raghupur V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	191	Raghupur V.F.	7.000	0.000	0.000	7.000	7.000	0.000	0.000	0.000	0.000	7.000
	192	Raghupur V.F.	9.600	0.000	0.000	9.600	9.600	0.000	0.000	0.000	0.000	9.600
	193	Raghupur V.F.	3.000	0.000	0.000	3.000	3.000	0.000	0.000	0.000	0.000	3.000
	194	Raghupur V.F.	5.684	0.000	0.000	5.684	5.684	0.000	0.000	0.000	0.000	5.684
	195	Raghupur V.F.	11.232	0.000	0.000	11.232	11.232	0.000	0.000	0.000	0.000	11.232

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC	Total RWC	Total IWC	NTFP (O) WC	Wildlife (O) WC	JFM (O) WC
				Under FRA	Under FC Act.							
	196	Raghupur V.F.	7.000	0.000	0.000	7.000	7.000	0.000	0.000	0.000	0.000	7.000
	197	Gadigaon V.F.	9.644	0.000	0.000	9.644	9.644	0.000	0.000	0.000	0.000	9.644
	198	Gadadeuli V.F.	0.840	0.000	0.000	0.840	0.840	0.000	0.000	0.000	0.000	0.840
	199	Gadadeuli V.F.	7.296	0.000	0.000	7.296	7.296	0.000	0.000	0.000	0.000	7.296
	200	Nuagaon V.F.	3.200	0.000	0.000	3.200	3.200	0.000	0.000	0.000	0.000	3.200
	201	Buguhuda V.F.	2.000	0.000	0.000	2.000	2.000	0.000	0.000	0.000	0.000	2.000
		Sub-total	**12648.590**	**5.436**	**71.470**	**12571.684**	**7251.151**	**5320.533**	**0.000**	**7000.000**	**6231.000**	**9242.620**
DEULI	202	Andhari R.F.	731.630	0.000	0.000	731.630	722.718	8.912	0.000	185.630	185.630	216.550
	203	Chandua R.F.	3073.120	0.000	8.840	3064.280	1246.035	1818.245	0.000	1372.620	1471.880	1383.650
	204	Deuli R.F.	2379.260	0.000	1.200	2378.060	555.153	1822.907	0.000	891.640	1244.380	2378.060
	205	Kuliana R.F.	1203.680	0.000	4.800	1198.880	733.037	465.843	0.000	771.680	771.680	960.000
	206	Suliapada R.F.	2889.560	0.000	8.000	2881.560	1027.099	1854.461	0.000	1230.560	1439.560	2000.000
	207	Badsole P.R.F.	227.030	0.000	10.000	217.030	60.927	156.103	0.000	217.030	217.030	217.030
	208	Tangasole P.R.F.	236.800	0.000	5.120	231.680	24.986	206.694	0.000	231.680	231.680	231.680
	209	Kaliasole P.R.F.	320.160	0.000	0.000	320.160	134.729	185.431	0.000	320.160	320.160	100.000
	210	Dhalu Suliapada V.F.	1.060	0.000	0.000	1.060	1.060	0.000	0.000	0.000	0.000	1.060
	211	Kasia V.F.	1.740	0.000	0.000	1.740	1.740	0.000	0.000	0.000	0.000	1.740
	212	Handibhanga V.F.	2.468	0.000	0.000	2.468	2.468	0.000	0.000	0.000	0.000	2.468
	213	Anlakuda V.F.	6.000	0.000	0.000	6.000	6.000	0.000	0.000	0.000	0.000	6.000
	214	Sankhunta V.F.	2.000	0.000	0.000	2.000	2.000	0.000	0.000	0.000	0.000	2.000
	215	Jalda V.F.	0.276	0.000	0.000	0.276	0.276	0.000	0.000	0.000	0.000	0.276
		Sub-total	**11074.784**	**0.000**	**37.960**	**11036.824**	**4518.228**	**6518.596**	**0.000**	**5221.000**	**5882.000**	**7500.514**
KAPTIPADA	216	Asanabani R.F.	262.560	0.000	0.000	262.560	175.465	87.095	0.000	262.560	262.560	262.560
	217	Nachhipur R.F.	229.000	0.000	0.000	229.000	229.000	0.000	0.000	229.000	229.000	100.000

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC	Total RWC	Total IWC	NTFP (O) WC	Wildlife (O) WC	JFM (O) WC
				Under FRA	Under FC Act.							
	218	Notto R.F.	7707.080	0.000	0.000	7707.080	0.000	0.000	7707.080	5974.120	7707.080	1215.000
	219	Sukhuapata Hill P.F.	92.320	0.000	0.330	91.990	45.000	46.990	0.000	91.990	91.990	92.320
	220	Kaladahi V.F.	1.500	0.000	0.000	1.500	1.500	0.000	0.000	0.330	0.330	1.500
	221	Pedagadia V.F.	0.220	0.000	0.000	0.220	0.220	0.000	0.000	0.000	0.000	0.220
	222	Khaladi V.F.	2.112	0.000	0.000	2.112	2.112	0.000	0.000	0.000	0.000	2.112
		Sub-total	**8294.792**	**0.000**	**0.330**	**8294.462**	**453.297**	**134.085**	**7707.080**	**6558.000**	**8290.960**	**1673.712**
BANGRIPOSI	223	Dighi R.F.	515.940	0.000	0.000	515.940	515.940	0.000	0.000	0.000	0.000	110.000
	224	Rangahudi R.F.	86.670	0.000	0.000	86.670	53.587	33.083	0.000	60.000	60.000	86.670
	225	Thakurani R.F.	497.020	0.000	0.000	497.020	287.124	209.896	0.000	136.050	226.050	200.000
	226	Juha P.R.F.	86.040	0.000	0.000	86.040	26.806	59.234	0.000	86.040	86.040	0.000
	227	Pimpudijharan P.F.	60.970	0.000	0.000	60.970	0.000	60.970	0.000	60.970	60.970	0.000
	228	Kapadiha P.F.	10.730	0.000	0.000	10.730	0.000	10.730	0.000	10.730	10.730	0.000
	229	Ambadiha P.F.	14.030	0.000	0.000	14.030	0.000	14.030	0.000	14.030	14.030	0.000
	230	Hill Block-1 P.F.	712.750	0.000	0.000	712.750	0.000	712.750	0.000	412.750	412.750	0.000
	231	Maheshpur P.F.	98.430	0.000	0.000	98.430	0.000	98.430	0.000	98.430	98.430	0.000
	232	Manbhanj V.F.	3.940	0.000	0.000	3.940	3.940	0.000	0.000	0.000	0.000	3.940
	233	Baghajhampa V.F.	8.000	0.000	0.000	8.000	8.000	0.000	0.000	0.000	0.000	8.000
	234	Jarkani V.F.	7.000	0.000	0.000	7.000	7.000	0.000	0.000	0.000	0.000	7.000
	235	Nata V.F.	7.000	0.000	0.000	7.000	7.000	0.000	0.000	0.000	0.000	7.000
	236	Birsingh V.F.	0.600	0.000	0.000	0.600	0.600	0.000	0.000	0.000	0.000	0.600
	237	Nohanatia V.F.	4.000	0.000	0.000	4.000	4.000	0.000	0.000	0.000	0.000	4.000
	238	Pahadpur V.F.	9.000	0.000	0.000	9.000	9.000	0.000	0.000	0.000	0.000	9.000
	239	Heenachandrapur V.F.	9.000	0.000	0.000	9.000	9.000	0.000	0.000	0.000	0.000	9.000

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC	Total RWC	Total IWC	NTFP (O) WC	Wildlife (O) WC	JFM (O) WC
				Under FRA	Under FC Act.							
	240	Heenachandrapur V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	241	Jaivilla V.F.	0.532	0.000	0.000	0.532	0.532	0.000	0.000	0.000	0.000	0.532
	242	Sindurgoura V.F.	0.260	0.000	0.000	0.260	0.260	0.000	0.000	0.000	0.000	0.260
	243	Handibhanga V.F.	2.468	0.000	0.000	2.468	2.468	0.000	0.000	0.000	0.000	2.468
	244	Bagbuda V.F.	4.000	0.000	0.000	4.000	4.000	0.000	0.000	0.000	0.000	4.000
	245	Pokhariadiha V.F.	8.000	0.000	0.000	8.000	8.000	0.000	0.000	0.000	0.000	8.000
	246	Govindpur V.F.	8.000	0.000	0.000	8.000	8.000	0.000	0.000	0.000	0.000	8.000
	247	Bedhakudar V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	248	Gopinathpur V.F.	1.424	0.000	0.000	1.424	1.424	0.000	0.000	0.000	0.000	1.424
	249	Pahadpur V.F.	1.500	0.000	0.000	1.500	1.500	0.000	0.000	0.000	0.000	1.500
	250	Brundabanchandrapur V.F.	1.846	0.000	0.000	1.846	1.846	0.000	0.000	0.000	0.000	1.846
	251	Brundabanchandrapur V.F.	4.500	0.000	0.000	4.500	4.500	0.000	0.000	0.000	0.000	4.500
	252	Brundabanchandrapur V.F.	0.720	0.000	0.000	0.720	0.720	0.000	0.000	0.000	0.000	0.720
	253	Kuabuda V.F.	12.000	0.000	0.000	12.000	12.000	0.000	0.000	0.000	0.000	12.000
	254	Kuabuda V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	255	Kuabuda V.F.	8.000	0.000	0.000	8.000	8.000	0.000	0.000	0.000	0.000	8.000
	256	Kuabuda V.F.	10.608	0.000	0.000	10.608	10.608	0.000	0.000	0.000	0.000	10.608
	257	Kuabuda V.F.	5.000	0.000	0.000	5.000	5.000	0.000	0.000	0.000	0.000	5.000
	258	Pokharia V.F.	6.208	0.000	0.000	6.208	6.208	0.000	0.000	0.000	0.000	6.208
	259	Pokharia V.F.	4.000	0.000	0.000	4.000	4.000	0.000	0.000	0.000	0.000	4.000
	260	Pokharia V.F.	10.000	0.000	0.000	10.000	10.000	0.000	0.000	0.000	0.000	10.000
	261	Pokharia V.F.	4.000	0.000	0.000	4.000	4.000	0.000	0.000	0.000	0.000	4.000

Name of Range	Name of RF/ PRF /PF/ VF		Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Total PWC	Total RWC	Total IWC	NTFP (O) WC	Wildlife (O) WC	JFM (O) WC
				Under FRA	Under FC Act.							
	262	Pokharia V.F.	1.608	0.000	0.000	1.608	1.608	0.000	0.000	0.000	0.000	1.608
	263	Pokharia V.F.	0.788	0.000	0.000	0.788	0.788	0.000	0.000	0.000	0.000	0.788
	264	Pokharia V.F.	6.000	0.000	0.000	6.000	6.000	0.000	0.000	0.000	0.000	6.000
	265	Pokharia V.F.	3.000	0.000	0.000	3.000	3.000	0.000	0.000	0.000	0.000	3.000
	266	Pokharia V.F.	2.108	0.000	0.000	2.108	2.108	0.000	0.000	0.000	0.000	2.108
	267	Joka V.F.	8.000	0.000	0.000	8.000	8.000	0.000	0.000	0.000	0.000	8.000
	268	Jharpokharia V.F.	0.540	0.000	0.000	0.540	0.540	0.000	0.000	0.000	0.000	0.540
	269	Jharpokharia V.F.	2.000	0.000	0.000	2.000	2.000	0.000	0.000	0.000	0.000	2.000
	270	Bagbuda V.F.	0.400	0.000	0.000	0.400	0.400	0.000	0.000	0.000	0.000	0.400
	271	Bagbuda V.F.	0.640	0.000	0.000	0.640	0.640	0.000	0.000	0.000	0.000	0.640
	272	Banakati V.F.	3.088	0.000	0.000	3.088	3.088	0.000	0.000	0.000	0.000	3.088
		Sub-total	**2272.358**	**0.000**	**0.000**	**2272.358**	**1073.235**	**1199.123**	0.000	**879.000**	**969.000**	**586.448**
Division Total	**272 Forest Blocks**		***50435.734***	***8.086***	***388.928***	***50038.720***	***21029.019***	***21302.621***	***7707.080***	***27193.000***	***29108.960***	***30368.424***

Appendix – XXIII (a)

Block Wise Stand Table – Estimated Number of Stems

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		Anogeissus latifolia	58	41	57	40	26	18	1	1	1	1	143
		Misc	2,654	74	732	21	105	3	43	1	29	1	3,563
		Shorea robusta	2,964	69	1,149	27	159	4	36	1	12	0	4,319
		Terminalia tomentosa	169	61	74	27	19	7	10	4	4	1	275
	AMBADIHA P.F.	(all)	5,844	70	2,012	24	309	4	90	1	46	1	8,301
		All Trees	14,447	74	4,389	22	614	3	125	1	62	0	19,637
	DIGHI R.F.	(all)	14,447	74	4,389	22	614	3	125	1	62	0	19,637
		All Trees	119,223	61	59,547	30	11,966	6	3,250	2	1,473	1	195,458
	HILL BLOCK-I P.F.	(all)	119,223	61	59,547	30	11,966	6	3,250	2	1,473	1	195,458
		Anogeissus latifolia	232	34	262	39	163	24	8	1	10	1	675
		Misc	7,697	65	3,276	27	561	5	244	2	153	1	11,930
		Shorea robusta	11,622	65	5,307	30	761	4	200	1	80	0	17,970
		Terminalia tomentosa	706	57	365	29	96	8	50	4	20	2	1,238
	JUHA PRF	(all)	20,257	64	9,210	29	1,581	5	502	2	263	1	31,813
		Anogeissus latifolia	20	29	28	41	21	30	0	0	0	0	69
		Misc	735	60	383	31	58	5	32	3	21	2	1,229
		Shorea robusta	1,272	64	596	30	74	4	20	1	10	1	1,973
		Terminalia tomentosa	71	53	41	31	11	8	8	6	3	2	134
	KAPADIHA P.F.	(all)	2,098	62	1,049	31	164	5	61	2	34	1	3,405

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		All Trees	75,668	57	45,231	34	8,922	7	2,319	2	879	1	133,018
	MAHESHPUR P.F.	(all)	75,668	57	45,231	34	8,922	7	2,319	2	879	1	133,018
		Anogeissus latifolia	471	32	560	38	385	26	15	1	30	2	1,461
		Misc	15,383	61	7,633	30	1,404	6	577	2	357	1	25,353
		Shorea robusta	25,026	63	11,918	30	1,848	5	564	1	212	1	39,569
		Terminalia tomentosa	1,517	56	794	30	225	8	106	4	49	2	2,691
	PIMPUDIJHARAN P.F.	(all)	42,397	61	20,905	30	3,862	6	1,262	2	648	1	69,075
		Anogeissus latifolia	201	41	186	38	85	17	10	2	10	2	492
		Misc	6,560	72	2,007	22	359	4	124	1	71	1	9,120
		Shorea robusta	8,201	66	3,473	28	530	4	115	1	38	0	12,357
		Terminalia tomentosa	533	62	241	28	57	7	19	2	10	1	861
	RANGAHUDI R.F.	(all)	15,496	68	5,907	26	1,030	5	268	1	130	1	22,830
		Anogeissus latifolia	22,369	93	599	2	519	2	44	0	641	3	24,173
		Misc	111,169	79	20,911	15	5,885	4	1,934	1	398	0	140,296
		Shorea robusta	74,935	69	25,256	23	5,711	5	1,450	1	852	1	108,205
		Terminalia tomentosa	21,759	94	1,001	4	265	1	68	0	45	0	23,137
	THAKURANI R.F.		230,232	78	47,767	16	12,381	4	3,496	1	1,935	1	295,811
BANGIRIPOSI	(all)	(all)	525,661	67	196,016	25	40,828	5	11,373	1	5,469	1	779,348
		All Trees	172,952	79	40,289	18	4,066	2	1,162	1	404	0	218,873
	ASANBANI R.F.	(all)	172,952	79	40,289	18	4,066	2	1,162	1	404	0	218,873
		All Trees	113,615	67	53,343	31	2,536	1	630	0	210	0	170,334
	BADAMPUR R.F.	(all)	113,615	67	53,343	31	2,536	1	630	0	210	0	170,334
		All Trees	9,416	78	2,311	19	198	2	76	1	25	0	12,025
	BADGOMA	(all)	9,416	78	2,311	19	198	2	76	1	25	0	12,025

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		All Trees	3,073	69	1,152	26	150	3	59	1	29	1	4,462
	BADGUMA R.F.	(all)	3,073	69	1,152	26	150	3	59	1	29	1	4,462
		Anogeissus latifolia	10	29	13	38	11	32	0	0	0	0	34
		Misc	2,546	78	609	19	47	1	37	1	15	0	3,254
		Shorea robusta	2,506	73	826	24	90	3	18	1	9	0	3,449
		Terminalia tomentosa	64	65	23	23	6	6	4	4	1	1	98
	BAISINGA R.F.	(all)	5,126	75	1,470	22	153	2	60	1	25	0	6,834
		Anogeissus latifolia	3	100	0	0	0	0	0	0	0	0	3
		Misc	2,040	83	373	15	15	1	18	1	3	0	2,450
		Shorea robusta	1,721	76	478	21	48	2	6	0	3	0	2,257
		Terminalia tomentosa	30	91	3	9	0	0	0	0	0	0	33
	BALKA R.F	(all)	3,795	80	855	18	63	1	24	1	6	0	4,743
		Anogeissus latifolia	123	33	130	34	117	31	0	0	8	2	377
		Misc	19,236	76	5,134	20	500	2	329	1	142	1	25,342
		Shorea robusta	21,056	69	7,970	26	976	3	208	1	88	0	30,297
		Terminalia tomentosa	705	64	280	25	65	6	39	4	15	1	1,104
	BARTANA R.F.	(all)	41,120	72	13,513	24	1,658	3	576	1	252	0	57,120
		All Trees	9,707	73	2,985	23	333	3	130	1	58	0	13,214
	BASANTAPUR R.F.	(all)	9,707	73	2,985	23	333	3	130	1	58	0	13,214
		All Trees	4,850	74	1,455	22	159	2	62	1	27	0	6,553
	BELDIHA R.F.	(all)	4,850	74	1,455	22	159	2	62	1	27	0	6,553
		Anogeissus latifolia	27	44	18	30	16	26	0	0	0	0	61
		Misc	12,205	82	2,436	16	129	1	129	1	33	0	14,933

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		Shorea robusta	10,805	75	3,187	22	331	2	51	0	25	0	14,399
		Terminalia tomentosa	217	78	45	16	8	3	6	2	2	1	278
	BHALIA P.R.F.	(all)	23,255	78	5,686	19	484	2	186	1	61	0	29,672
		All Trees	56,455	59	33,529	35	4,191	4	635	1	293	0	95,103
	BHALUKACHUA R.F.	(all)	56,455	59	33,529	35	4,191	4	635	1	293	0	95,103
		Anogeissus latifolia	64	44	44	30	39	27	0	0	0	0	147
		Misc	27,416	82	5,517	16	300	1	295	1	79	0	33,606
		Shorea robusta	24,384	75	7,232	22	752	2	118	0	59	0	32,546
		Terminalia tomentosa	496	77	108	17	20	3	15	2	5	1	643
	CHHATANA R.F.	(all)	52,361	78	12,901	19	1,110	2	427	1	142	0	66,943
		Anogeissus latifolia	90	60	22	15	21	14	0	0	17	11	150
		Misc	5,254	74	1,472	21	221	3	87	1	32	0	7,066
		Shorea robusta	8,409	60	4,758	34	705	5	105	1	21	0	13,998
		Terminalia tomentosa	547	70	199	26	26	3	1	0	3	0	777
	DALDALI R.F.	(all)	14,300	65	6,451	29	974	4	193	1	72	0	21,991
		Anogeissus latifolia	667	39	359	21	532	31	45	3	95	6	1,698
		Misc	59,742	73	17,247	21	2,811	3	1,081	1	507	1	81,388
		Shorea robusta	102,580	58	64,657	37	8,158	5	1,119	1	337	0	176,851
		Terminalia tomentosa	6,634	72	2,238	24	286	3	76	1	29	0	9,263
	DALKI R.F.	(all)	169,623	63	84,501	31	11,787	4	2,321	1	968	0	269,200
		Anogeissus latifolia	118	36	55	17	130	40	11	3	14	4	329

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		Misc	21,522	77	5,285	19	768	3	255	1	157	1	27,987
		Shorea robusta	39,393	57	26,286	38	2,660	4	311	0	122	0	68,772
		Terminalia tomentosa	2,589	75	780	23	77	2	14	0	3	0	3,463
	DUMAPADA R.F.	(all)	63,622	63	32,406	32	3,634	4	592	1	295	0	100,550
		All Trees	323,735	64	156,709	31	22,388	4	4,347	1	1,712	0	508,891
	DURGAPUR R.F.	(all)	323,735	64	156,709	31	22,388	4	4,347	1	1,712	0	508,891
		Anogeissus latifolia	2	100	0	0	0	0	0	0	0	0	2
		Misc	1,414	83	259	15	10	1	13	1	2	0	1,698
		Shorea robusta	1,193	76	332	21	33	2	4	0	2	0	1,565
		Terminalia tomentosa	21	91	2	9	0	0	0	0	0	0	23
	GAD-DEULIA R.F.	(all)	2,631	80	592	18	44	1	17	1	4	0	3,288
		Anogeissus latifolia	994	37	559	21	904	33	110	4	132	5	2,699
		Misc	71,682	71	22,161	22	4,141	4	1,611	2	660	1	100,256
		Shorea robusta	126,103	57	82,931	37	11,720	5	1,455	1	377	0	222,585
		Terminalia tomentosa	8,537	71	2,952	25	360	3	121	1	32	0	12,002
	GANDIGODHA R.F.	(all)	207,317	61	108,602	32	17,126	5	3,297	1	1,201	0	337,543
		All Trees	14,600	65	6,634	30	963	4	168	1	59	0	22,423
	GARUDABASA R.F.	(all)	14,600	65	6,634	30	963	4	168	1	59	0	22,423
		Anogeissus latifolia	1	100	0	0	0	0	0	0	0	0	1
		Misc	471	83	86	15	3	1	4	1	1	0	565
		Shorea robusta	397	76	110	21	11	2	1	0	1	0	521
		Terminalia tomentosa	7	88	1	13	0	0	0	0	0	0	8

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	HARIPUR R.F.	(all)	875	80	197	18	15	1	6	1	1	0	1,094
		Anogeissus latifolia	109	57	30	16	30	16	0	0	22	11	192
		Misc	5,588	72	1,739	22	301	4	103	1	40	1	7,771
		Shorea robusta	9,461	59	5,535	35	864	5	150	1	30	0	16,040
		Terminalia tomentosa	647	70	237	26	35	4	0	0	4	0	924
	HATIJHARI R.F.	(all)	15,805	63	7,541	30	1,231	5	253	1	97	0	24,926
		Anogeissus latifolia	26	24	43	40	38	36	0	0	0	0	107
		Misc	2,532	68	949	26	113	3	73	2	41	1	3,707
		Shorea robusta	3,347	68	1,369	28	161	3	43	1	22	0	4,943
		Terminalia tomentosa	126	54	69	30	19	8	14	6	5	2	233
	HEMAPUR R.F.	(all)	6,032	67	2,429	27	331	4	130	1	67	1	8,989
		Anogeissus latifolia	367	43	125	15	279	33	37	4	43	5	852
		Misc	35,515	76	9,060	19	1,452	3	548	1	260	1	46,835
		Shorea robusta	67,380	57	45,900	38	5,339	4	484	0	146	0	119,250
		Terminalia tomentosa	4,691	74	1,514	24	131	2	38	1	2	0	6,376
	JAGANATHAPUR R.F.	(all)	107,953	62	56,600	33	7,201	4	1,107	1	451	0	173,313
		Anogeissus latifolia	319	57	79	14	99	18	3	1	56	10	556
		Misc	25,112	76	6,497	20	906	3	361	1	145	0	33,022
		Shorea robusta	40,080	60	23,368	35	3,039	5	409	1	99	0	66,995
		Terminalia tomentosa	2,532	72	864	25	102	3	8	0	9	0	3,515
	JUGAL R.F.	(all)	68,044	65	30,808	30	4,147	4	781	1	310	0	104,089

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		All Trees	6,307	69	2,366	26	308	3	121	1	61	1	9,163
	KALAMA R.F.	(all)	6,307	69	2,366	26	308	3	121	1	61	1	9,163
		All Trees	10,552	76	2,888	21	301	2	103	1	37	0	13,882
	KAPOI R.F.	(all)	10,552	76	2,888	21	301	2	103	1	37	0	13,882
		Anogeissus latifolia	6	100	0	0	0	0	0	0	0	0	6
		Misc	4,090	83	748	15	30	1	36	1	6	0	4,911
		Shorea robusta	3,451	76	959	21	97	2	12	0	6	0	4,524
		Terminalia tomentosa	60	91	6	9	0	0	0	0	0	0	66
	KETAKISOLE R.F.	(all)	7,607	80	1,713	18	127	1	48	1	12	0	9,507
		Anogeissus latifolia	3	100	0	0	0	0	0	0	0	0	3
		Misc	2,157	83	394	15	16	1	19	1	3	0	2,589
		Shorea robusta	1,819	76	506	21	51	2	6	0	3	0	2,386
		Terminalia tomentosa	32	91	3	9	0	0	0	0	0	0	35
	KHADIKAPADA R.F.	(all)	4,011	80	903	18	67	1	25	0	6	0	5,013
		Anogeissus latifolia	336	33	224	22	391	38	45	4	35	3	1,031
		Misc	36,278	74	10,289	21	1,753	4	677	1	318	1	49,314
		Shorea robusta	63,682	57	42,050	38	5,151	5	614	1	201	0	111,698
		Terminalia tomentosa	4,163	73	1,355	24	154	3	56	1	12	0	5,740
	KHIRIPADA R.F.	(all)	104,458	62	53,917	32	7,448	4	1,393	1	566	0	167,783
		All Trees	89,163	65	42,572	31	4,711	3	772	1	361	0	137,578
		Anogeissus latifolia	13	65	2	10	2	10	0	0	2	10	20
		Misc	2,121	80	447	17	38	1	23	1	6	0	2,635
		Shorea	2,268	68	925	28	121	4	17	1	5	0	3,336

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		robusta											
		Terminalia tomentosa	88	75	26	22	3	3	0	0	0	0	118
	KOCHILAKHUNTA R.F	(all)	93,653	65	43,972	31	4,875	3	813	1	373	0	143,687
		Anogeissus latifolia	530	24	601	27	900	41	95	4	65	3	2,192
		Misc	67,781	63	27,682	26	7,902	7	2,817	3	1,335	1	107,518
		Shorea robusta	116,645	54	77,363	36	19,693	9	2,190	1	1,139	1	217,030
		Terminalia tomentosa	6,843	54	5,349	42	320	3	124	1	42	0	12,678
	KRUSHNACHANDRAPUR R.F.	(all)	191,799	57	110,995	33	28,815	8	5,227	2	2,581	1	339,418
		All Trees	1,295	80	292	18	22	1	8	0	2	0	1,618
	MACHHAPADA R.F.	(all)	1,295	80	292	18	22	1	8	0	2	0	1,618
		Anogeissus latifolia	95	38	75	30	70	28	0	0	12	5	251
		Misc	16,757	77	4,155	19	417	2	243	1	90	0	21,661
		Shorea robusta	17,407	70	6,471	26	859	3	193	1	69	0	24,998
		Terminalia tomentosa	571	69	191	23	45	5	16	2	9	1	831
	MANATAPAL R.F.	(all)	34,829	73	10,891	23	1,390	3	452	1	180	0	47,742
		All Trees	118,419	78	29,900	20	2,667	2	1,029	1	361	0	152,376
	MERADA R.F.	(all)	118,419	78	29,900	20	2,667	2	1,029	1	361	0	152,376
		All Trees	3,722	63	1,778	30	332	6	83	1	34	1	5,948
	MONHANPUR R.F.	(all)	3,722	63	1,778	30	332	6	83	1	34	1	5,948
		All Trees	3,839	80	865	18	64	1	24	1	6	0	4,798
	NUAGAN R.F	(all)	3,839	80	865	18	64	1	24	1	6	0	4,798
		Anogeissus latifolia	150	51	59	20	57	19	0	0	29	10	295
		Misc	9,870	73	2,962	22	457	3	179	1	71	1	13,540
		Shorea	14,737	61	7,893	33	1,204	5	223	1	53	0	24,111

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		robusta											
		Terminalia tomentosa	885	69	326	25	54	4	5	0	8	1	1,279
	PATPUR R.F.	(all)	25,643	65	11,240	29	1,772	5	407	1	162	0	39,224
		All Trees	63,399	61	33,955	33	5,138	5	919	1	339	0	103,750
	PHULAJHARI R.F.	(all)	63,399	61	33,955	33	5,138	5	919	1	339	0	103,750
		Anogeissus latifolia	71	32	79	36	70	32	0	0	0	0	221
		Misc	19,785	79	4,523	18	321	1	269	1	98	0	24,996
		Shorea robusta	18,947	73	6,084	24	656	3	125	0	62	0	25,874
		Terminalia tomentosa	457	67	150	22	35	5	26	4	9	1	678
	PURUNIA R.F.	(all)	39,261	76	10,836	21	1,083	2	420	1	169	0	51,769
		All Trees	3,713	77	958	20	88	2	34	1	12	0	4,805
	RAIKAMA R.F.	(all)	3,713	77	958	20	88	2	34	1	12	0	4,805
		All Trees	24,255	78	5,967	19	512	2	197	1	65	0	30,997
	RAUTRA R.F	(all)	24,255	78	5,967	19	512	2	197	1	65	0	30,997
		All Trees	5,868	66	2,488	28	403	5	102	1	41	0	8,902
	SARBANA R.F.	(all)	5,868	66	2,488	28	403	5	102	1	41	0	8,902
		All Trees	64,819	61	35,740	34	4,800	5	864	1	394	0	106,618
	SUKHILAKHALI R.F.	(all)	64,819	61	35,740	34	4,800	5	864	1	394	0	106,618
		Anogeissus latifolia	15	43	10	29	9	26	0	0	0	0	35
		Misc	6,472	82	1,303	16	71	1	70	1	19	0	7,934
		Shorea robusta	5,758	75	1,708	22	178	2	28	0	14	0	7,686
		Terminalia tomentosa	117	77	26	17	5	3	3	2	1	1	152
	THAKURTOTA R.F.	(all)	12,362	78	3,047	19	263	2	101	1	34	0	15,806
		All Trees	6,115	71	2,086	24	254	3	100	1	48	1	8,602
	TIKAYATPUR R.F.	(all)	6,115	71	2,086	24	254	3	100	1	48	1	8,602

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		Anogeissus latifolia	3	100	0	0	0	0	0	0	0	0	3
		Misc	1,985	83	363	15	15	1	18	1	3	0	2,383
		Shorea robusta	1,675	76	465	21	47	2	6	0	3	0	2,196
		Terminalia tomentosa	29	91	3	9	0	0	0	0	0	0	32
	TOTATADA R.F.		3,692	80	831	18	61	1	23	0	6	0	4,614
BETNOTI	(all)	(all)	2,319,879	66	1,030,589	29	145,734	4	29,734	1	12,259	0	3,538,195
		Misc	2,830	78	654	18	114	3	16	0	0	0	3,615
		Shorea robusta	3,795	76	965	19	213	4	0	0	0	0	4,972
		Terminalia tomentosa	556	87	65	10	0	0	16	3	0	0	638
	ANDHARI R.F.	(all)	7,180	78	1,685	18	327	4	33	0	0	0	9,225
		All Trees	700	78	164	18	32	4	3	0	0	0	899
	BADSOLE P.R.F.	(all)	700	78	164	18	32	4	3	0	0	0	899
		All Trees	437,453	70	146,422	24	28,845	5	7,354	1	2,441	0	622,515
	CHANDUA R.F.	(all)	437,453	70	146,422	24	28,845	5	7,354	1	2,441	0	622,515
		All Trees	81,237	72	25,778	23	4,367	4	1,115	1	17	0	112,514
		Anogeissus latifolia	623	25	681	27	1,017	40	137	5	58	2	2,516
		Misc	82,597	71	25,183	22	5,742	5	2,876	2	507	0	116,905
		Shorea robusta	250,462	74	74,350	22	12,083	4	1,170	0	232	0	338,298
		Terminalia tomentosa	12,905	75	3,735	22	333	2	231	1	36	0	17,241
	DEULI R.F.	(all)	427,824	73	129,728	22	23,542	4	5,530	1	851	0	587,475
		Misc	9,884	75	2,430	18	526	4	306	2	0	0	13,146
		Shorea robusta	22,191	74	6,702	22	1,077	4	77	0	0	0	30,047
		Terminalia tomentosa	2,205	71	848	27	38	1	23	1	0	0	3,115

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	KALIASOLE P.R.F.	(all)	34,280	74	9,981	22	1,642	4	406	1	0	0	46,308
		Anogeissus latifolia	9	26	11	32	11	32	0	0	3	9	34
		Misc	43,060	77	10,076	18	1,919	3	666	1	9	0	55,730
		Shorea robusta	78,312	76	21,034	20	3,928	4	41	0	11	0	103,325
		Terminalia tomentosa	8,490	88	969	10	9	0	174	2	2	0	9,643
	KULIANA R.F.	(all)	129,871	77	32,090	19	5,866	3	881	1	24	0	168,732
		All Trees	451,303	69	158,033	24	34,342	5	7,757	1	433	0	651,868
	SULIAPADA R.F.	(all)	451,303	69	158,033	24	34,342	5	7,757	1	433	0	651,868
		All Trees	50,506	73	15,161	22	2,908	4	678	1	166	0	69,419
	TANGASOLE P.R.F.		50,506	73	15,161	22	2,908	4	678	1	166	0	69,419
DEULI	(all)	(all)	1,539,117	71	493,262	23	97,504	5	22,641	1	3,916	0	2,156,441
		Anogeissus latifolia	12	24	21	41	19	37	0	0	0	0	51
		Misc	3,356	88	346	9	49	1	28	1	19	1	3,799
		Shorea robusta	3,124	63	1,581	32	228	5	19	0	9	0	4,961
		Terminalia tomentosa	63	55	33	29	9	8	7	6	2	2	115
	AGHASOLE R.F.	(all)	6,556	73	1,981	22	305	3	54	1	30	0	8,926
		Anogeissus latifolia	724	37	646	33	476	24	68	3	40	2	1,955
		Misc	35,686	77	7,846	17	1,740	4	692	1	312	1	46,276
		Shorea robusta	47,164	59	27,899	35	4,338	5	483	1	175	0	80,058
		Terminalia tomentosa	2,564	63	1,193	29	201	5	81	2	35	1	4,074
	BARSAHI R.F.	(all)	86,139	65	37,584	28	6,755	5	1,325	1	563	0	132,364
		Anogeissus latifolia	20	22	37	41	33	37	0	0	0	0	90
		Misc	3,989	84	580	12	86	2	49	1	33	1	4,737

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		Shorea robusta	4,071	63	2,068	32	293	5	33	1	16	0	6,481
		Terminalia tomentosa	102	53	57	30	16	8	12	6	4	2	192
	BELPARA R.F.	(all)	8,182	71	2,742	24	428	4	94	1	53	0	11,500
		Anogeissus latifolia	860	38	753	33	529	23	79	3	68	3	2,289
		Misc	25,453	68	8,967	24	2,157	6	752	2	321	1	37,650
		Shorea robusta	40,835	58	24,518	35	4,131	6	686	1	219	0	70,390
		Terminalia tomentosa	2,792	63	1,288	29	243	5	62	1	42	1	4,427
	BIDYADHARPUR R.F.	(all)	69,941	61	35,526	31	7,060	6	1,580	1	650	1	114,757
		All Trees	16,813	58	9,267	32	2,197	8	634	2	280	1	29,190
	BUDHABALANGA-A P.R.F.	(all)	16,813	58	9,267	32	2,197	8	634	2	280	1	29,190
		All Trees	38,975	54	25,574	35	6,087	8	1,401	2	450	1	72,486
	BUDHABALANGA-B P.R.F.	(all)	38,975	54	25,574	35	6,087	8	1,401	2	450	1	72,486
		All Trees	33,354	72	10,807	23	1,820	4	316	1	159	0	46,457
	CHAKRADHARPUR R.F.	(all)	33,354	72	10,807	23	1,820	4	316	1	159	0	46,457
		Anogeissus latifolia	5	24	9	43	8	38	0	0	0	0	21
		Misc	9,153	97	252	3	20	0	12	0	8	0	9,444
		Shorea robusta	7,051	63	3,533	32	532	5	8	0	4	0	11,127
		Terminalia tomentosa	63	75	13	15	4	5	3	4	1	1	84
	CHENGUAMANGALPUR R.F.	(all)	16,271	79	3,807	18	563	3	22	0	13	0	20,676
		Anogeissus latifolia	20	23	36	41	32	36	0	0	0	0	88
		Misc	27,499	96	899	3	84	0	48	0	32	0	28,562
		Shorea robusta	21,485	63	10,774	32	1,616	5	32	0	16	0	33,923

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		Terminalia tomentosa	210	70	56	19	16	5	12	4	4	1	298
	DEULIA R.F.	(all)	49,214	78	11,766	19	1,748	3	92	0	52	0	62,872
		Anogeissus latifolia	252	35	269	37	165	23	15	2	16	2	718
		Misc	16,756	81	2,956	14	569	3	227	1	123	1	20,632
		Shorea robusta	18,597	63	9,374	32	1,423	5	186	1	76	0	29,655
		Terminalia tomentosa	747	59	373	29	91	7	37	3	19	1	1,267
	DUKURA R.F.	(all)	36,352	70	12,972	25	2,248	4	466	1	235	0	52,273
		Anogeissus latifolia	52	44	43	36	16	14	5	4	3	3	118
		Misc	4,320	92	286	6	59	1	17	0	5	0	4,688
		Shorea robusta	3,921	64	1,945	32	293	5	7	0	3	0	6,169
		Terminalia tomentosa	128	66	54	28	9	5	1	1	2	1	193
	GOJODI-DAMODARPUR R.F.	(all)	8,421	75	2,328	21	377	3	29	0	12	0	11,168
		All Trees	64,654	58	35,092	32	7,966	7	2,478	2	1,162	1	111,353
	GOPINATHPUR P.R.F.	(all)	64,654	58	35,092	32	7,966	7	2,478	2	1,162	1	111,353
		Anogeissus latifolia	139	38	121	33	80	22	11	3	15	4	367
		Misc	3,249	61	1,503	28	379	7	113	2	48	1	5,293
		Shorea robusta	5,646	58	3,289	34	610	6	144	1	43	0	9,731
		Terminalia tomentosa	425	63	191	28	43	6	5	1	7	1	671
	HALADIA R.F.	(all)	9,459	59	5,104	32	1,112	7	273	2	113	1	16,061
		Anogeissus latifolia	257	38	241	36	135	20	17	3	27	4	676
		Misc	7,678	69	2,612	23	617	6	182	2	84	1	11,173

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		Shorea robusta	10,810	62	5,469	31	981	6	237	1	75	0	17,572
		Terminalia tomentosa	682	61	320	29	83	7	11	1	16	1	1,112
	ITAMUNDIA R.F.	(all)	19,427	64	8,641	28	1,816	6	447	1	202	1	30,533
		Anogeissus latifolia	29	22	53	41	47	36	0	0	0	0	129
		Misc	8,241	88	867	9	123	1	70	1	47	1	9,348
		Shorea robusta	7,707	63	3,900	32	562	5	47	0	23	0	12,239
		Terminalia tomentosa	158	55	82	29	23	8	18	6	6	2	287
	ITAMUNDIA-JAMUNA R.F.	(all)	16,134	73	4,902	22	756	3	135	1	76	0	22,004
		All Trees	13,649	73	4,251	23	677	4	122	1	67	0	18,766
	KANPURA R.F.	(all)	13,649	73	4,251	23	677	4	122	1	67	0	18,766
		All Trees	569	80	125	18	18	3	0	0	0	0	712
	KERKO R.F.	(all)	569	80	125	18	18	3	0	0	0	0	712
		Anogeissus latifolia	30	33	35	39	23	26	2	2	1	1	90
		Misc	7,008	92	454	6	66	1	32	0	19	0	7,579
		Shorea robusta	6,039	63	3,031	32	448	5	20	0	10	0	9,547
		Terminalia tomentosa	115	62	50	27	12	6	7	4	3	2	186
	KHANUA R.F.	(all)	13,191	76	3,569	21	549	3	60	0	32	0	17,402
		All Trees	28,245	59	15,147	31	3,165	7	1,033	2	514	1	48,104
	KUKURBHUKA-I P.R.F.	(all)	28,245	59	15,147	31	3,165	7	1,033	2	514	1	48,104
		All Trees	47,379	57	26,538	32	5,960	7	1,957	2	945	1	82,779
	KUKURBHUKA-II P.R.F.	(all)	47,379	57	26,538	32	5,960	7	1,957	2	945	1	82,779
		All Trees	1,538	80	339	18	50	3	0	0	0	0	1,927

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	KULDIHA R.F.	(all)	1,538	80	339	18	50	3	0	0	0	0	1,927
		All Trees	13,885	61	6,764	30	1,322	6	409	2	208	1	22,587
	NIGIRDHA-A P.R.F.	(all)	13,885	61	6,764	30	1,322	6	409	2	208	1	22,587
		All Trees	17,352	54	11,417	35	2,679	8	599	2	188	1	32,236
	NIGIRDHA-B P.R.F.	(all)	17,352	54	11,417	35	2,679	8	599	2	188	1	32,236
		All Trees	4,473	80	986	18	144	3	0	0	0	0	5,603
	PUNDALA R.F.	(all)	4,473	80	986	18	144	3	0	0	0	0	5,603
		Anogeissus latifolia	139	34	146	36	97	24	7	2	16	4	405
		Misc	6,511	72	1,912	21	420	5	138	2	73	1	9,053
		Shorea robusta	8,318	61	4,238	31	738	5	177	1	59	0	13,530
		Terminalia tomentosa	421	60	202	29	58	8	14	2	12	2	706
	PURUNAPANI R.F.	(all)	15,388	65	6,497	27	1,313	6	336	1	159	1	23,694
		All Trees	33,763	60	17,132	31	3,334	6	1,078	2	554	1	55,862
	SANMAKABADI P.R.F.		33,763	60	17,132	31	3,334	6	1,078	2	554	1	55,862
DUKURA	(all)	(all)	669,323	64	300,859	29	60,451	6	14,942	1	6,717	1	1,052,291
		All Trees	25,912	47	21,729	39	4,824	9	1,959	4	983	2	55,406
	ASANBANI R.F.	(all)	25,912	47	21,729	39	4,824	9	1,959	4	983	2	55,406
		All Trees	23,932	45	21,082	40	4,728	9	1,937	4	1,031	2	52,709
	NACHHIPUR R.F.	(all)	23,932	45	21,082	40	4,728	9	1,937	4	1,031	2	52,709
		Anogeissus latifolia	38,452	20	96,696	50	47,032	25	6,717	4	2,619	1	191,516
		Misc	332,264	36	410,520	45	117,177	13	36,430	4	19,091	2	915,483
		Shorea robusta	441,081	50	337,979	38	86,006	10	8,873	1	5,742	1	879,681
		Terminalia tomentosa	47,438	33	71,162	49	17,289	12	4,234	3	4,004	3	144,126
	NOTO R.F.	(all)	859,235	40	916,357	43	267,504	13	56,254	3	31,457	1	2,130,806
		All Trees	15,535	42	15,547	42	3,569	10	1,491	4	894	2	37,037
	SUKHUAPATA P.F.		15,535	42	15,547	42	3,569	10	1,491	4	894	2	37,037

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
KAPTIPADA	(all)	(all)	924,614	41	974,714	43	280,625	12	61,640	3	34,365	2	2,275,959
		All Trees	8,751	63	4,300	31	545	4	200	1	154	1	13,950
	ASANBANI P.R.F.	(all)	8,751	63	4,300	31	545	4	200	1	154	1	13,950
		Anogeissus latifolia	333	37	325	36	185	21	22	2	29	3	894
		Misc	10,251	67	3,882	25	759	5	250	2	204	1	15,348
		Shorea robusta	15,989	63	7,951	31	1,114	4	271	1	94	0	25,419
		Terminalia tomentosa	977	61	478	30	109	7	25	2	22	1	1,612
	BALIDIHA R.F.	(all)	27,551	64	12,636	29	2,168	5	569	1	349	1	43,273
		All Trees	119,386	66	53,032	29	5,541	3	925	1	1,183	1	180,067
	BHAGABATACHANDRAPUR R.F.	(all)	119,386	66	53,032	29	5,541	3	925	1	1,183	1	180,067
		Anogeissus latifolia	214	43	171	35	78	16	17	3	13	3	493
		Misc	4,812	70	1,604	23	355	5	111	2	31	0	6,912
		Shorea robusta	9,813	54	7,236	40	929	5	120	1	87	0	18,184
		Terminalia tomentosa	809	70	303	26	39	3	5	0	7	1	1,162
	BUDHIKHAMARI R.F.	(all)	15,647	58	9,314	35	1,401	5	253	1	137	1	26,752
		Anogeissus latifolia	1,199	42	917	32	606	21	109	4	38	1	2,869
		Misc	51,767	73	14,613	21	2,551	4	999	1	509	1	70,440
		Shorea robusta	106,708	51	88,543	43	10,229	5	1,037	0	1,011	0	207,529
		Terminalia tomentosa	7,951	73	2,584	24	167	2	94	1	25	0	10,821
	BURHIKHAMARI R.F.	(all)	167,625	57	106,657	37	13,554	5	2,239	1	1,583	1	291,659
		All Trees	5,094	66	2,224	29	234	3	80	1	78	1	7,710
	DANGARSAHI R.F.	(all)	5,094	66	2,224	29	234	3	80	1	78	1	7,710
		Anogeissus	477	30	503	32	506	32	70	4	26	2	1,581

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		latifolia											
		Misc	74,243	77	18,807	20	2,134	2	673	1	274	0	96,132
		Shorea robusta	53,566	52	37,018	36	11,015	11	966	1	117	0	102,682
		Terminalia tomentosa	4,358	80	818	15	153	3	96	2	27	0	5,453
	HATIKOTE R.F.	(all)	132,644	64	57,146	28	13,809	7	1,804	1	444	0	205,848
		All Trees	251,922	57	159,281	36	20,816	5	3,847	1	2,641	1	438,506
	MANCHABANDHA R.F.	(all)	251,922	57	159,281	36	20,816	5	3,847	1	2,641	1	438,506
		All Trees	58,300	59	34,051	34	5,603	6	1,094	1	554	1	99,601
	PURUNAPANI R.F.		58,300	59	34,051	34	5,603	6	1,094	1	554	1	99,601
PITHABATA	(all)	(all)	786,920	60	438,642	34	63,671	5	11,011	1	7,123	1	1,307,367
		All Trees	299,632	67	128,673	29	13,377	3	2,475	1	1,058	0	445,215
		Anogeissus latifolia	57	85	5	7	5	7	0	0	0	0	67
		Misc	18,666	94	1,053	5	133	1	57	0	38	0	19,948
		Shorea robusta	73,740	82	15,456	17	486	1	57	0	29	0	89,767
		Terminalia tomentosa	929	35	1,682	64	10	0	0	0	0	0	2,620
	AMARDA R.F.	(all)	393,024	70	146,869	26	14,010	3	2,589	0	1,125	0	557,617
		All Trees	18,507	77	4,749	20	601	3	55	0	0	0	23,911
	BAGHAJHARAN R.F.	(all)	18,507	77	4,749	20	601	3	55	0	0	0	23,911
		Anogeissus latifolia	32	46	20	29	17	25	0	0	0	0	69
		Misc	3,329	78	784	18	129	3	26	1	17	0	4,286
		Shorea robusta	4,797	71	1,707	25	180	3	17	0	9	0	6,710
		Terminalia tomentosa	129	49	72	28	30	11	27	10	2	1	261
	BALADIA R.F.	(all)	8,287	73	2,583	23	356	3	71	1	28	0	11,326
		All Trees	26,704	77	7,148	21	806	2	79	0	0	0	34,737

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	BETNASIA R.F.	(all)	26,704	77	7,148	21	806	2	79	0	0	0	34,737
		All Trees	13,498	61	7,594	34	828	4	152	1	81	0	22,153
	BHARADASOLE R.F.	(all)	13,498	61	7,594	34	828	4	152	1	81	0	22,153
		Anogeissus latifolia	116	93	5	4	4	3	0	0	0	0	125
		Misc	16,490	83	2,801	14	466	2	6	0	4	0	19,767
		Shorea robusta	21,850	74	7,053	24	696	2	4	0	2	0	29,606
		Terminalia tomentosa	466	50	235	25	116	12	115	12	1	0	934
	CHITRADA R.F.	(all)	38,923	77	10,094	20	1,283	3	126	0	7	0	50,431
		Anogeissus latifolia	387	45	165	19	264	31	40	5	3	0	858
		Misc	17,934	70	5,726	22	1,276	5	576	2	266	1	25,777
		Shorea robusta	38,890	54	28,989	40	3,701	5	357	0	140	0	72,078
		Terminalia tomentosa	2,606	66	1,189	30	77	2	47	1	3	0	3,923
	GANDIGODHA R.F.	(all)	59,818	58	36,068	35	5,318	5	1,021	1	412	0	102,636
		Anogeissus latifolia	157	47	84	25	79	24	0	0	12	4	331
		Misc	28,016	77	6,961	19	971	3	231	1	73	0	36,252
		Shorea robusta	48,220	71	18,744	27	1,147	2	185	0	60	0	68,357
		Terminalia tomentosa	859	48	650	37	147	8	113	6	11	1	1,779
	JAMSOLE R.F.	(all)	77,253	72	26,439	25	2,343	2	528	0	155	0	106,718
		All Trees	68,161	70	23,962	25	3,447	4	862	1	402	0	96,834
		Anogeissus latifolia	25	32	28	36	25	32	0	0	0	0	78
		Misc	1,913	70	642	24	105	4	37	1	25	1	2,722
		Shorea robusta	3,095	69	1,229	27	138	3	25	1	12	0	4,498

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		Terminalia tomentosa	105	49	63	30	22	10	19	9	3	1	213
	MORODA R.F.	(all)	73,300	70	25,924	25	3,737	4	943	1	442	0	104,346
		All Trees	54,206	66	24,859	30	2,703	3	511	1	202	0	82,481
	NALGAJA R.F.	(all)	54,206	66	24,859	30	2,703	3	511	1	202	0	82,481
		All Trees	7,292	72	2,578	26	167	2	40	0	9	0	10,085
	NICHUAPADA R.F.	(all)	7,292	72	2,578	26	167	2	40	0	9	0	10,085
		All Trees	2,208	77	567	20	72	3	7	0	0	0	2,853
	NUHAJHALIA R.F.	(all)	2,208	77	567	20	72	3	7	0	0	0	2,853
		All Trees	27,840	65	13,145	31	1,517	4	289	1	120	0	42,911
	NUNCHATI R.F.	(all)	27,840	65	13,145	31	1,517	4	289	1	120	0	42,911
		Anogeissus latifolia	285	63	74	16	77	17	1	0	15	3	452
		Misc	35,491	81	6,956	16	1,132	3	290	1	152	0	44,021
		Shorea robusta	90,512	65	45,126	33	2,298	2	348	0	130	0	138,414
		Terminalia tomentosa	1,769	61	894	31	149	5	86	3	8	0	2,906
	SARUIMULA R.F.		128,057	69	53,050	29	3,655	2	725	0	306	0	185,793
RASGOBINDPUR	(all)	(all)	928,914	69	361,669	27	37,396	3	7,133	1	2,887	0	1,337,999
		Anogeissus latifolia	8	22	15	41	14	38	0	0	0	0	37
		Misc	5,025	88	486	9	80	1	20	0	102	2	5,713
		Shorea robusta	8,072	72	2,768	25	396	4	14	0	7	0	11,256
		Terminalia tomentosa	36	49	24	33	7	10	5	7	2	3	73
	BELAKUTI R.F.	(all)	13,141	77	3,292	19	496	3	39	0	110	1	17,079
		Misc	447	92	25	5	4	1	0	0	8	2	485
		Shorea robusta	696	73	228	24	33	3	0	0	0	0	957
	BHANDAGAON R.F.	(all)	1,144	79	253	18	37	3	0	0	8	1	1,442
		All Trees	6,337	53	4,255	36	1,043	9	198	2	44	0	11,878

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	DUGDHA R.F.	(all)	6,337	53	4,255	36	1,043	9	198	2	44	0	11,878
		All Trees	9,083	79	2,008	18	296	3	0	0	66	1	11,453
	JAIPUR R.F.	(all)	9,083	79	2,008	18	296	3	0	0	66	1	11,453
		Anogeissus latifolia	651	38	555	33	390	23	51	3	45	3	1,692
		Misc	32,552	75	8,021	18	1,787	4	603	1	591	1	43,554
		Shorea robusta	57,014	63	28,139	31	4,233	5	542	1	192	0	90,120
		Terminalia tomentosa	2,315	63	1,100	30	192	5	57	2	33	1	3,696
	KAHNUPUR R.F.	(all)	92,531	67	37,815	27	6,602	5	1,252	1	861	1	139,062
		All Trees	55,696	71	18,371	23	3,140	4	635	1	611	1	78,453
	KANPURA R.F.	(all)	55,696	71	18,371	23	3,140	4	635	1	611	1	78,453
		Anogeissus latifolia	487	40	368	30	278	23	44	4	30	2	1,208
		Misc	15,491	69	5,187	23	1,239	5	448	2	246	1	22,611
		Shorea robusta	29,259	58	18,243	36	2,745	5	373	1	128	0	50,748
		Terminalia tomentosa	1,890	65	865	30	122	4	33	1	18	1	2,927
	KHUNTA R.F.	(all)	47,127	61	24,664	32	4,383	6	899	1	422	1	77,494
		All Trees	19,263	72	6,048	23	1,116	4	167	1	161	1	26,755
	KUAMARA R.F.	(all)	19,263	72	6,048	23	1,116	4	167	1	161	1	26,755
		All Trees	1,149	79	254	18	37	3	0	0	8	1	1,449
	KURIAKHUNTA R.F.	(all)	1,149	79	254	18	37	3	0	0	8	1	1,449
		All Trees	7,072	70	2,473	24	389	4	91	1	87	1	10,112
	MARSIGAON R.F.	(all)	7,072	70	2,473	24	389	4	91	1	87	1	10,112
		Anogeissus latifolia	3	20	6	40	5	33	0	0	0	0	15
		Misc	203	62	94	29	15	5	8	2	7	2	328
		Shorea robusta	418	66	187	29	25	4	5	1	3	0	638
		Terminalia	14	48	10	34	3	10	2	7	1	3	29

RANGE	BLOCK	MAJOR SPECIES	GIRTH CLASS (cm)										
			30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
		tomentosa											
	MUNDHAKATA R.F.	(all)	638	63	297	29	48	5	16	2	11	1	1,010
		All Trees	3,780	77	954	19	144	3	12	0	32	1	4,922
	NAHARA R.F.	(all)	3,780	77	954	19	144	3	12	0	32	1	4,922
		Anogeissus latifolia	454	38	398	34	268	23	34	3	28	2	1,183
		Misc	18,310	72	5,225	21	1,146	5	410	2	339	1	25,429
		Shorea robusta	32,994	62	16,962	32	2,506	5	343	1	128	0	52,933
		Terminalia tomentosa	1,564	62	759	30	134	5	44	2	24	1	2,524
	NAUPADA R.F.	(all)	53,322	65	23,344	28	4,053	5	831	1	519	1	82,069
		All Trees	39,182	56	23,642	34	5,393	8	1,061	2	334	0	69,611
	PHULAJHARI – (A) R.F.	(all)	39,182	56	23,642	34	5,393	8	1,061	2	334	0	69,611
		All Trees	2,063	79	456	18	67	3	0	0	15	1	2,601
	PURUNA-BARIPADA R.F.	(all)	2,063	79	456	18	67	3	0	0	15	1	2,601
		Misc	1,482	92	82	5	14	1	0	0	27	2	1,606
		Shorea robusta	2,305	73	755	24	110	3	0	0	0	0	3,170
	SIRATHALI R.F.	(all)	3,787	79	837	18	124	3	0	0	27	1	4,775
		All Trees	62,505	57	34,859	32	8,364	8	2,254	2	963	1	108,945
	UDALA R.F.		62,505	57	34,859	32	8,364	8	2,254	2	963	1	108,945
UDALA			417,820	64	183,821	28	35,733	6	7,455	1	4,281	1	649,111
(all)	*(all)*	*(all)*	*8,112,248*	*62*	*3,979,573*	*30*	*761,942*	*6*	*165,930*	*1*	*77,018*	*1*	*13,096,712*

Appendix – XXIII (b)

Range Wise Stand Table –Estimated Number of Stems

RANGE	MAJOR SPECIES	GIRTH CLASS (cm)										
		30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	Anogeissus latifolia	23,351	86	1,692	6	1,199	4	78	0	693	3	27,013
	Misc	144,198	75	34,941	18	8,372	4	2,953	2	1,029	1	191,492
	Shorea robusta	124,020	67	47,699	26	9,084	5	2,386	1	1,204	1	184,393
	Terminalia tomentosa	24,755	87	2,517	9	672	2	261	1	131	0	28,337
BANGIRIPOSI	**(all)**	**316,324**	**73**	**86,849**	**20**	**19,327**	**4**	**5,679**	**1**	**3,056**	**1**	**431,235**
	Anogeissus latifolia	4,145	37	2,526	22	3,716	33	346	3	531	5	11,264
	Misc	459,570	73	131,691	21	22,738	4	9,295	1	4,064	1	627,359
	Shorea robusta	705,204	59	419,364	35	62,944	5	7,897	1	2,894	0	1,198,304
	Terminalia tomentosa	41,091	68	16,749	28	1,751	3	569	1	191	0	60,351
BETNOTI	**(all)**	**1,210,010**	**64**	**570,330**	**30**	**91,149**	**5**	**18,108**	**1**	**7,681**	**0**	**1,897,278**

RANGE	MAJOR SPECIES	GIRTH CLASS (cm)										
		30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	Anogeissus latifolia	632	25	692	27	1,028	40	137	5	61	2	2,550
	Misc	138,370	73	38,344	20	8,301	4	3,864	2	516	0	189,395
	Shorea robusta	354,760	74	103,051	22	17,301	4	1,288	0	243	0	476,643
	Terminalia tomentosa	24,156	79	5,618	18	380	1	445	1	38	0	30,638
DEULI	**(all)**	**517,918**	**74**	**147,705**	**21**	**27,010**	**4**	**5,734**	**1**	**858**	**0**	**699,228**
	Anogeissus latifolia	2,539	36	2,409	34	1,659	24	205	3	186	3	6,998
	Misc	158,899	80	29,481	15	6,371	3	2,361	1	1,123	1	198,235
	Shorea robusta	184,766	61	101,618	33	16,191	5	2,079	1	729	0	305,383
	Terminalia tomentosa	8,470	62	3,913	29	809	6	268	2	153	1	13,613
DUKURA	**(all)**	**354,675**	**68**	**137,420**	**26**	**25,030**	**5**	**4,912**	**1**	**2,191**	**0**	**524,229**
	Anogeissus latifolia	38,452	20	96,696	50	47,032	25	6,717	4	2,619	1	191,516
	Misc	332,264	36	410,520	45	117,177	13	36,430	4	19,091	2	915,483

RANGE	MAJOR SPECIES	GIRTH CLASS (cm)										
		30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	Shorea robusta	441,081	50	337,979	38	86,006	10	8,873	1	5,742	1	879,681
	Terminalia tomentosa	47,438	33	71,162	49	17,289	12	4,234	3	4,004	3	144,126
KAPTIPADA	**(all)**	**859,235**	**40**	**916,357**	**43**	**267,504**	**13**	**56,254**	**3**	**31,456**	**1**	**2,130,806**
	Anogeissus latifolia	2,223	38	1,916	33	1,376	24	218	4	106	2	5,839
	Misc	141,074	75	38,907	21	5,800	3	2,033	1	1,018	1	188,831
	Shorea robusta	186,076	53	140,748	40	23,288	7	2,394	1	1,309	0	353,814
	Terminalia tomentosa	14,095	74	4,184	22	468	2	220	1	80	0	19,048
PITHABATA	**(all)**	**343,467**	**61**	**185,754**	**33**	**30,931**	**5**	**4,866**	**1**	**2,514**	**0**	**567,532**
	Anogeissus latifolia	1,060	54	379	19	470	24	41	2	30	2	1,980
	Misc	121,840	80	24,924	16	4,212	3	1,223	1	575	0	152,774
	Shorea robusta	281,105	69	118,305	29	8,646	2	993	0	382	0	409,430
	Terminalia tomentosa	6,864	54	4,785	38	551	4	408	3	27	0	12,635

RANGE	MAJOR SPECIES	GIRTH CLASS (cm)										
		30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
RASGOBINDPUR	**(all)**	**410,869**	**71**	**148,393**	**26**	**13,878**	**2**	**2,665**	**0**	**1,014**	**0**	**576,818**
	Anogeissus latifolia	1,604	39	1,342	32	955	23	130	3	104	3	4,135
	Misc	73,510	74	19,122	19	4,284	4	1,489	1	1,320	1	99,725
	Shorea robusta	130,758	62	67,282	32	10,047	5	1,277	1	458	0	209,822
	Terminalia tomentosa	5,819	63	2,756	30	456	5	141	2	78	1	9,250
UDALA	**(all)**	**211,691**	**66**	**90,502**	**28**	**15,743**	**5**	**3,036**	**1**	**1,960**	**1**	**322,932**
(all)	***(all)***	***4,224,189***	***59***	***2,283,309***	***32***	***490,573***	***7***	***101,255***	***1***	***50,730***	***1***	***7,150,056***

Appendix – XXIII (c)

Range Wise Stand Table – Estimated Number of Stems (Medium Dense Forest)

RANGE	MAJOR SPECIES	GIRTH CLASS (cm)										
		30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	All Trees	209,337	60	109,168	31	21,502	6	5,693	2	2,413	1	348,113
BANGIRIPOSI	**(all)**	**209,337**	**60**	**109,168**	**31**	**21,502**	**6**	**5,693**	**2**	**2,413**	**1**	**348,113**
	All Trees	1,109,868	68	460,259	28	54,585	3	11,626	1	4,578	0	1,640,916
BETNOTI	**(all)**	**1,109,868**	**68**	**460,259**	**28**	**54,585**	**3**	**11,626**	**1**	**4,578**	**0**	**1,640,916**
	All Trees	1,021,199	70	345,557	24	70,494	5	16,907	1	3,058	0	1,457,215
DEULI	**(all)**	**1,021,199**	**70**	**345,557**	**24**	**70,494**	**5**	**16,907**	**1**	**3,058**	**0**	**1,457,215**
	All Trees	314,648	60	163,439	31	35,420	7	10,029	2	4,526	1	528,062
DUKURA	**(all)**	**314,648**	**60**	**163,439**	**31**	**35,420**	**7**	**10,029**	**2**	**4,526**	**1**	**528,062**
	All Trees	65,379	45	58,357	40	13,121	9	5,387	4	2,908	2	145,152
KAPTIPADA	**(all)**	**65,379**	**45**	**58,357**	**40**	**13,121**	**9**	**5,387**	**4**	**2,908**	**2**	**145,152**
	All Trees	443,452	60	252,888	34	32,740	4	6,146	1	4,609	1	739,835
PITHABATA	**(all)**	**443,452**	**60**	**252,888**	**34**	**32,740**	**4**	**6,146**	**1**	**4,609**	**1**	**739,835**

RANGE	MAJOR SPECIES	GIRTH CLASS (cm)										
		30-60	%	60-90	%	90-120	%	120-150	%	> 150	%	Total
	All Trees	518,046	68	213,276	28	23,517	3	4,468	1	1,873	0	761,180
RASGOBINDPUR	**(all)**	**518,046**	**68**	**213,276**	**28**	**23,517**	**3**	**4,468**	**1**	**1,873**	**0**	**761,180**
	All Trees	206,129	63	93,319	29	19,990	6	4,419	1	2,321	1	326,178
UDALA	**(all)**	**206,129**	**63**	**93,319**	**29**	**19,990**	**6**	**4,419**	**1**	**2,321**	**1**	**326,178**
(all)	***(all)***	***3,888,059***	***65***	***1,696,264***	***29***	***271,370***	***5***	***64,675***	***1***	***26,288***	***0***	***5,946,656***

Appendix – XXIII (d)

Stand Table – Compartment Wise Estimated Number of Stems (Dense Forest)

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Anogeissus latifolia	58	57	26	1	1	143
				Misc	2,654	732	105	43	29	3,563
				Shorea robusta	2,964	1,149	159	36	12	4,316
		I	I	*Terminalia tomentosa*	169	74	19	10	4	276
	AMBADIHA P.F.	(all)	(all)	(all)	5,844	2,012	309	90	46	8,301
				Anogeissus latifolia	54	66	45	2	2	169
				Misc	1,679	847	145	68	43	2,782
				Shorea robusta	2,865	1,363	190	52	22	4,492
		I (P)	II	*Terminalia tomentosa*	172	95	25	15	6	313
				Anogeissus	66	67	36	3	3	175

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	1,947	736	133	52	30	2,898
				Shorea robusta	2,814	1,270	187	43	16	4,330
		I (P)	III	*Terminalia tomentosa*	183	90	22	9	4	308
				Anogeissus latifolia	43	49	33	2	3	130
				Misc	1,376	666	127	49	30	2,248
				Shorea robusta	2,191	1,043	168	52	19	3,473
		I (P)	IV	*Terminalia tomentosa*	135	69	20	8	4	236
				Anogeissus latifolia	69	80	48	2	1	200
				Misc	2,696	1,026	157	75	50	4,004
				Shorea robusta	3,753	1,631	216	53	23	5,676
		I (B)	I	*Terminalia*	216	111	29	18	6	380

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				tomentosa						
	JUHA P.R.F.	(all)	(all)	(all)	20,257	9,210	1,581	502	263	31,813
				Anogeissus latifolia	20	28	21	0	0	69
				Misc	735	383	58	32	21	1229
				Shorea robusta	1,272	596	74	20	10	1972
		I	I	*Terminalia tomentosa*	71	41	11	8	3	134
	KAPADIHA P.F.	(all)		(all)	2,098	1,049	164	61	34	3406
				Anogeissus latifolia	285	365	268	7	16	941
				Misc	9,242	5,084	914	402	253	15895
				Shorea robusta	16,212	7,873	1,180	367	146	25778
				Terminalia tomentosa	963	529	151	80	34	1757
				Anogeissus latifolia	186	195	117	7	14	519

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	6,141	2,549	490	175	103	9458
				Shorea robusta	8,814	4,045	669	197	67	13792
		I	I	*Terminalia tomentosa*	554	265	74	26	15	934
	PIMPUDIJHARAN P.F.	(all)	(all)	(all)	42,397	20,905	3,862	1,262	648	69,074
				Anogeissus latifolia	29	25	9	1	1	65
				Misc	1,163	270	42	13	8	1,496
				Shorea robusta	1,222	461	67	12	3	1,765
		I (P)	I	*Terminalia tomentosa*	76	31	7	2	1	117
				Anogeissus latifolia	45	39	16	3	3	106
				Misc	1,047	335	73	21	9	1,485
				Shorea robusta	1,446	657	108	21	7	2,239
				Shorea	2,456	1,142	204	57	18	3,877

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		I (P)	II	*Terminalia tomentosa*	168	77	20	4	4	273
				Anogeissus latifolia	65	64	29	2	1	161
				Misc	2,620	722	98	45	31	3,516
				Shorea robusta	3,077	1,213	151	25	10	4,476
		I (B)	III	*Terminalia tomentosa*	181	85	19	12	4	301
	RANGAHUDI	(all)	(all)	(all)	15,496	5,907	1,030	268	130	22,831
				Anogeissus latifolia	1,491	41	38	0	48	1,618
				Misc	7,163	1,625	465	136	33	9,422
				Shorea robusta	4,847	1,505	407	160	75	6,994
		I (P)	I	*Terminalia tomentosa*	1,436	58	27	1	5	1,527
				Anogeissus	993	42	25	1	28	1,089

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	6,585	1,529	286	86	25	8,511
				Shorea robusta	5,668	1,460	313	135	43	7,619
		I (P)	II	*Terminalia tomentosa*	1,039	56	20	3	4	1,122
				Anogeissus latifolia	468	50	34	3	13	568
				Misc	5,010	1,380	210	69	27	6,696
				Shorea robusta	5,400	1,710	335	118	25	7,588
		I (P)	III	*Terminalia tomentosa*	604	70	19	6	3	702
				Anogeissus latifolia	1,044	48	48	5	30	1,175
				Misc	6,615	1,627	350	117	31	8,740
				Shorea robusta	5,909	2,030	454	135	45	8,573
		I (P)	IV	*Terminalia*	1,116	75	20	6	3	1,220

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				tomentosa						
				Anogeissus latifolia	3,531	60	44	3	100	3,738
				Misc	15,656	2,444	790	256	40	19,186
				Shorea robusta	8,711	2,553	605	144	122	12,135
		I (P)	IX	*Terminalia tomentosa*	3,290	101	28	6	5	3,430
				Anogeissus latifolia	1,453	81	83	11	41	1,669
				Misc	9,268	2,131	527	191	52	12,169
				Shorea robusta	8,177	3,606	743	141	60	12,727
		I (P)	V	*Terminalia tomentosa*	1,590	147	28	14	4	1,783
				Anogeissus latifolia	1,443	86	85	9	44	1,667
				Misc	9,356	2,244	575	199	59	12,433
				Shorea	8,400	3,890	787	165	71	13,313

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		I (P)	VI	*Terminalia tomentosa*	1,600	164	35	13	5	1,817
				Anogeissus latifolia	4,032	69	56	5	112	4,274
				Misc	17,986	2,735	899	302	47	21,969
				Shorea robusta	10,316	3,446	749	141	135	14,787
		I (P)	VII	*Terminalia tomentosa*	3,793	138	29	9	4	3,973
				Anogeissus latifolia	3,443	63	67	6	99	3,678
				Misc	14,966	2,530	849	281	47	18,673
				Shorea robusta	8,630	3,034	740	161	126	12,691
		I (P)	VIII	*Terminalia tomentosa*	3,238	116	30	7	5	3,396
				Anogeissus latifolia	4,471	58	38	1	127	4,695

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	18,563	2,665	935	297	36	22,496
				Shorea robusta	8,875	2,022	579	150	150	11,776
		I (B)	X	*Terminalia tomentosa*	4,053	77	29	4	5	4,168
	THAKURANI			(all)	230,232	47,767	12,381	3,496	1,935	295,811
BANGIRIPOSI	**(all)**	**(all)**	**(all)**	**(all)**	**316,324**	**86,849**	**19,327**	**5,679**	**3,056**	**431,235**
				Anogeissus latifolia	2	0	0	0	0	2
				Misc	1,309	239	10	12	2	1,572
				Shorea robusta	1,105	307	31	4	2	1,449
		II,IV,VI	II	*Terminalia tomentosa*	19	2	0	0	0	21
				Anogeissus latifolia	8	13	11	0	0	32
				Misc	1,237	370	37	26	13	1,683
				Shorea robusta	1,401	519	59	14	7	2,000

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I,III,V,VII	I	*Terminalia tomentosa*	44	21	6	4	1	77
	BAISINGA	(all)	(all)	(all)	5,126	1,470	153	60	25	6,834
				Anogeissus latifolia	3	0	0	0	0	3
				Misc	2,040	373	15	18	3	2,449
				Shorea robusta	1,721	478	48	6	3	2,256
		I	I	*Terminalia tomentosa*	30	3	0	0	0	33
	BALKA	(all)	(all)	(all)	3,795	855	63	24	6	4,743
				Anogeissus latifolia	54	66	58	0	0	178
				Misc	12,843	3,099	240	192	76	16,450
				Shorea robusta	12,707	4,210	460	93	47	17,517
		I (P)	I	*Terminalia tomentosa*	327	120	29	22	7	505
				Anogeissus	24	35	31	0	1	91

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	2,977	962	109	68	34	4,152
				Shorea robusta	3,505	1,347	166	45	20	5,083
		I (P)	III	*Terminalia tomentosa*	119	58	16	11	4	208
				Anogeissus latifolia	46	29	27	0	7	109
				Misc	3,416	1,073	151	70	32	4,742
				Shorea robusta	4,844	2,412	350	70	21	7,697
		I (B)	II	*Terminalia tomentosa*	259	103	20	6	4	392
	BARTANA	(all)	(all)	(all)	41,120	13,513	1,658	576	252	57,119
				Anogeissus latifolia	27	18	16	0	0	61
				Misc	12,205	2,436	129	129	33	14,932
				Shorea robusta	10,805	3,187	331	51	25	14,399

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I	I	*Terminalia tomentosa*	217	45	8	6	2	278
	BHALIA	(all)	(all)	(all)	23,255	5,686	484	186	61	29,672
				Anogeissus latifolia	21	16	14	0	0	51
				Misc	8,340	1,703	96	92	26	10,257
				Shorea robusta	7,480	2,240	234	38	19	10,011
		I (P)	II	*Terminalia tomentosa*	156	36	7	5	2	206
				Anogeissus latifolia	43	28	25	0	0	96
				Misc	19,076	3,814	204	203	53	23,350
				Shorea robusta	16,904	4,993	518	80	40	22,535
		I (B)	I	*Terminalia tomentosa*	341	72	13	9	3	438
	CHHATANA	(all)	(all)	(all)	52,361	12,901	1,110	427	142	66,941
				Anogeissus	90	22	21	0	17	150

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	5,254	1,472	221	87	32	7,066
				Shorea robusta	8,409	4,758	705	105	21	13,998
		I	I	*Terminalia tomentosa*	547	199	26	1	3	778
	DALDALI	(all)	(all)	(all)	14,300	6,451	974	193	72	21,990
				Anogeissus latifolia	90	49	60	4	15	218
				Misc	6,806	2,092	344	134	58	9,434
				Shorea robusta	10,625	6,141	880	150	41	17,837
		I (P)	I	*Terminalia tomentosa*	648	231	37	8	5	929
				Anogeissus latifolia	100	41	59	2	21	223
				Misc	7,568	2,358	434	124	70	10,554
				Shorea robusta	14,910	9,921	1,231	211	60	26,333

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (P)	II	*Terminalia tomentosa*	1,058	349	49	2	5	1,463
				Anogeissus latifolia	63	17	33	2	10	125
				Misc	6,730	1,690	248	87	43	8,798
				Shorea robusta	11,844	7,588	865	106	32	20,435
		I (P)	III	*Terminalia tomentosa*	783	249	26	2	1	1,061
				Anogeissus latifolia	55	40	72	11	5	183
				Misc	3,381	1,187	265	103	42	4,978
				Shorea robusta	6,857	5,055	739	76	19	12,746
		I (P)	IV	*Terminalia tomentosa*	508	177	19	11	1	716
				Anogeissus latifolia	87	68	96	8	10	269
				Misc	10,759	3,019	448	192	89	14,507

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	16,368	9,620	1,179	174	60	27,401
		I (P)	V	*Terminalia tomentosa*	937	312	44	17	6	1,316
				Anogeissus latifolia	107	47	73	7	15	249
				Misc	7,962	2,311	392	149	68	10,882
				Shorea robusta	14,540	9,472	1,222	150	41	25,425
		I (P)	VI	*Terminalia tomentosa*	994	340	40	10	3	1,387
				Anogeissus latifolia	75	65	86	8	5	239
				Misc	8,111	2,342	333	166	75	11,027
				Shorea robusta	12,130	6,957	878	110	40	20,115
		I (P)	VIII	*Terminalia tomentosa*	674	241	34	20	5	974
				Anogeissus	92	33	54	4	14	197

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	8,424	2,249	346	126	63	11,208
				Shorea robusta	15,307	9,903	1,163	142	43	26,558
		I (B)	VII	*Terminalia tomentosa*	1,031	339	37	7	3	1,417
	DALKI	(all)	(all)	(all)	169,623	84,501	11,787	2,321	968	269,200
				Anogeissus latifolia	36	33	90	8	1	168
				Misc	11,306	2,859	456	128	103	14,852
				Shorea robusta	23,889	17,202	1,597	179	83	42,950
		I (P)	I	*Terminalia tomentosa*	1,669	492	46	11	1	2,219
				Anogeissus latifolia	82	22	40	3	13	160
				Misc	10,216	2,426	312	127	53	13,134
				Shorea robusta	15,504	9,084	1,062	132	40	25,822

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (B)	II	*Terminalia tomentosa*	920	288	30	3	2	1,243
	DUMAPADA	(all)	(all)	(all)	63,622	32,406	3,634	592	295	100,549
				Anogeissus latifolia	2	0	0	0	0	2
				Misc	1,414	259	10	13	2	1,698
				Shorea robusta	1,193	332	33	4	2	1,564
		I,II	I	*Terminalia tomentosa*	21	2	0	0	0	23
	GAD-DEULIA	(all)	(all)	(all)	2,631	592	44	17	4	3,288
				Anogeissus latifolia	155	110	185	27	16	493
				Misc	7,886	2,962	679	274	101	11,902
				Shorea robusta	15,044	10,825	1,789	195	42	27,895
		I (P)	III	*Terminalia tomentosa*	1,105	406	49	27	4	1,591
				Anogeissus	168	164	290	38	7	667

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	15,553	5,105	1,026	404	195	22,283
				Shorea robusta	31,366	22,746	2,876	295	103	57,386
		I (P)	IV	*Terminalia tomentosa*	2,211	744	82	50	6	3,093
				Anogeissus latifolia	126	98	152	18	19	413
				Misc	7,338	2,872	651	227	99	11,187
				Shorea robusta	14,284	10,065	1,561	241	64	26,215
		I (P)	V	*Terminalia tomentosa*	1,032	365	56	18	6	1,477
				Anogeissus latifolia	204	68	81	4	40	397
				Misc	11,544	3,598	639	219	89	16,089
				Shorea robusta	19,968	12,139	1,813	300	66	34,286
		I (P)	VI	*Terminalia*	1,367	488	71	4	8	1,938

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				tomentosa						
				Anogeissus latifolia	118	85	154	20	13	390
				Misc	9,116	3,018	638	224	106	13,102
				Shorea robusta	18,906	13,779	1,810	213	63	34,771
		I (P)	VII	*Terminalia tomentosa*	1,386	462	53	20	4	1,925
				Anogeissus latifolia	53	5	5	0	7	70
				Misc	11,432	2,251	147	114	24	13,968
				Shorea robusta	11,413	4,268	521	63	19	16,284
		I (P)	I	*Terminalia tomentosa*	381	102	9	0	1	493
				Anogeissus latifolia	170	29	37	3	30	269
				Misc	8,812	2,354	360	149	47	11,722
				Shorea	15,122	9,109	1,350	148	20	25,749

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		I (B)	II	*Terminalia tomentosa*	1,055	385	40	3	3	1,486
	GANDIGODHA	(all)	(all)	(all)	207,317	108,602	17,126	3,297	1,201	337,543
				Anogeissus latifolia	1	0	0	0	0	1
				Misc	471	86	3	4	1	565
				Shorea robusta	397	110	11	1	1	520
		I	I	*Terminalia tomentosa*	7	1	0	0	0	8
	HARIPUR	(all)	(all)	(all)	875	197	15	6	1	1,094
				Anogeissus latifolia	35	12	12	0	8	67
				Misc	1,766	596	110	36	15	2,523
				Shorea robusta	2,975	1,730	281	56	12	5,054
		I	I	*Terminalia tomentosa*	202	74	13	0	2	291

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Anogeissus latifolia	74	18	18	0	15	125
				Misc	3,822	1,143	191	67	25	5,248
				Shorea robusta	6,486	3,805	583	94	18	10,986
		II	II	*Terminalia tomentosa*	445	162	23	0	3	633
	HATIJHARI	(all)	(all)	(all)	15,805	7,541	1,231	253	97	24,927
				Anogeissus latifolia	3	4	3	0	0	10
				Misc	847	199	15	12	5	1,078
				Shorea robusta	826	270	29	6	3	1,134
		I,IV,V	I	*Terminalia tomentosa*	21	7	2	1	0	31
				Anogeissus latifolia	9	16	15	0	0	40
				Misc	272	237	38	22	15	584
				Shorea	697	363	46	15	7	1,128

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		II,VI,VII	II	*Terminalia tomentosa*	38	26	7	5	2	78
				Anogeissus latifolia	14	22	20	0	0	56
				Misc	1,413	512	60	39	21	2,045
				Shorea robusta	1,825	736	86	23	11	2,681
		III,VIII,IX	III	*Terminalia tomentosa*	67	36	10	7	2	123
	HEMAPUR	(all)	(all)	(all)	6,032	2,429	331	130	67	8,989
				Anogeissus latifolia	87	37	78	9	11	222
				Misc	8,912	2,400	410	137	77	11,936
				Shorea robusta	18,288	12,865	1,435	150	50	32,788
		I (P)	III	*Terminalia tomentosa*	1,311	419	40	10	1	1,781
				Anogeissus	75	32	64	9	9	189

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	5,446	1,553	291	110	48	7,448
				Shorea robusta	11,073	7,860	996	90	24	20,043
		I (P)	I	*Terminalia tomentosa*	813	272	25	9	1	1,120
				Anogeissus latifolia	53	53	127	18	0	251
				Misc	7,944	2,330	482	153	94	11,003
				Shorea robusta	18,757	14,560	1,574	143	58	35,092
		I (P)	II	*Terminalia tomentosa*	1,414	437	38	18	0	1,907
				Anogeissus latifolia	140	4	10	1	22	177
				Misc	10,356	2,239	241	121	35	12,992
				Shorea robusta	16,480	9,609	1,218	90	11	27,408
		I (P)	IV	*Terminalia*	1,066	364	27	1	0	1,458

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				tomentosa						
				Anogeissus latifolia	11	0	0	0	1	12
				Misc	2,856	538	28	27	5	3,454
				Shorea robusta	2,782	1,006	116	11	4	3,919
		I (B)	V	*Terminalia tomentosa*	87	22	1	0	0	110
	JAGANATHAPUR	(all)	(all)	(all)	107,953	56,600	7,201	1,107	451	173,312
				Anogeissus latifolia	105	40	62	3	20	230
				Misc	8,204	2,459	444	131	73	11,311
				Shorea robusta	16,372	11,036	1,338	207	60	29,013
		I (P)	II	*Terminalia tomentosa*	1,170	384	49	3	4	1,610
				Anogeissus latifolia	159	30	28	0	26	243
				Misc	10,633	2,645	322	156	52	13,809

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	16,146	8,829	1,224	138	25	26,362
		I (P)	I	*Terminalia tomentosa*	998	362	39	5	4	1,408
				Anogeissus latifolia	56	9	9	0	10	84
				Misc	6,276	1,393	139	75	20	7,903
				Shorea robusta	7,563	3,503	478	64	14	11,622
		I (B)	III	*Terminalia tomentosa*	364	118	13	0	1	496
	JUGAL	(all)	(all)	(all)	68,044	30,808	4,147	781	310	104,090
				Anogeissus latifolia	6	0	0	0	0	6
				Misc	4,090	748	30	36	6	4,910
				Shorea robusta	3,451	959	97	12	6	4,525
		I	I	*Terminalia tomentosa*	60	6	0	0	0	66

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
	KETAKISOLE	(all)	(all)	(all)	7,607	1,713	127	48	12	9,507
				Anogeissus latifolia	3	0	0	0	0	3
				Misc	2,157	394	16	19	3	2,589
				Shorea robusta	1,819	506	51	6	3	2,385
		I	I	*Terminalia tomentosa*	32	3	0	0	0	35
	KHADIKAPADA	(all)	(all)	(all)	4,011	903	67	25	6	5,012
				Anogeissus latifolia	64	44	63	7	8	186
				Misc	6,781	1,904	292	131	50	9,158
				Shorea robusta	9,379	5,217	742	107	32	15,477
		I (P)	I	*Terminalia tomentosa*	509	174	25	10	3	721
				Anogeissus latifolia	114	79	142	19	11	365
				Misc	8,696	2,789	565	214	96	12,360

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	17,186	12,256	1,636	176	51	31,305
		I (P)	II	*Terminalia tomentosa*	1,231	417	46	21	3	1,718
				Anogeissus latifolia	76	36	57	5	9	183
				Misc	9,331	2,346	314	139	59	12,189
				Shorea robusta	14,076	8,237	984	120	39	23,456
		I (P)	III	*Terminalia tomentosa*	819	265	30	9	3	1,126
				Anogeissus latifolia	56	39	86	9	5	195
				Misc	9,552	2,534	423	136	85	12,730
				Shorea robusta	18,873	13,226	1,375	160	63	33,697
		I (P)	IV	*Terminalia tomentosa*	1,296	395	40	11	2	1,744
				Anogeissus	25	25	43	5	2	101

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	1,917	716	159	57	28	2,877
				Shorea robusta	4,168	3,114	414	51	16	7,763
		I (B)	V	*Terminalia tomentosa*	307	105	13	7	1	433
	KHIRIPADA	(all)	(all)	(all)	104,458	53,917	7,448	1,393	566	167,782
				Anogeissus latifolia	13	2	2	0	2	19
				Misc	2,121	447	38	23	6	2,635
				Shorea robusta	2,268	925	121	17	5	3,336
		I	I	*Terminalia tomentosa*	88	26	3	0	0	117
	KOCHILAKHUNTA	(all)		(all)	4,491	1,400	164	40	13	6,108
				Anogeissus latifolia	14	21	20	0	2	57
				Misc	4,005	1,691	437	231	148	6,512

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	5,663	2,520	1,212	113	144	9,652
		I (P)	I	*Terminalia tomentosa*	260	314	12	4	3	593
				Anogeissus latifolia	25	34	36	1	4	100
				Misc	4,881	2,119	615	249	134	7,998
				Shorea robusta	7,132	3,828	1,542	165	127	12,794
		I (P)	II	*Terminalia tomentosa*	328	427	19	6	4	784
				Anogeissus latifolia	89	93	162	22	7	373
				Misc	7,356	2,926	825	260	93	11,460
				Shorea robusta	14,436	10,996	2,014	227	51	27,724
		I (P)	III	*Terminalia tomentosa*	987	520	42	22	4	1,575
				Anogeissus	69	75	110	11	12	277

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	7,029	3,024	967	249	72	11,341
				Shorea robusta	12,074	8,741	2,143	292	56	23,306
		I (P)	IV	*Terminalia tomentosa*	697	604	42	11	6	1,360
				Anogeissus latifolia	43	44	78	11	3	179
				Misc	3,705	1,479	445	136	42	5,807
				Shorea robusta	6,989	5,346	1,088	112	22	13,557
		I (P)	IX	*Terminalia tomentosa*	458	289	19	11	2	779
				Anogeissus latifolia	23	30	30	0	6	89
				Misc	4,877	2,116	707	208	80	7,988
				Shorea robusta	7,071	4,310	1,641	195	79	13,296
		I (P)	V	*Terminalia*	295	493	20	3	4	815

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				tomentosa						
				Anogeissus latifolia	40	41	86	12	1	181
				Misc	7,497	2,571	731	241	110	11,151
				Shorea robusta	14,336	10,381	2,044	177	86	27,025
		I (P)	VI	*Terminalia tomentosa*	918	579	24	12	1	1,535
				Anogeissus latifolia	5	6	6	0	2	19
				Misc	2,749	1,087	256	167	119	4,379
				Shorea robusta	3,728	1,412	802	65	120	6,128
		I (P)	VII	*Terminalia tomentosa*	179	184	4	0	1	368
				Anogeissus latifolia	80	90	136	15	9	331
				Misc	7,693	3,256	980	286	99	12,314
				Shorea	13,886	10,055	2,260	280	68	26,551

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		I (P)	VIII	*Terminalia tomentosa*	843	633	46	19	6	1,547
				Anogeissus latifolia	140	166	236	22	17	581
				Misc	17,990	7,412	1,939	789	437	28,567
				Shorea robusta	31,329	19,773	4,948	564	385	56,999
		I (B)	X	*Terminalia tomentosa*	1,877	1,305	91	35	13	3,321
	KRUSHNACHANDRAPUR	(all)	(all)	(all)	191,799	110,995	28,815	5,227	2,581	339,417
				Anogeissus latifolia	27	28	25	0	1	81
				Misc	8,008	1,798	129	104	36	10,075
				Shorea robusta	7,549	2,397	266	53	25	10,290
		I (P)	I	*Terminalia tomentosa*	178	54	13	9	3	257
				Anogeissus	48	36	34	0	9	127

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	7,080	1,883	229	109	41	9,342
				Shorea robusta	7,611	2,991	443	114	36	11,195
		I (P)	II	*Terminalia tomentosa*	278	92	24	5	5	404
				Anogeissus latifolia	19	11	10	0	3	43
				Misc	1,669	474	59	30	13	2,245
				Shorea robusta	2,246	1,083	150	26	8	3,513
		I (B)	III	*Terminalia tomentosa*	114	44	8	3	1	170
	MANTAPAL	(all)	(all)	(all)	34,829	10,891	1,390	452	180	47,742
				Anogeissus latifolia	102	36	34	0	19	191
				Misc	6,986	1,994	291	119	46	9,436
				Shorea robusta	10,301	5,485	817	139	32	16,774

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (P)	II	*Terminalia tomentosa*	613	224	34	4	5	880
				Anogeissus latifolia	48	23	22	0	10	103
				Misc	2,884	968	166	59	26	4,103
				Shorea robusta	4,436	2,408	387	84	21	7,336
		I (B)	I	*Terminalia tomentosa*	272	102	20	2	3	399
	PATPUR	(all)	(all)	(all)	25,643	11,240	1,772	407	162	39,224
				Anogeissus latifolia	1	0	0	0	0	1
				Misc	665	122	5	6	1	799
				Shorea robusta	561	156	16	2	1	736
		I,IV	I	*Terminalia tomentosa*	10	1	0	0	0	11
				Anogeissus latifolia	14	21	19	0	0	54

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	2,042	614	62	43	21	2,782
				Shorea robusta	2,322	863	98	24	12	3,319
		II	II	*Terminalia tomentosa*	74	35	9	7	2	127
				Anogeissus latifolia	56	58	52	0	0	166
				Misc	17,077	3,787	255	220	75	21,414
				Shorea robusta	16,064	5,065	542	99	50	21,820
		III	III	*Terminalia tomentosa*	373	114	26	19	6	538
	PURUNIA	(all)	(all)	(all)	39,261	10,836	1,083	420	169	51,769
				Misc	6,472	1,303	71	70	19	7,935
				Shorea robusta	5,758	1,708	178	28	14	7,686
		I,II	I	*Terminalia tomentosa*	117	26	5	3	1	152
	THAKURTOTA	(all)	(all)	(all)	12,362	3,047	263	101	34	15,807

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Anogeissus latifolia	3	0	0	0	0	3
				Misc	1,985	363	15	18	3	2,384
				Shorea robusta	1,675	465	47	6	3	2,196
		I	I	*Terminalia tomentosa*	29	3	0	0	0	32
	TOTATADA			(all)	3,692	831	61	23	6	4,613
BETNOTI	**(all)**	**(all)**	**(all)**	**(all)**	**1,210,010**	**570,330**	**91,149**	**18,108**	**7,681**	**1,897,278**
				Misc	422	98	17	2	0	539
				Shorea robusta	566	144	32	0	0	742
		I (P)	I	*Terminalia tomentosa*	83	10	0	2	0	95
				Misc	493	114	20	3	0	630
				Shorea robusta	660	168	37	0	0	865
		I (P)	II	*Terminalia tomentosa*	97	11	0	3	0	111
				Misc	1,915	443	77	11	0	2,446

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	2,568	653	144	0	0	3,365
		I (B)	III	*Terminalia tomentosa*	376	44	0	11	0	431
	ANDHARI	(all)	(all)	(all)	7,180	1,685	327	33	0	9,225
				Misc	4,999	1,144	227	108	0	6,478
				Shorea robusta	10,735	2,912	501	0	0	14,148
		I (P)	IX	*Terminalia tomentosa*	994	105	0	15	0	1,114
				Anogeissus latifolia	28	31	49	7	1	116
				Misc	4,622	1,232	183	90	22	6,149
				Shorea robusta	21,662	2,588	415	28	6	24,699
		I (P)	VI	*Terminalia tomentosa*	336	81	8	11	1	437
				Misc	6,124	1,284	170	91	0	7,669
				Shorea robusta	24,588	2,768	386	0	0	27,742

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (P)	VII	*Terminalia tomentosa*	731	75	0	9	0	815
				Anogeissus latifolia	3	3	6	1	0	13
				Misc	12,544	2,781	472	237	2	16,036
				Shorea robusta	38,458	6,656	1,060	2	0	46,176
		I (P)	VIII	*Terminalia tomentosa*	2,002	215	1	28	0	2,246
				Anogeissus latifolia	90	95	153	23	5	366
				Misc	10,211	2,718	679	349	68	14,025
				Shorea robusta	37,356	11,869	1,541	108	22	50,896
		III	III	*Terminalia tomentosa*	1,338	275	28	29	3	1,673
				Anogeissus latifolia	129	134	232	40	2	537
				Misc	8,798	2,735	714	348	93	12,688
				Shorea robusta	29,367	11,533	1,722	88	10	42,720

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		IV	IV	*Terminalia tomentosa*	1,103	328	28	49	2	1,510
				Anogeissus latifolia	15	28	25	0	0	68
				Misc	619	437	71	38	25	1,190
				Shorea robusta	1,391	667	89	25	12	2,184
		I (P)	X	*Terminalia tomentosa*	96	47	12	10	3	168
				Anogeissus latifolia	5	5	7	1	1	19
				Misc	8,142	1,702	365	225	4	10,438
				Shorea robusta	25,655	6,681	854	10	2	33,202
		I (B)	V	*Terminalia tomentosa*	1,430	148	2	10	0	1,590
				Anogeissus latifolia	180	201	246	18	42	687
				Misc	14,727	6,285	1,567	652	162	23,393
				Shorea robusta	34,065	13,884	2,769	571	147	51,436

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I	I	*Terminalia tomentosa*	2,353	618	123	18	21	3,133
				Anogeissus latifolia	172	184	299	47	7	709
				Misc	11,813	4,866	1,294	739	131	18,843
				Shorea robusta	27,186	14,793	2,747	339	33	45,098
		II	II	*Terminalia tomentosa*	2,522	1,843	131	53	6	4,555
	DEULI	(all)	(all)	(all)	346,587	103,950	19,175	4,415	834	474,961
				Misc	4,329	1,046	215	105	0	5,695
				Shorea robusta	8,691	2,546	433	24	0	11,694
		I (P)	II	*Terminalia tomentosa*	933	294	12	14	0	1,253
				Misc	5,555	1,384	311	201	0	7,451
				Shorea robusta	13,500	4,156	644	53	0	18,353
		I (B)	I	*Terminalia tomentosa*	1,272	554	26	9	0	1,861

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
	KALIASOLE	(all)	(all)	(all)	34,280	9,981	1,642	406	0	46,309
				Misc	9,367	2,163	386	76	0	11,992
				Shorea robusta	13,695	3,534	739	0	0	17,968
		I (P)	I	*Terminalia tomentosa*	1,844	214	0	50	0	2,108
				Misc	11,419	2,613	518	246	0	14,796
				Shorea robusta	24,529	6,654	1,144	0	0	32,327
		I (B)	II	*Terminalia tomentosa*	2,271	240	0	33	0	2,544
				Misc	9,675	2,236	407	103	0	12,421
				Shorea robusta	15,247	4,001	799	2	0	20,049
		II	II	*Terminalia tomentosa*	1,916	238	1	48	0	2,203
				Anogeissus latifolia	6	7	7	0	2	22
				Misc	5,187	1,301	257	89	6	6,840
				Shorea	9,549	2,651	503	24	7	12,734

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		III	III	*Terminalia tomentosa*	1,002	117	5	20	1	1,144
				Anogeissus latifolia	3	4	4	0	1	13
				Misc	7,412	1,764	351	152	3	9,683
				Shorea robusta	15,291	4,194	743	14	4	20,246
		I	I	*Terminalia tomentosa*	1,457	160	3	23	1	1,644
	KULIANA			(all)	129,871	32,090	5,866	881	24	168,732
DEULI	**(all)**	**(all)**	**(all)**	**(all)**	**517,919**	**147,705**	**27,010**	**5,734**	**858**	**699,227**
				Anogeissus latifolia	12	21	19	0	0	51
				Misc	3,356	346	49	28	19	3,799
				Shorea robusta	3,124	1,581	228	19	9	4,961
		I	I	*Terminalia tomentosa*	63	33	9	7	2	115
	AGHASOLE	(all)	(all)	(all)	6,556	1,981	305	54	30	8,926

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Anogeissus latifolia	363	335	212	31	24	965
				Misc	14,679	3,562	795	291	131	19,459
				Shorea robusta	19,435	10,755	1,716	232	83	32,220
		I (P)	I	*Terminalia tomentosa*	1,096	520	103	32	19	1,770
				Anogeissus latifolia	217	201	142	22	13	595
				Misc	9,079	2,194	497	195	83	12,048
				Shorea robusta	12,167	7,034	1,142	129	45	20,518
		I (P)	III	*Terminalia tomentosa*	695	326	59	23	10	1,113
				Anogeissus latifolia	144	110	122	16	3	395
				Misc	11,928	2,090	447	206	97	14,769
				Shorea robusta	15,562	10,110	1,480	122	47	27,320
		I (B)	II	*Terminalia tomentosa*	774	347	40	25	6	1,191

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
	BARSAHI	(all)	(all)	(all)	86,139	37,584	6,755	1,325	563	132,364
				Anogeissus latifolia	20	37	33	0	0	90
				Misc	3,989	580	86	49	33	4,737
				Shorea robusta	4,071	2,068	293	33	16	6,481
		I	I	*Terminalia tomentosa*	102	57	16	12	4	192
	BELPARA	(all)	(all)	(all)	8,182	2,742	428	94	53	11,500
				Anogeissus latifolia	338	293	160	25	27	844
				Misc	10,275	2,988	702	222	98	14,286
				Shorea robusta	14,883	8,153	1,310	229	77	24,653
		I	I	*Terminalia tomentosa*	963	450	91	14	16	1,534
				Anogeissus latifolia	522	460	370	54	40	1,445
				Misc	15,178	5,979	1,455	530	224	23,365
				Shorea	25,952	16,365	2,821	457	142	45,737

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		II	II	*Terminalia tomentosa*	1,830	838	152	48	25	2,893
	BIDYADHARPUR	(all)	(all)	(all)	69,941	35,526	7,060	1,580	650	114,757
				Anogeissus latifolia	5	9	8	0	0	21
				Misc	9,153	252	20	12	8	9,444
				Shorea robusta	7,051	3,533	532	8	4	11,127
		I	I	*Terminalia tomentosa*	63	13	4	3	1	84
	CHENGUAMANGALPUR	(all)	(all)	(all)	16,271	3,807	563	22	13	20,676
				Anogeissus latifolia	6	10	9	0	0	25
				Misc	3,606	194	23	13	9	3,845
				Shorea robusta	2,978	1,498	222	9	4	4,711
		I (P)	I	*Terminalia tomentosa*	40	16	4	3	1	64

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Anogeissus latifolia	14	26	23	0	0	64
				Misc	23,893	706	61	35	23	24,717
				Shorea robusta	18,507	9,277	1,394	23	12	29,212
		I (B)	II	*Terminalia tomentosa*	171	40	12	9	3	234
	DEULIA	(all)	(all)	(all)	49,214	11,766	1,748	92	52	62,872
				Anogeissus latifolia	252	269	165	15	16	718
				Misc	16,756	2,956	569	227	123	20,632
				Shorea robusta	18,597	9,374	1,423	186	76	29,655
		I	I	*Terminalia tomentosa*	747	373	91	37	19	1,267
	DUKURA	(all)	(all)	(all)	36,352	12,972	2,248	466	235	52,273
				Anogeissus latifolia	52	43	16	5	3	118
				Misc	4,320	286	59	17	5	4,688
				Shorea	3,921	1,945	293	7	3	6,169

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		I	I	*Terminalia tomentosa*	128	54	9	1	2	193
	GOJODI-DAMODARPUR	(all)	(all)	(all)	8,421	2.328	377	29	12	11,168
				Anogeissus latifolia	139	121	80	11	15	367
				Misc	3,249	1,503	379	113	48	5,293
				Shorea robusta	5,646	3,289	610	144	43	9,731
		I	I	*Terminalia tomentosa*	425	191	43	5	7	671
	HALADIA	(all)	(all)	(all)	9,459	5,104	1,112	273	113	16,061
				Anogeissus latifolia	43	39	22	3	5	113
				Misc	922	451	113	30	13	1,529
				Shorea robusta	1,515	771	155	47	14	2,502
		I	I	*Terminalia tomentosa*	114	52	14	0	3	183

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Anogeissus latifolia	213	201	113	14	21	563
				Misc	6,756	2,161	504	152	71	9,644
				Shorea robusta	9,294	4,698	826	190	61	15,070
		II	II	*Terminalia tomentosa*	568	268	69	10	13	929
	ITAMUNDIA	(all)	(all)	(all)	19,427	8,641	1,816	447	202	30,533
				Anogeissus latifolia	6	10	9	0	0	24
				Misc	2,657	178	23	13	9	2,881
				Shorea robusta	2,270	1,144	168	9	4	3,595
		I (P)	II	*Terminalia tomentosa*	35	15	4	3	1	59
				Anogeissus latifolia	24	43	38	0	0	105
				Misc	5,583	689	100	57	38	6,467
				Shorea robusta	5,436	2,756	394	38	19	8,644

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (B)	I	*Terminalia tomentosa*	123	67	19	14	5	228
	ITAMUNDIA-JAMUNA	(all)	(all)	(all)	16,134	4,902	756	135	76	22,004
				Anogeissus latifolia	30	35	23	2	1	90
				Misc	7,008	454	66	32	19	7,579
				Shorea robusta	6,039	3,031	448	20	10	9,547
		I	I	*Terminalia tomentosa*	115	50	12	7	3	186
	KHANUA	(all)	(all)	(all)	13,191	3,569	549	60	32	17,402
				Anogeissus latifolia	139	146	97	7	16	405
				Misc	6,511	1,912	420	138	73	9,053
				Shorea robusta	8,318	4,238	738	177	59	13,530
		I,II	I	*Terminalia tomentosa*	421	202	58	14	12	706
	PURUNAPANI			(all)	15,388	6,497	1,313	336	159	23,694

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
DUKURA	**(all)**	**(all)**	**(all)**	**(all)**	**354,675**	**137,420**	**25,030**	**4,912**	**2,191**	**524,229**
				Anogeissus latifolia	1,619	3,829	3,864	320	24	9,657
				Misc	33,941	31,906	7,995	1,863	567	76,272
				Shorea robusta	56,187	52,159	14,585	447	51	123,429
		X	X	*Terminalia tomentosa*	4,176	2,810	285	277	36	7,583
				Anogeissus latifolia	2,167	4,720	2,711	253	168	10,020
				Misc	22,843	24,763	7,228	3,042	1,381	59,257
				Shorea robusta	28,764	12,534	2,767	472	341	44,878
		I	I	*Terminalia tomentosa*	5,224	6,663	1,557	921	257	14,621
				Anogeissus latifolia	1,203	2,508	1,650	2,025	205	7,590
				Misc	61,682	43,847	15,004	7,534	1,260	129,325
				Shorea robusta	77,711	46,709	19,458	534	365	144,776

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		IX	IX	*Terminalia tomentosa*	2,426	6,578	869	262	205	10,341
				Anogeissus latifolia	5,812	24,814	6,310	140	373	37,449
				Misc	34,509	61,382	12,887	2,900	1,744	113,422
				Shorea robusta	46,832	66,334	15,335	764	1,756	131,021
		VIII	VIII	*Terminalia tomentosa*	4,649	5,898	1,063	263	242	12,115
				Anogeissus latifolia	5,980	1,942	1,432	78	214	9,646
				Misc	36,554	24,502	5,303	1,722	1,079	69,160
				Shorea robusta	51,207	23,170	5,401	498	275	80,551
		VII	VII	*Terminalia tomentosa*	5,304	2,330	717	184	163	8,697
				Anogeissus latifolia	3,977	10,016	4,366	769	324	19,452
				Misc	27,845	35,977	10,521	3,147	1,807	79,296
				Shorea robusta	28,020	19,164	4,842	978	563	53,567

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		VI	VI	*Terminalia tomentosa*	4,394	7,812	2,167	673	490	15,536
				Anogeissus latifolia	8,590	26,544	7,546	21	287	42,988
				Misc	38,581	76,175	19,242	5,184	1,960	141,143
				Shorea robusta	57,744	59,529	8,205	751	1,726	127,956
		V	V	*Terminalia tomentosa*	7,776	14,192	1,079	366	1,481	24,895
				Anogeissus latifolia	3,570	2,961	980	231	61	7,802
				Misc	36,727	21,522	6,232	1,787	3,409	69,676
				Shorea robusta	22,560	16,699	5,400	238	91	44,987
		III	III	*Terminalia tomentosa*	4,963	4,042	1,450	129	110	10,693
				Anogeissus latifolia	3,512	8,885	7,349	497	275	20,518
				Misc	22,717	49,871	15,085	5,767	2,011	95,451
				Shorea robusta	53,332	21,569	4,569	1,201	344	81,015

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		II	II	*Terminalia tomentosa*	4,416	7,794	2,524	842	290	15,866
				Anogeissus latifolia	2,023	10,476	10,823	2,385	687	26,395
				Misc	16,867	40,576	17,680	3,484	3,874	82,481
				Shorea robusta	18,725	20,112	5,444	2,990	230	47,501
		IV	IV	*Terminalia tomentosa*	4,110	13,044	5,577	317	731	23,779
	NOTO			(all)	859,235	916,357	267,504	56,254	31,457	2,130,806
KAPTIPADA	**(all)**	**(all)**	**(all)**	**(all)**	**859,235**	**916,357**	**267,504**	**56,254**	**31,457**	**2,130,806**
				Anogeissus latifolia	182	176	103	12	18	492
				Misc	4,895	2,098	451	140	93	7,677
				Shorea robusta	7,899	3,966	636	174	57	12,731
		I (P)	I	*Terminalia tomentosa*	518	249	62	11	12	853
				Anogeissus latifolia	151	148	83	10	11	403

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	5,356	1,784	308	111	111	7,671
				Shorea robusta	8,090	3,985	478	98	37	12,688
		I (B)	II	*Terminalia tomentosa*	459	229	47	14	10	759
	BALIDIHA	(all)	(all)	(all)	27,551	12,636	2,168	569	349	43,273
				Anogeissus latifolia	214	171	78	17	13	493
				Misc	4,812	1,604	355	111	31	6,912
				Shorea robusta	9,813	7,236	929	120	87	18,184
	BUDHIKHAMARI	I (P)	I	*Terminalia tomentosa*	809	303	39	5	7	1,162
		(all)	(all)	(all)	15,647	9,314	1,401	253	137	26,752
				Anogeissus latifolia	39	43	27	2	2	112
				Misc	7,318	1,392	88	37	166	9,001
				Shorea robusta	8,840	4,215	263	29	12	13,358
		I (P)	X	*Terminalia*	290	132	15	7	3	446

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				tomentosa						
				Anogeissus latifolia	230	181	112	24	10	557
				Misc	6,094	1,987	436	162	40	8,719
				Shorea robusta	13,126	10,708	1,393	134	115	25,476
		I (P)	II	*Terminalia tomentosa*	1,081	381	35	14	5	1,515
				Anogeissus latifolia	164	124	87	16	6	397
				Misc	5,650	1,825	374	141	35	8,025
				Shorea robusta	12,951	11,403	1,414	153	139	26,060
		I (P)	III	*Terminalia tomentosa*	1,052	335	23	11	3	1,425
				Anogeissus latifolia	191	145	79	13	10	438
				Misc	6,712	2,153	413	140	43	9,462
				Shorea robusta	15,219	13,070	1,536	203	177	30,205

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (P)	IV	*Terminalia tomentosa*	1,214	384	32	9	5	1,644
				Anogeissus latifolia	163	108	67	13	2	353
				Misc	6,842	1,912	333	134	24	9,245
				Shorea robusta	16,913	15,881	1,789	170	203	34,955
		I (P)	V	*Terminalia tomentosa*	1,384	402	11	11	1	1,809
				Anogeissus latifolia	100	76	78	13	0	267
				Misc	5,442	1,607	285	130	55	7,518
				Shorea robusta	11,976	10,681	1,278	113	119	24,167
		I (P)	VI	*Terminalia tomentosa*	904	279	10	16	1	1,211
				Anogeissus latifolia	86	62	42	7	1	198
				Misc	4,339	1,192	189	80	36	5,836
				Shorea robusta	9,697	8,586	949	93	105	19,429

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (P)	VII	*Terminalia tomentosa*	737	223	9	8	1	979
				Anogeissus latifolia	131	97	80	14	2	324
				Misc	6,674	1,816	307	132	68	8,997
				Shorea robusta	13,857	11,859	1,374	120	129	27,340
		I (P)	VIII	*Terminalia tomentosa*	1,024	322	14	14	2	1,375
				Anogeissus latifolia	94	82	35	8	5	224
				Misc	2,697	729	125	43	42	3,636
				Shorea robusta	4,128	2,140	234	23	13	6,538
		I (B)	IX	*Terminalia tomentosa*	265	125	19	4	4	417
	BURHIKHAMARI	(all)	(all)	(all)	167,625	106,657	13,554	2,239	1,583	291,659
				Anogeissus latifolia	49	56	88	13	0	206
				Misc	6,674	1,896	281	115	41	9,007

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	5,710	4,662	1,317	90	7	11,786
		I (P)	I	*Terminalia tomentosa*	456	112	14	19	2	601
				Anogeissus latifolia	48	64	84	10	0	205
				Misc	9,685	2,597	298	113	50	12,744
				Shorea robusta	7,285	5,458	1,606	129	16	14,493
		I (P)	II	*Terminalia tomentosa*	573	116	20	21	4	735
				Anogeissus latifolia	47	48	69	12	1	177
				Misc	7,312	1,988	320	89	29	9,738
				Shorea robusta	5,394	6,676	2,284	162	5	14,522
		I (P)	III	*Terminalia tomentosa*	430	92	11	13	1	547
				Anogeissus latifolia	103	97	71	12	7	290
				Misc	9,662	2,551	360	92	35	12,701

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	7,434	6,308	1,998	176	19	15,936
		I (P)	IV	*Terminalia tomentosa*	604	141	27	10	5	787
				Anogeissus latifolia	11	13	19	3	0	46
				Misc	7,694	1,732	167	26	10	9,628
				Shorea robusta	4,208	4,711	1,746	125	2	10,793
		I (P)	IX	*Terminalia tomentosa*	348	26	4	4	1	382
				Misc	496	91	0	0	0	587
				Shorea robusta	252	23	0	0	0	274
		I (P)	X	*Terminalia tomentosa*	23	0	0	0	0	23
				Anogeissus latifolia	45	54	59	7	2	167
				Misc	3,867	1,258	187	81	36	5,428
				Shorea robusta	3,887	2,280	510	58	15	6,749

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (P)	V	*Terminalia tomentosa*	296	91	18	13	3	421
				Anogeissus latifolia	142	131	73	10	15	371
				Misc	3,815	1,589	345	98	45	5,893
				Shorea robusta	5,394	2,543	472	135	42	8,586
		I (P)	VI	*Terminalia tomentosa*	412	174	46	5	9	645
				Anogeissus latifolia	13	24	21	0	0	58
				Misc	13,410	2,746	55	32	21	16,264
				Shorea robusta	7,617	1,126	66	21	11	8,841
		I (P)	VII	*Terminalia tomentosa*	656	37	11	8	3	714
				Anogeissus latifolia	17	16	22	4	0	59
				Misc	11,628	2,358	120	27	8	14,141
				Shorea robusta	6,384	3,231	1,017	69	0	10,701

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
		I (B)	VIII	*Terminalia tomentosa*	561	30	3	4	0	597
	HATIKOTE			(all)	132,644	57,146	13,809	1,804	444	205,848
PITHABATA	**(all)**	**(all)**	**(all)**	**(all)**	**343,467**	**185,754**	**30,931**	**4,866**	**2,514**	**567,532**
				Anogeissus latifolia	8	1	1	0	0	9
				Misc	3,851	174	18	8	5	4,056
				Shorea robusta	15,577	2,982	65	8	4	18,635
		I (P)	I	*Terminalia tomentosa*	166	351	1	0	0	518
				Anogeissus latifolia	15	1	1	0	0	18
				Misc	5,435	303	36	15	10	5,799
				Shorea robusta	20,845	4,126	130	15	8	25,124
		I I (P)	II	*Terminalia tomentosa*	247	446	3	0	0	695
				Anogeissus latifolia	34	3	3	0	0	40

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	3,088	401	80	34	23	3,626
				Shorea robusta	12,383	4,771	291	34	17	17,496
		I (B)	III	*Terminalia tomentosa*	354	400	6	0	0	759
				Misc	6,291	176	0	0	0	6,467
				Shorea robusta	24,935	3,577	0	0	0	28,512
		I I (B)	IV	*Terminalia tomentosa*	162	486	0	0	0	648
	AMARDA	(all)	(all)	(all)	93,393	18,196	633	114	67	112,402
				Anogeissus latifolia	32	20	17	0	0	69
				Misc	3,329	784	129	26	17	4,286
				Shorea robusta	4,797	1,707	180	17	9	6,710
		I	I	*Terminalia tomentosa*	129	72	30	27	2	261
	BALADIA	(all)	(all)	(all)	8,287	2,583	356	71	28	11,326
				Anogeissus	11	0	0	0	0	11

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				latifolia						
				Misc	1,534	256	43	0	0	1,833
				Shorea robusta	2,025	650	64	0	0	2,738
		I	I	*Terminalia tomentosa*	43	21	11	11	0	85
				Anogeissus latifolia	41	5	4	0	0	49
				Misc	5,551	978	163	6	4	6,701
				Shorea robusta	7,417	2,419	241	4	2	10,083
		II	II	*Terminalia tomentosa*	163	83	40	40	1	326
				Anogeissus latifolia	43	0	0	0	0	43
				Misc	6,210	1,035	173	0	0	7,418
				Shorea robusta	8,194	2,631	259	0	0	11,083
		III	III	*Terminalia tomentosa*	173	86	43	43	0	345

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Anogeissus latifolia	22	0	0	0	0	22
				Misc	3,194	532	89	0	0	3,816
				Shorea robusta	4,215	1,353	133	0	0	5,701
		IV	IV	*Terminalia tomentosa*	89	44	22	22	0	177
	CHITRADA	(all)	(all)	(all)	38,923	10,094	1,283	126	7	50,431
				Anogeissus latifolia	387	165	264	40	3	858
				Misc	17,934	5,726	1,276	576	266	25,777
				Shorea robusta	38,890	28,989	3,701	357	140	72,078
		I	I	*Terminalia tomentosa*	2,606	1,189	77	47	3	3,923
	GANDIGODHA	(all)	(all)	(all)	59,818	36,068	5,318	1,021	412	102,636
				Anogeissus latifolia	38	6	5	0	0	49
				Misc	5,081	913	152	8	5	6,159
				Shorea	6,821	2,238	224	5	3	9,290

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				robusta						
		I (P)	III	*Terminalia tomentosa*	152	78	37	37	1	304
				Anogeissus latifolia	28	12	12	0	3	54
				Misc	9,888	2,476	275	84	10	12,732
				Shorea robusta	19,095	7,698	265	42	12	27,112
		I (B)	I	*Terminalia tomentosa*	243	248	26	18	2	536
				Anogeissus latifolia	92	66	62	0	8	228
				Misc	13,047	3,572	544	140	58	17,361
				Shorea robusta	22,304	8,808	659	138	46	31,954
		II	II	*Terminalia tomentosa*	464	325	83	58	8	939
	JAMSOLE	(all)	(all)	(all)	77,253	26,439	2,343	528	155	106,718
				Anogeissus latifolia	25	28	25	0	0	78

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	1,913	642	105	37	25	2,722
		I,II,III,IV	I	*Shorea robusta*	3,095	1,229	138	25	12	4,498
	MORODA	(all)	(all)	(all)	5,139	1,962	290	81	40	7,511
				Anogeissus latifolia	58	0	0	0	0	58
				Misc	8,396	1,399	233	0	0	10,028
				Shorea robusta	11,078	3,556	350	0	0	14,984
		I (P)	I	*Terminalia tomentosa*	233	117	58	58	0	466
				Anogeissus latifolia	80	53	53	0	13	198
				Misc	8,192	2,814	476	156	67	11,705
				Shorea robusta	16,812	8,640	741	205	66	26,464
		I (P)		*Terminalia tomentosa*	540	326	43	3	7	918
				Anogeissus latifolia	146	21	24	1	2	195

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	18,904	2,743	423	134	85	22,288
				Shorea robusta	62,622	32,930	1,207	143	64	96,966
		I (B)	III	*Terminalia tomentosa*	997	451	48	24	1	1,521
	SARUIMULA			(all)	128,057	53,050	3,655	725	306	185,793
RASGOVINDPUR	**(all)**	**(all)**	**(all)**	**(all)**	**410,869**	**148,392**	**13,878**	**2,665**	**1,014**	**576,819**
				Anogeissus latifolia	8	15	14	0	0	37
				Misc	5,025	486	80	20	102	5,713
				Shorea robusta	8,072	2,768	396	14	7	11,256
		I	I	*Terminalia tomentosa*	36	24	7	5	2	73
	BELAKUTI	(all)	(all)	(all)	13,141	3,292	496	39	110	17,079
				Misc	447	25	4	0	8	485
		I	I	*Shorea robusta*	696	228	33	0	0	957
	BHANDAGAON	(all)	(all)	(all)	1,144	253	37	0	8	1,442

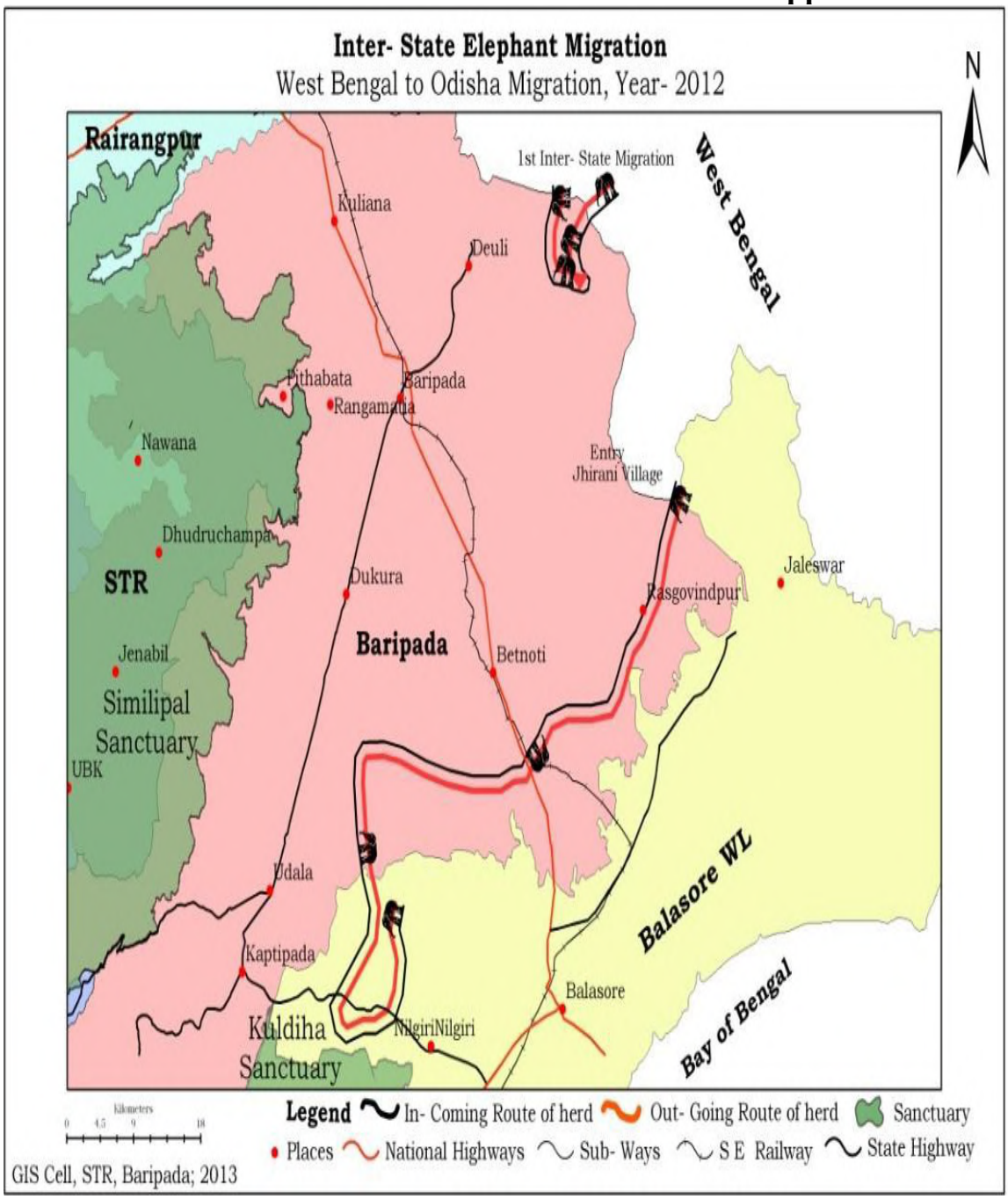
RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	6,178	343	57	0	114	6,693
		I (P)	I	*Shorea robusta*	9,611	3,146	458	0	0	13,215
				Anogeissus latifolia	184	184	110	12	17	507
				Misc	8,287	2,280	500	151	159	11,378
				Shorea robusta	13,876	5,803	947	174	60	20,860
		I (B)	II	*Terminalia tomentosa*	499	249	65	15	13	842
				Anogeissus latifolia	130	117	98	10	6	360
				Misc	7,437	1,939	403	160	152	10,091
				Shorea robusta	13,631	7,055	1,008	118	47	21,859
		II (P)	III	*Terminalia tomentosa*	552	271	44	22	8	896
				Anogeissus latifolia	337	255	182	30	22	825
				Misc	10,649	3,459	827	292	165	15,392

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	19,897	12,134	1,820	249	86	34,186
		I I (B)	IV	*Terminalia tomentosa*	1,264	579	83	20	12	1,957
	KAHNUPUR	(all)	(all)	(all)	92,531	37,815	6,602	1,252	861	139,062
				Anogeissus latifolia	162	116	111	18	10	417
				Misc	5,032	1,918	478	181	79	7,689
				Shorea robusta	9,835	6,911	1,085	145	46	18,022
		I (P)	I	*Terminalia tomentosa*	718	319	40	13	5	1,095
				Anogeissus latifolia	114	83	56	8	4	266
				Misc	4,690	1,190	255	99	81	6,315
				Shorea robusta	8,893	5,070	670	66	29	14,728
		I (P)	II	*Terminalia tomentosa*	462	220	27	10	4	724
				Misc	525	29	5	0	10	569

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Shorea robusta	817	267	39	0	0	1,123
				Anogeissus latifolia	211	169	111	18	16	525
				Misc	5,243	2,050	501	167	76	8,038
				Shorea robusta	9,715	5,994	951	162	53	16,875
		I (B)	III	*Terminalia tomentosa*	710	325	55	10	9	1,109
	KHUNTA	(all)	(all)	(all)	47,127	24,664	4,383	899	422	77,494
				Anogeissus latifolia	3	6	5	0	0	15
				Misc	203	94	15	8	7	328
				Shorea robusta	418	187	25	5	3	638
		I	I	*Terminalia tomentosa*	14	10	3	2	1	29
	MUNDHAKATA	(all)	(all)	(all)	638	297	48	16	11	1,010
				Anogeissus latifolia	212	184	152	15	10	573

RANGE	BLOCK	COMPARTMENT	COUPE	MAJOR SPECIES	30-60	60-90	90-120	120-150	> 150	Total
				Misc	11,446	3,076	645	251	231	15,649
				Shorea robusta	21,097	11,122	1,581	198	78	34,077
		I (P)	I	*Terminalia tomentosa*	900	439	70	32	13	1,454
				Anogeissus latifolia	243	213	116	19	18	610
				Misc	6,864	2,150	501	158	108	9,780
				Shorea robusta	11,897	5,840	925	145	50	18,856
		I (B)	II	*Terminalia tomentosa*	664	319	63	12	11	1,071
	NAUPADA	(all)	(all)	(all)	53,322	23,344	4,053	831	519	82,069
				Misc	1,482	82	14	0	27	1,606
		I	I	*Shorea robusta*	2,305	755	110	0	0	3,170
	SIRATHALI			(all)	3,787	837	124	0	27	4,775
UDALA				**(all)**	**211,691**	**90,502**	**15,743**	**3,036**	**1,960**	**322,932**
(all)	***(all)***	***(all)***	***(all)***	***(all)***	***4,224,189***	***2,283,309***	***490,573***	***101,255***	***50,730***	***7,150,056***

Appendix – XXIV



Appendix – XXV

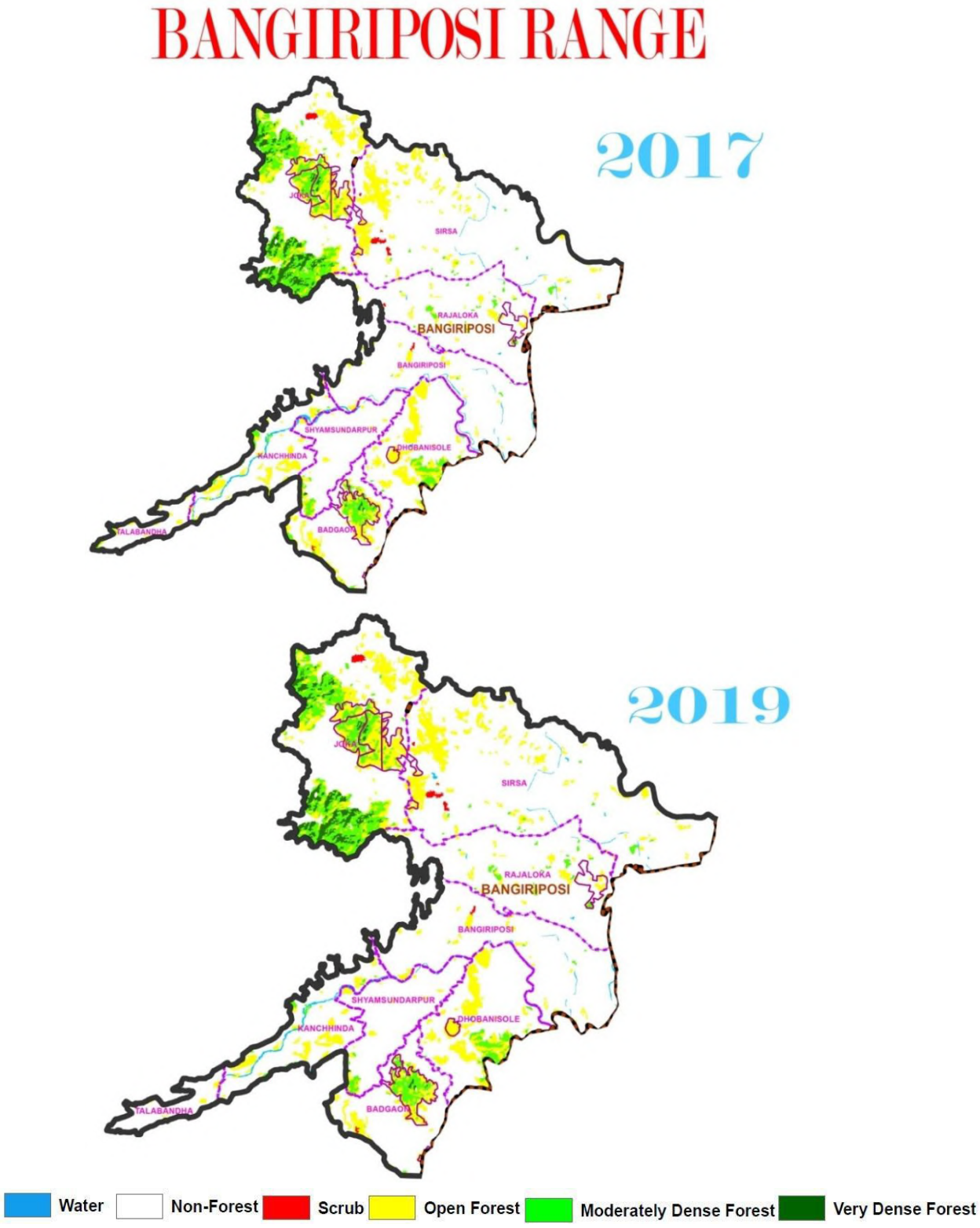
ABSTRACT OF ACTION TAKEN REPORT ON APPROVED WORKING PLAN SCHEMES OF BARIPADA FOREST DIVISION FOR THE YEAR FROM 2016-17 TO 2019-20

Sl. No.	Item of Work	YEAR OF OPERATION			
		2016-17	2017-18	2018-19	2019-20
1	Targets of SWC in ha	798	697	392	392
	Achievement of SWC in ha	-	-	-	-
2	Targets of RWC in ha	2600	745	1200	990
	Achievement of RWC in ha	2600	720	1200	990
3	Targets of PLWC in ha	200	155	-	50
	Achievement of PLWC in ha	250	115	-	50
4	Coupe Working Target in ha	723	710	723.30	380
	Coupe Working Achievement in ha	-	-	-	-
5	Subsidiary Silvicultural Operation Target in ha	2309.86	745	-	-
	Subsidiary Silvicultural Operation Achievement in ha	1200	720	-	-
6	Subsidiary Silvicultural Operation Target for 2016-17 Coupe in ha	-	697	-	-
	Subsidiary Silvicultural Operation Achievement in 2017-18 in ha	-	697	-	-
7	Bamboo Plantation Target in ha	50	20	-	-
	Bamboo Plantation Achievement in ha	50	10	-	-
8	RDF Target in ha	2600	-	-	-
	RDF Achievement in ha	2600	-	-	-

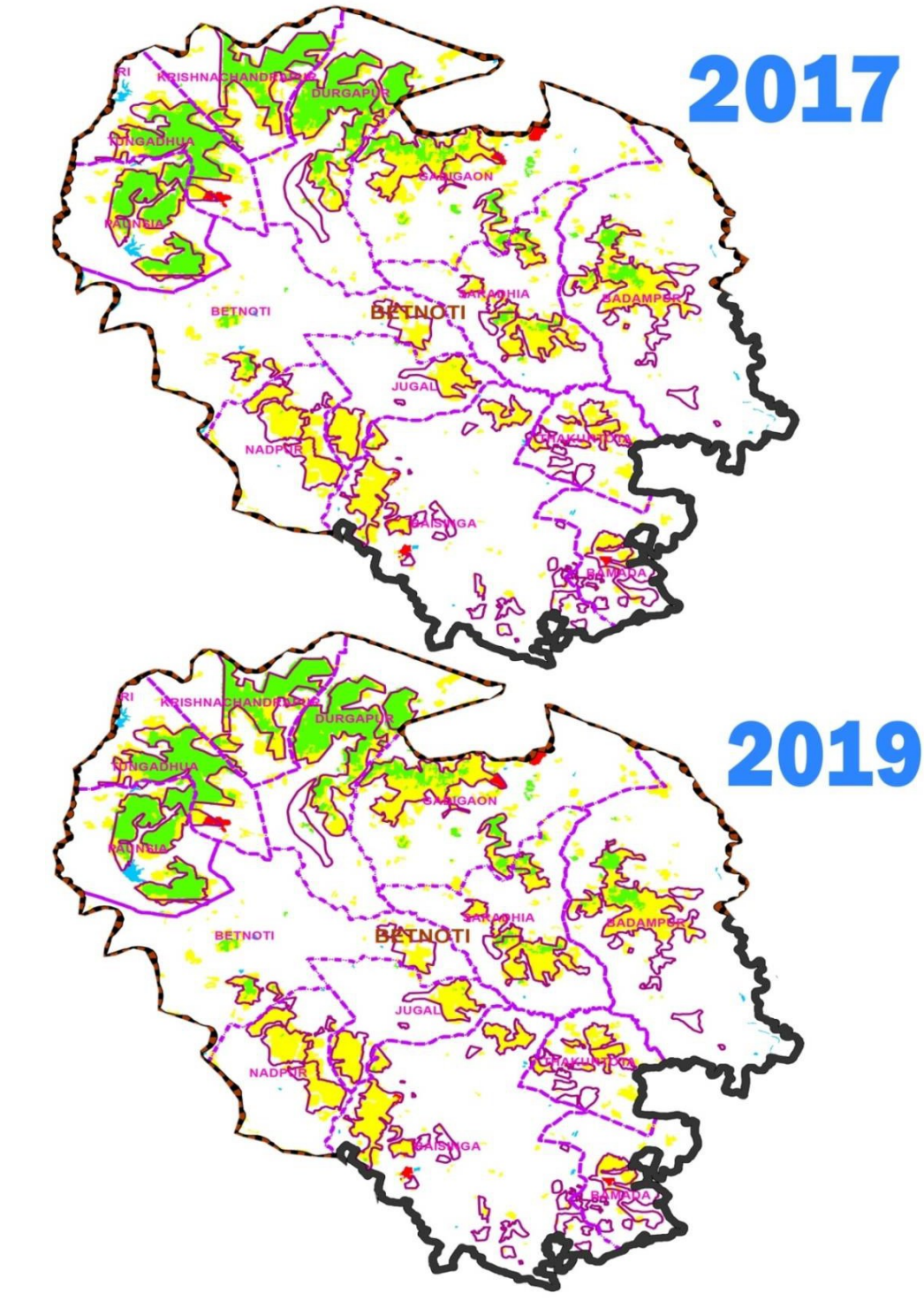
Source – DFO, Baripada Forest Division

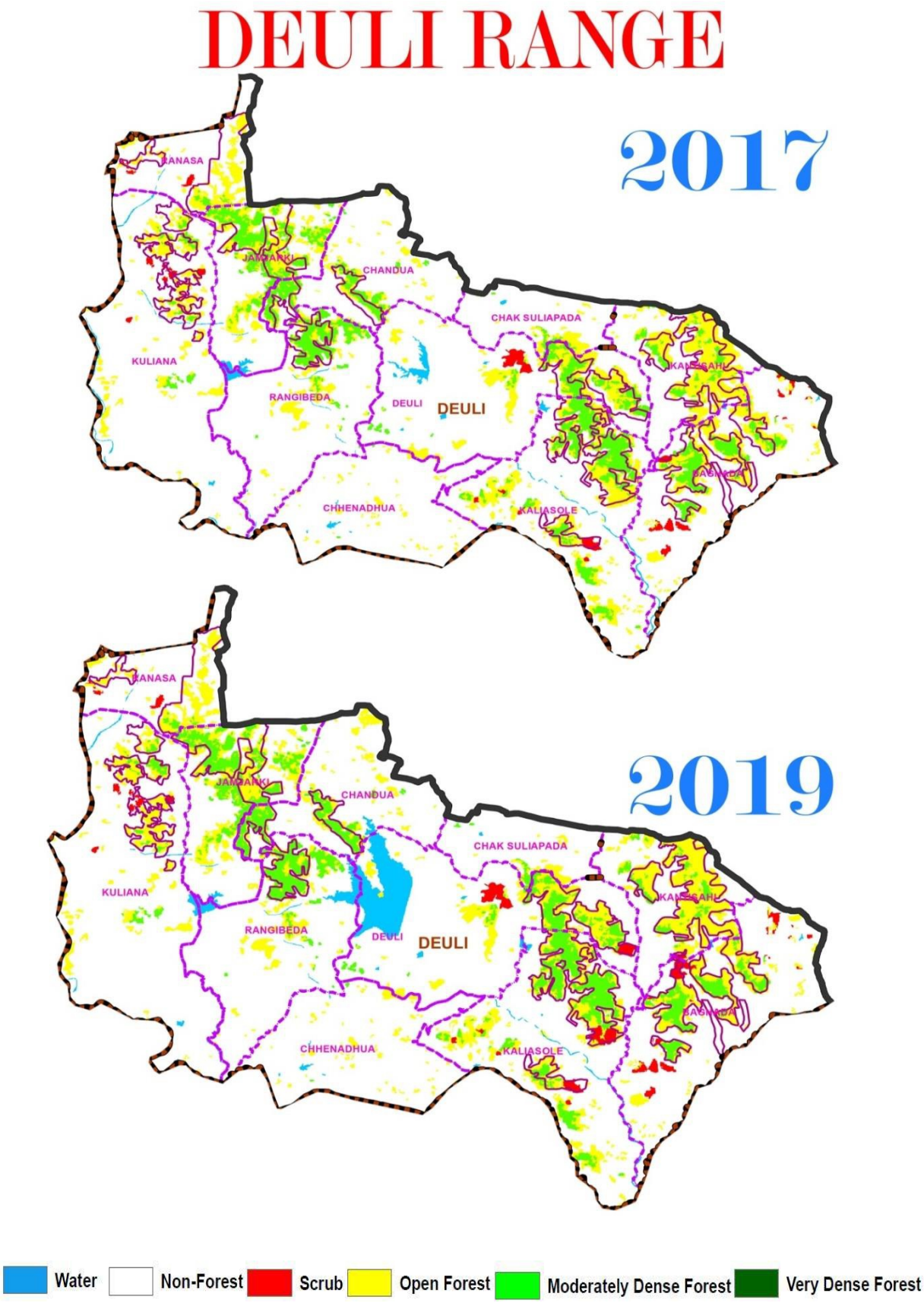
Appendix – XXVI

FOREST COVER CHANGE MAP

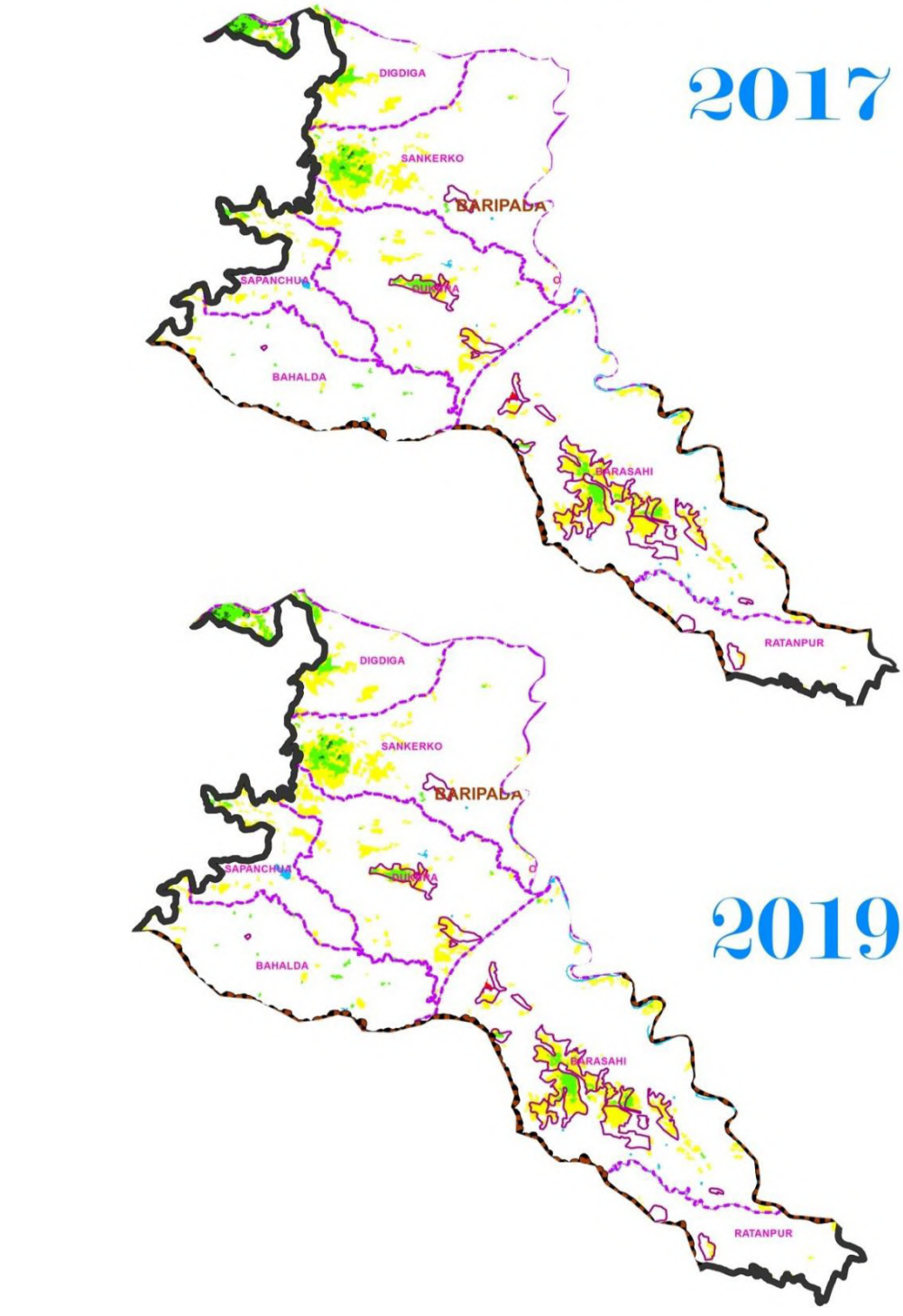


BETNOTI RANGE

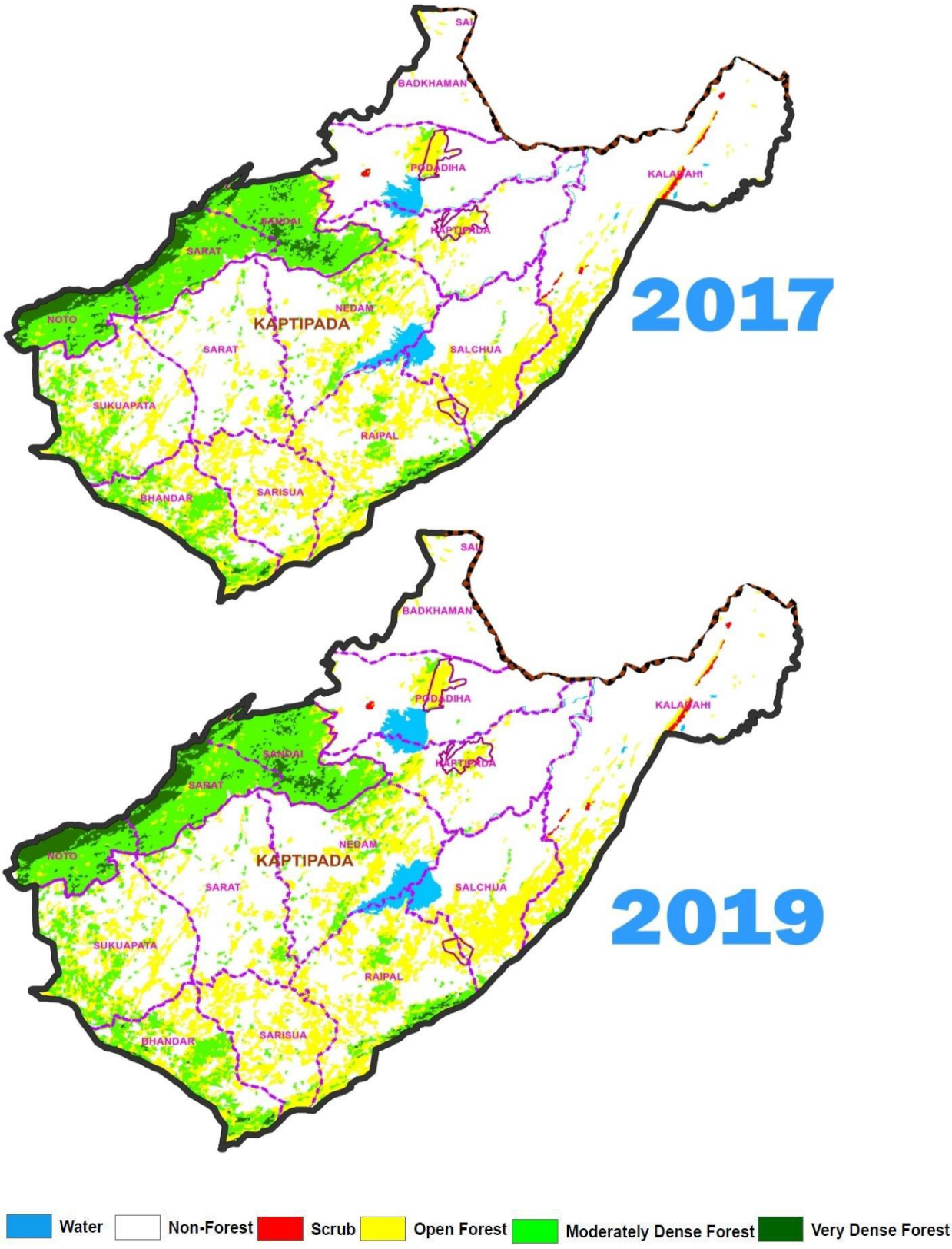



DEULI RANGE
2017
KANASA
JAMDANKI
CHANDUA
CHAK SULIAPADA
KULIANA
KANDSAHI
RANGIBEDA
DEULI
DEULI
JAGMARA
CHHENADHUA
KALIASOLE
KANASA
JAMDANKI
CHANDUA
2019
CHAK SULIAPADA
KULIANA
KANDSAHI
RANGIBEDA
DEULI
DEULI
JAGMARA
CHHENADHUA
KALIASOLE
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

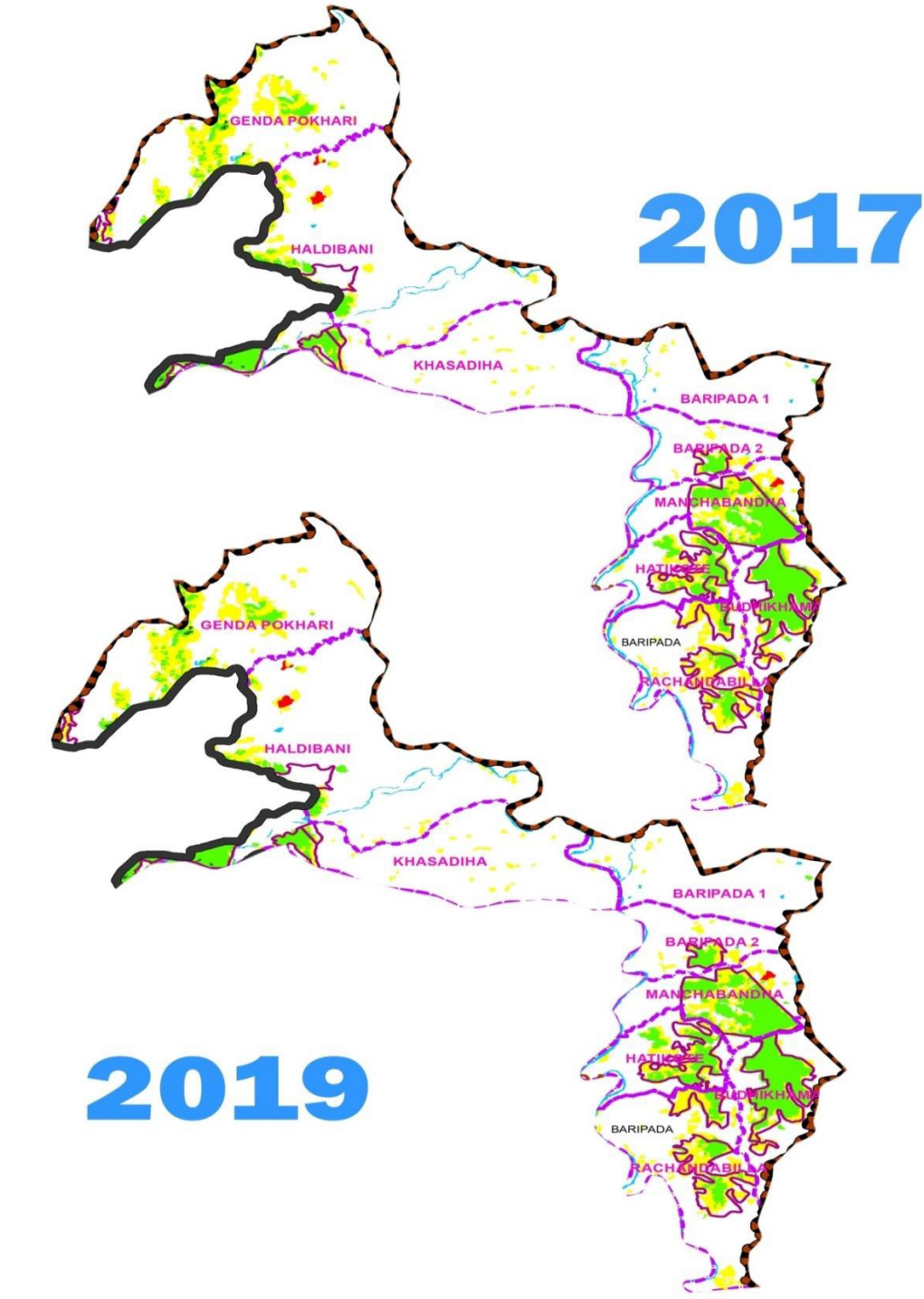
DUKURA RANGE



KAPTIPADA RANGE

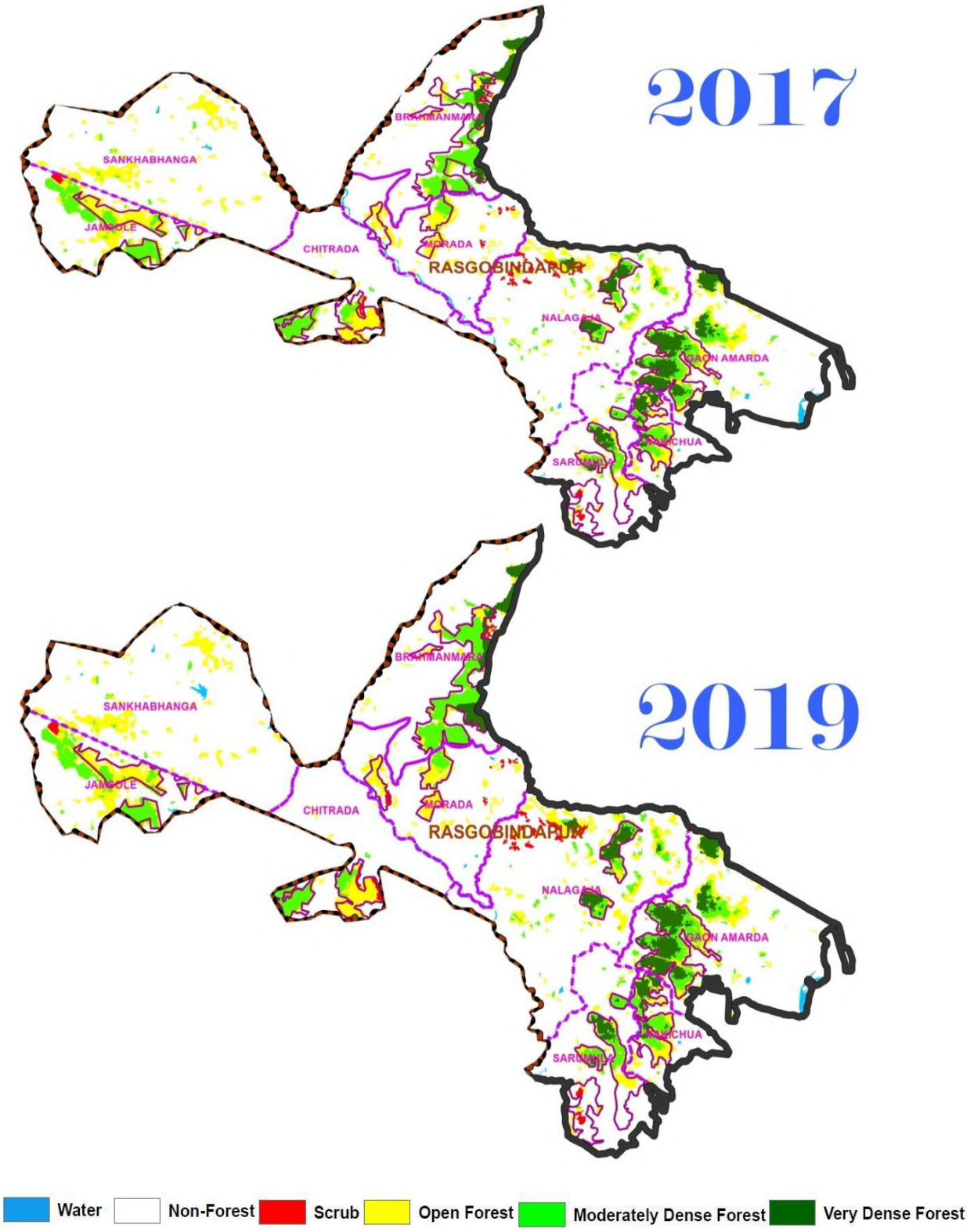


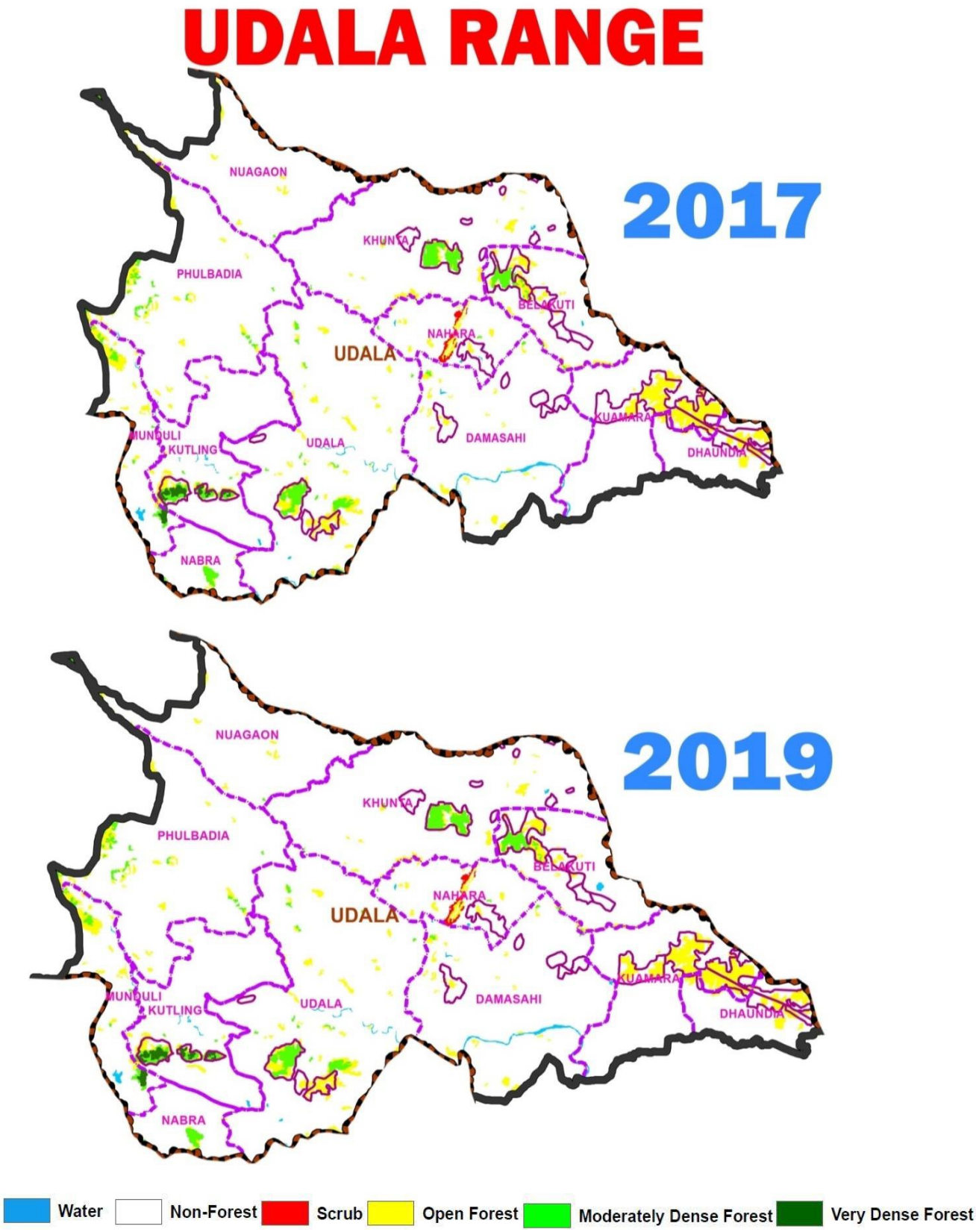
PITHABATA RANGE



Water | Non-Forest | Scrub | Open Forest | Moderately Dense Forest | Very Dense Forest

RASGOBINDAPUR RANGE




UDALA RANGE
2017
NUAGAON
KHUNTA
PHULBADIA
BELAKUTI
NAHARA
UDALA
KUAMARA
DAMASAHI
DHAUNDIA
MUNDULI
KUTLING
UDALA
NABRA
2019
NUAGAON
KHUNTA
PHULBADIA
BELAKUTI
NAHARA
UDALA
KUAMARA
DAMASAHI
DHAUNDIA
MUNDULI
KUTLING
UDALA
NABRA
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

Appendix – XXVII

Shannon Index Value and Simpson Index Value for the Herbs of Baripada Division

Sl No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
1	*Achyranthes aspera*	Apamaranga	32	39	54	41	166	4	41.5	0.81	100	1.053	41.5	1	0.415	**3.47**	**0.94**
2	*Haldina cordifolia*	Haldu	2	13	5	3	23	4	5.75	0.11	100	1.053	5.75	1	0.058		
3	*Aegle marmelos*	Bela	14	21	20	12	67	4	16.8	0.33	100	1.053	16.8	1	0.168		
4	*Alangium salvifolium*	Ankula	7	3	11	2	23	4	5.75	0.11	100	1.053	5.75	1	0.058		
5	*Albizia lebbeck*	Sirisa	5	27	21	30	83	4	20.8	0.41	100	1.053	20.8	1	0.208		
7	*Amorphophallus bulbifera*	Ban Olua	3	4	2	2	11	4	2.75	0.05	100	1.053	2.75	1	0.028		
8	*Andrographis paniculata*	Bhuinimba	622	489	532	600	2243	4	561	11	100	1.053	561	1	5.608		
9	*Anogeissus latifolia*	Dhaura	72	63	61	95	291	4	72.8	1.43	100	1.053	72.8	1	0.728		
10	*Antidesma diandrum*	Mamuri	22	13	23	37	95	4	23.8	0.47	100	1.053	23.8	1	0.238		
11	*Aristida setacea*	Khadika grass	13	10	15	16	54	4	13.5	0.26	100	1.053	13.5	1	0.135		
12	*Arundinella setosa*	Jhadu	3	1	-	2	6	3	1.5	0.03	75	0.789	2	0.75	0.027		
13	*Asparagus racemosus*	Satavar	99	125	117	111	452	4	113	2.22	100	1.053	113	1	1.13		
14	*Azadirachta indica*	Neem	18	11	10	9	48	4	12	0.24	100	1.053	12	1	0.12		
15	*Bethrichoa pertma*	Basana	1	1	1	1	4	4	1	0.02	100	1.053	1	1	0.01		
16	*Bridelia retusa*	Kasi	11	8	6	11	36	4	9	0.18	100	1.053	9	1	0.09		
17	*Buchanania lanzan*	Char	167	165	166	187	685	4	171	3.36	100	1.053	171	1	1.713		
18	*Calamus guruba*	Kanta beta	4	4	4	-	12	3	3	0.06	75	0.789	4	0.75	0.053		
19	*Calotropis gigantea*	Arakha	1	1	1	-	3	3	0.75	0.01	75	0.789	1	0.75	0.013		

Sl No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
20	*Cannabis sativa*	Ganjei	5	6	2	4	17	4	4.25	0.08	100	1.053	4.25	1	0.043		
21	*Careya arborea*	Kumbhi	8	5	9	9	31	4	7.75	0.15	100	1.053	7.75	1	0.078		
22	*Cassia fistula*	Sunari	7	12	13	14	46	4	11.5	0.23	100	1.053	11.5	1	0.115		
23	*Senna siamea*	Chakunda	8	11	5	3	27	4	6.75	0.13	100	1.053	6.75	1	0.068		
24	*Senna tora*	Banchakunda	-	-	-	4	4	1	1	0.02	25	0.263	4	0.25	0.16		
25	*Celastrus paniculatus*	Pengu	19	23	13	13	68	4	17	0.33	100	1.053	17	1	0.17		
26	*Celosia argenta*	Mayurachulia	156	152	124	158	590	4	148	2.89	100	1.053	148	1	1.475		
27	*Celosia argentea*	Iswarjata	10	19	6	7	42	4	10.5	0.21	100	1.053	10.5	1	0.105		
28	*Cissampelos pareira*	Akanabindhi	4	2	4	-	10	3	2.5	0.05	75	0.789	3.33	0.75	0.044		
29	*Clausena excavata*	Agnijhal	89	81	97	77	344	4	86	1.69	100	1.053	86	1	0.86		
30	*Cleome viscosa*	Ban soris	221	195	188	199	803	4	201	3.94	100	1.053	201	1	2.008		
31	*Clerodendrum viscosum*	Kharkhari	10	18	17	19	64	4	16	0.31	100	1.053	16	1	0.16		
32	*Cocculus hirsutus*	Musakani Dahidahia	54	38	55	35	182	4	45.5	0.89	100	1.053	45.5	1	0.455		
33	*Coldenia procumbens*	Gandhuri	5	1	3	-	9	3	2.25	0.04	75	0.789	3	0.75	0.04		
34	*Colocasia esculenta*	Bansaru	1	-	1	-	2	2	0.5	0.01	50	0.526	1	0.5	0.02		
35	*Combretum decandrum*	Atundi	206	199	194	228	827	4	207	4.06	100	1.053	207	1	2.068		
36	*Croton oblongifolius*	Masundi	15	4	5	20	44	4	11	0.22	100	1.053	11	1	0.11		
37	*Curculigo orchioides*	Talmuli	43	32	39	49	163	4	40.8	0.8	100	1.053	40.8	1	0.408		
38	*Curcuma amada*	Ada (Ambakasi)	3	1	3	1	8	4	2	0.04	100	1.053	2	1	0.02		
39	*Curcuma longa*	Haladi	6	3	-	2	11	3	2.75	0.05	75	0.789	3.67	0.75	0.049		
40	*Cynodon dactylon*	Duba	201	189	167	155	712	4	178	3.49	100	1.053	178	1	1.78		
41	*Dalbergia latifolia*	Pahadi sisoo	16	22	12	19	69	4	17.3	0.34	100	1.053	17.3	1	0.173		

Sl No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
42	*Datura stramonium*	Dudura	1	1	1	2	5	4	1.25	0.02	100	1.053	1.25	1	0.013		
43	*Desmodium gangeticum*	Salaparni	22	24	17	22	85	4	21.3	0.42	100	1.053	21.3	1	0.213		
44	*Desmodium polycarpum*	Krushnaparni	1	1	3	-	5	3	1.25	0.02	75	0.789	1.67	0.75	0.022		
45	*Diospyros ferrea*	Guakuli	1	1	-	1	3	3	0.75	0.01	75	0.789	1	0.75	0.013		
46	*Diospyros melanoxylon*	Kendu	577	593	549	527	2246	4	562	11	100	1.053	562	1	5.615		
47	*Phyllanthus emblica*	Amla	23	22	27	27	99	4	24.8	0.49	100	1.053	24.8	1	0.248		
48	*Entada scandens*	Gila	1	-	2	1	4	3	1	0.02	75	0.789	1.33	0.75	0.018		
49	*Eragrostis unioloides*	phur phuri	23	-	29	19	71	3	17.8	0.35	75	0.789	23.7	0.75	0.316		
50	*Eugenia heyneana*	Karhjamu	12	10	16	7	45	4	11.3	0.22	100	1.053	11.3	1	0.113		
51	*Eulaliopsis binata*	Sabai grass	4	6	-	4	14	3	3.5	0.07	75	0.789	4.67	0.75	0.062		
52	*Flacourtia indica*	Baincha	64	35	47	57	203	4	50.8	1	100	1.053	50.8	1	0.508		
53	*Flagellaria indica*	Banachanda	1	-	-	1	2	2	0.5	0.01	50	0.526	1	0.5	0.02		
54	*Maranta arundinacea*	Palua	3	7	9	20	39	4	9.75	0.19	100	1.053	9.75	1	0.098		
55	*Curcuma aromatica*	Banhaldi	120	142	119	106	487	4	122	2.39	100	1.053	122	1	1.218		
56	*Gardenia gummifera*	Kuruda/churdu	42	59	41	40	182	4	45.5	0.89	100	1.053	45.5	1	0.455		
57	*Grewia elastica*	Mirgichra/Barenga	1	-	1	-	2	2	0.5	0.01	50	0.526	1	0.5	0.02		
58	*Grewia helicterifolia*	Sunaragada	2	3	3	1	9	4	2.25	0.04	100	1.053	2.25	1	0.023		
59	*Grewia hirsuta*	Kukurabicha	-	-	-	1	1	1	0.25	0	25	0.263	1	0.25	0.04		
60	*Helicteres isora*	Muraphal/ muri muri	3	8	4	5	20	4	5	0.1	100	1.053	5	1	0.05		
61	*Hemidesmus indicus*	Anantamula	137	132	91	91	451	4	113	2.21	100	1.053	113	1	1.128		
62	*Heteropogon contortus*	Sinkulia	54	35	36	54	179	4	44.8	0.88	100	1.053	44.8	1	0.448		

Sl No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
63	*Holarrhena antidysenterica*	Kurei/kher	114	91	81	113	399	4	99.8	1.96	100	1.053	99.8	1	0.998		
64	*Holarrhena malaccensis*	Indrajal	19	7	7	10	43	4	10.8	0.21	100	1.053	10.8	1	0.108		
65	*Imperata arundinacea*	Channa grass	177	197	176	204	754	4	189	3.7	100	1.053	189	1	1.885		
66	*Indigofera cassioides*	Giliri/gilira	83	63	78	80	304	4	76	1.49	100	1.053	76	1	0.76		
67	*Ixora arborea*	Bhuinkurwan /telkurwan	15	12	5	13	45	4	11.3	0.22	100	1.053	11.3	1	0.113		
68	*Jasminum arborescens*	Banmalli	6	-	8	3	17	3	4.25	0.08	75	0.789	5.67	0.75	0.076		
69	*Justicia adhatoda*	Basanga	7	6	2	2	17	4	4.25	0.08	100	1.053	4.25	1	0.043		
70	*Lagerstroemia parviflora*	Sidha	6	4	3	2	15	4	3.75	0.07	100	1.053	3.75	1	0.038		
71	*Laportea interrupta*	Bichuati	7	14	18	9	48	4	12	0.24	100	1.053	12	1	0.12		
72	*Leea asiatica*	Banachiretia	-	-	3	3	6	2	1.5	0.03	50	0.526	3	0.5	0.06		
73	*Leucas aspera*	Gayas	1	1	1	16	19	4	4.75	0.09	100	1.053	4.75	1	0.048		
74	*Lipocarpha Sphacelata*	Mutha Grass	216	229	240	232	917	4	229	4.5	100	1.053	229	1	2.293		
75	*Loranthus longiflorus*	Madanga	12	6	3	1	22	4	5.5	0.11	100	1.053	5.5	1	0.055		
76	*Madhuca indica*	Mahula	33	46	40	67	186	4	46.5	0.91	100	1.053	46.5	1	0.465		
77	*Mallotus philippensis*	Kamalagundi	1	-	-	-	1	1	0.25	0	25	0.263	1	0.25	0.04		
78	*Mangifera indica*	Amba	1	-	-	5	6	2	1.5	0.03	50	0.526	3	0.5	0.06		
79	*Manilkara hexandra*	Khirkoli	1	-	2	-	3	2	0.75	0.01	50	0.526	1.5	0.5	0.03		
80	*Martynia diandra*	Baghanakhi	8	1	3	3	15	4	3.75	0.07	100	1.053	3.75	1	0.038		
81	*Melastoma malabathricum*	Gangoi	-	-	1	-	1	1	0.25	0	25	0.263	1	0.25	0.04		
82	*Mimosa himalayana*	Khirkit/Khirkichi	24	17	19	15	75	4	18.8	0.37	100	1.053	18.8	1	0.188		
83	*Mimosa pudica*	Lajwanti/Lajkulilata	1	8	4	4	17	4	4.25	0.08	100	1.053	4.25	1	0.043		
84	*Mucuna*	Baidanka	-	2	3	4	9	3	2.25	0.04	75	0.789	3	0.75	0.04		

Sl No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
	imbricata																
85	*Naregamia alata*	Pitamari	1	1	8	-	10	3	2.5	0.05	75	0.789	3.33	0.75	0.044		
86	*Nyctanthes arbortristis*	Gangasiuli	28	21	25	37	111	4	27.8	0.54	100	1.053	27.8	1	0.278		
87	*Ocimum basilicum*	Bantulasi	97	91	92	46	326	4	81.5	1.6	100	1.053	81.5	1	0.815		
88	*Ocimum sanctum*	Tulasi	-	2	1	2	5	3	1.25	0.02	75	0.789	1.67	0.75	0.022		
89	*Oldenlandia diffusa*	Ghara Podia Ghara podi	27	9	19	6	61	4	15.3	0.3	100	1.053	15.3	1	0.153		
90	*Opuntia vulgaris*	Nagapheni	5	1	-	-	6	2	1.5	0.03	50	0.526	3	0.5	0.06		
91	*Pavetta crassicaulis*	Kukurchhatia	-	1	-	-	1	1	0.25	0	25	0.263	1	0.25	0.04		
92	*Phoenix dactylifera*	Khajuri	41	60	62	52	215	4	53.8	1.05	100	1.053	53.8	1	0.538		
93	*Phoenix sylvestris*	Bankhajuri/Pinokhajuri	-	-	1	-	1	1	0.25	0	25	0.263	1	0.25	0.04		
94	*Phyllanths raticularis*	Jajang	1	1	1	-	3	3	0.75	0.01	75	0.789	1	0.75	0.013		
95	*Phyllanthus fraternus*	Badianla	3	-	-	-	3	1	0.75	0.01	25	0.263	3	0.25	0.12		
96	*Pogostemon benghalensis*	Poksunga	148	138	178	165	629	4	157	3.09	100	1.053	157	1	1.573		
97	*Millettia pinnata*	Karanja	1	1	-	1	3	3	0.75	0.01	75	0.789	1	0.75	0.013		
98	*Premna obtusifolia*	Agabadhu	1	-	4	-	5	2	1.25	0.02	50	0.526	2.5	0.5	0.05		
99	*Pterocarpus marsupium*	Piasal Bija	7	11	9	17	44	4	11	0.22	100	1.053	11	1	0.11		
100	*Rauwolfia serpentina*	Patalgaruda	10	13	18	20	61	4	15.3	0.3	100	1.053	15.3	1	0.153		
102	*Semecarpus anacardium*	Bhalia	3	1	6	8	18	4	4.5	0.09	100	1.053	4.5	1	0.045		
103	*Shorea robusta*	Sal	812	735	718	646	2911	4	728	14.3	100	1.053	728	1	7.278		
104	*Sida spinosa*	Bajramuli	9	3	14	7	33	4	8.25	0.16	100	1.053	8.25	1	0.083		
105	*Smilax macrophylla*	Muturi	37	38	38	38	151	4	37.8	0.74	100	1.053	37.8	1	0.378		

Sl No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
106	*Solanum xanthocarpum*	Ankaranti	-	1	-	1	2	2	0.5	0.01	50	0.526	1	0.5	0.02		
107	*Strobilanthes scaber*	Kakusia	-	1	-	1	2	2	0.5	0.01	50	0.526	1	0.5	0.02		
108	*Strychnos potatorum*	Katakala Nirmala	8	8	13	20	49	4	12.3	0.24	100	1.053	12.3	1	0.123		
109	*Terminalia bellirica*	Bahada	1	4	3	7	15	4	3.75	0.07	100	1.053	3.75	1	0.038		
110	*Terminalia chebula*	Harida	6	4	3	5	18	4	4.5	0.09	100	1.053	4.5	1	0.045		
111	*Terminalia tomentosa*	Asana sahaja	50	63	68	76	257	4	64.3	1.26	100	1.053	64.3	1	0.643		
112	*Thespesia lampas*	Banakapasi	6	8	7	10	31	4	7.75	0.15	100	1.053	7.75	1	0.078		
113	*Thysanolaena maxima*	Phula jhadu	29	22	26	20	97	4	24.3	0.48	100	1.053	24.3	1	0.243		
114	*Tridax procumbens*	Bisalyakarani	-	-	1	1	2	2	0.5	0.01	50	0.526	1	0.5	0.02		
115	*Urginea indica*	Banpiaja	2	11	3	3	19	4	4.75	0.09	100	1.053	4.75	1	0.048		
116	*Ventilago denticulata*	Kantamaul	4	9	7	5	25	4	6.25	0.12	100	1.053	6.25	1	0.063		
117	*Vigna radiata*	Banbiri	1	1	2	-	4	3	1	0.02	75	0.789	1.33	0.75	0.018		
118	*Wedelia calendulacea*	Bhrungaraj	-	2	-	-	2	1	0.5	0.01	25	0.263	2	0.25	0.08		
119	*Woodfordia fruticosa*	Dhatiki	11	28	17	10	66	4	16.5	0.32	100	1.053	16.5	1	0.165		
120	*Ziziphus rugosa*	Tinakoli	5	5	9	1	20	4	5	0.1	100	1.053	5	1	0.05		
TOTAL			**5361**	**5088**	**5051**	**5152**	**20652**	**408**	**5163**	**101**	**10200**	**107.4**	**5200**	**102**	**52.83**		

Appendix – XXVIII

Shannon Index Value and Simpson Index Value for the Shrubs of Baripada Division

Sl. No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
1	*Acacia auriculiformis*	Acacia	18	12	16	18	64	4	16	0.4	100	1.04	16	1	0.16	**3.045**	**0.898**
2	*Acacia catechu*	Khaira	4	1	-	1	6	3	1.5	0.04	75	0.78	2	0.75	0.0267		
3	*Acacia sinuata*	Dantari	1	-	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
4	*Achyranthes aspera*	Apamaranga	-	1	1	-	2	2	0.5	0.01	50	0.52	1	0.5	0.02		
5	*Adhatoda vasica*	Basanga	10	2	-	1	13	3	3.25	0.08	75	0.78	4.33	0.75	0.0578		
6	*Haldina cordifolia*	Haldu	1	-	2	1	4	3	1	0.03	75	0.78	1.33	0.75	0.0178		
7	*Aegle marmelos*	Bela	17	14	17	15	63	4	15.75	0.4	100	1.04	15.8	1	0.1575		
8	*Ailanthus excelsa*	Mahala	3	1	1	3	8	4	2	0.05	100	1.04	2	1	0.02		
9	*Alangium salvifolium*	Ankula	1	-	-	3	4	2	1	0.03	50	0.52	2	0.5	0.04		
10	*Albizia lebbeck*	Sirisa	8	3	7	-	18	3	4.5	0.11	75	0.78	6	0.75	0.08		
11	*Allophylus Cobbe*	Pata / Pata Nai	2	3	9	9	23	4	5.75	0.15	100	1.04	5.75	1	0.0575		
13	*Andrographis paniculata*	Bhuin-neem	6	2	2	2	12	4	3	0.08	100	1.04	3	1	0.03		
14	*Anogeissus latifolia*	Dhaura	160	160	145	155	620	4	155	3.91	100	1.04	155	1	1.55		
15	*Antidesma diandrum*	Mamuri	14	20	13	9	56	4	14	0.35	100	1.04	14	1	0.14		
16	*Asperagus racemosus*	Satavar	8	3	-	5	16	3	4	0.1	75	0.78	5.33	0.75	0.0711		
17	*Atylosia scarabaeoides*	Bana kolotho	-	1	3	2	6	3	1.5	0.04	75	0.78	2	0.75	0.0267		
18	*Atalantia monophylla*	Narguni	-	-	1	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
19	*Azadirachta indica*	Neem	6	8	2	3	19	4	4.75	0.12	100	1.04	4.75	1	0.0475		
20	*Bauhinia retusa*	Choari	-	1	-	1	2	2	0.5	0.01	50	0.52	1	0.5	0.02		
21	*Bauhinia vahlii*	Siali	31	42	36	48	157	4	39.25	0.99	100	1.04	39.3	1	0.3925		
22	*Bauhinia variegata*	kanchan	5	1	-	-	6	2	1.5	0.04	50	0.52	3	0.5	0.06		
23	*Boswellia serrata*	Salai	1	2	-	-	3	2	0.75	0.02	50	0.52	1.5	0.5	0.03		
24	*Bridelia retusa*	Kasi	22	22	12	14	70	4	17.5	0.44	100	1.04	17.5	1	0.175		

Sl. No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
25	*Buchanania lanzan*	Char	324	311	300	344	1279	4	319.8	8.07	100	1.04	320	1	3.1975		
26	*Butea monosperma*	Palasa	13	14	31	21	79	4	19.75	0.5	100	1.04	19.8	1	0.1975		
27	*Butea parviflora*	Handiphuta	3	-	-	-	3	1	0.75	0.02	25	0.26	3	0.25	0.12		
28	*Caesalpinia decapetala*	Gila	-	-	4	-	4	1	1	0.03	25	0.26	4	0.25	0.16		
29	*Casearia graveolens*	Giridi	-	3	3	-	6	2	1.5	0.04	50	0.52	3	0.5	0.06		
30	*Calamus guruba*	Kanta beta	-	-	-	1	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
31	*Calotropis procera*	Arakha	-	-	1	2	3	2	0.75	0.02	50	0.52	1.5	0.5	0.03		
32	*Canthium dicoccum*	Kumar chikni	-	-	3	-	3	1	0.75	0.02	25	0.26	3	0.25	0.12		
33	*Canthium didymum*	Dalsinnga Kumarchikini	-	2	1	-	3	2	0.75	0.02	50	0.52	1.5	0.5	0.03		
34	*Careya arborea*	Kumbhi	21	32	31	21	105	4	26.25	0.66	100	1.04	26.3	1	0.2625		
35	*Casearia elliptica*	Khakada	353	364	353	306	1376	4	344	8.68	100	1.04	344	1	3.44		
36	*Casia fistula*	Sunari	34	32	33	41	140	4	35	0.88	100	1.04	35	1	0.35		
37	*Senna siamea*	Chakunda	8	-	1	3	12	3	3	0.08	75	0.78	4	0.75	0.0533		
38	*Cassine glauca*	Mukha	1	-	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
39	*Celosia argentea*	Mayurachulia	3	7	3	8	21	4	5.25	0.13	100	1.04	5.25	1	0.0525		
40	*Chloroxylon swietenia*	Bheru	10	18	14	12	54	4	13.5	0.34	100	1.04	13.5	1	0.135		
41	*Cipadessa baccifera*	Nahalbell	-	-	1	1	2	2	0.5	0.01	50	0.52	1	0.5	0.02		
42	*Clausena excavata*	Agnijhal	3	7	4	13	27	4	6.75	0.17	100	1.04	6.75	1	0.0675		
43	*Cleistanthus collinus*	Korada	127	130	150	186	593	4	148.3	3.74	100	1.04	148	1	1.4825		
44	*Cleome viscosa*	Ban soris	1	5	1	1	8	4	2	0.05	100	1.04	2	1	0.02		
45	*Clerodendrum viscosum*	Kharkhari	-	-	3	-	3	1	0.75	0.02	25	0.26	3	0.25	0.12		
46	*Croton oblongifolius*	Masundi	24	5	19	17	65	4	16.25	0.41	100	1.04	16.3	1	0.1625		
47	*Curculigo orchiodes*	Talmuli	-	1	2	-	3	2	0.75	0.02	50	0.52	1.5	0.5	0.03		
48	*Curcuma angustifolia*	Palua	1	-	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
49	*Curcuma aromatica*	Banhaldi	-	1	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
50	*Dalbergia*	Pahadi sisoo	4	6	-	12	22	3	5.5	0.14	75	0.78	7.33	0.75	0.0978		

Sl. No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
	latifolia																
51	*Dalbergia paniculata*	Barabakulia Sataparadia	-	1	1	-	2	2	0.5	0.01	50	0.52	1	0.5	0.02		
52	*Desmodium gangeticum*	Salparni	-	-	2	2	4	2	1	0.03	50	0.52	2	0.5	0.04		
53	*Diospyros embryopteris*	Mankada kendu	9	7	23	15	54	4	13.5	0.34	100	1.04	13.5	1	0.135		
54	*Diospyros melanoxylon*	Kendu	458	420	431	417	1726	4	431.5	10.9	100	1.04	432	1	4.315		
55	*Diospyros montana*	Halda	9	8	11	7	35	4	8.75	0.22	100	1.04	8.75	1	0.0875		
56	*Elaeodendron glaucum*	Chauli	47	34	23	31	135	4	33.75	0.85	100	1.04	33.8	1	0.3375		
57	*Emblica officinalis*	Amla	22	13	29	18	82	4	20.5	0.52	100	1.04	20.5	1	0.205		
58	*Erythrina suberosa*	Chauladhua	1	-	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
59	*Euphorbia nivulia*	Siju	2	2	3	5	12	4	3	0.08	100	1.04	3	1	0.03		
60	*Euphorbia nivulia*	Kantasiju	-	1	1	-	2	2	0.5	0.01	50	0.52	1	0.5	0.02		
61	*Ficus bengalensis*	Bara	-	-	1	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
62	*Ficus glomerata*	Dimiri	2	-	-	-	2	1	0.5	0.01	25	0.26	2	0.25	0.08		
63	*Ficus religiosa*	Aswastha	1	-	1	3	5	3	1.25	0.03	75	0.78	1.67	0.75	0.0222		
64	*Ficus retusa*	Jida	1	1	-	1	3	3	0.75	0.02	75	0.78	1	0.75	0.0133		
65	*Flacourtia indica*	Baincha	4	5	2	3	14	4	3.5	0.09	100	1.04	3.5	1	0.035		
66	*Flemingia chappar*	Ranidantakathi Bhandari	13	19	24	17	73	4	18.25	0.46	100	1.04	18.3	1	0.1825		
67	*Gardenia gummifera*	Kuruda/churdu/Ghurudu	23	11	21	16	71	4	17.75	0.45	100	1.04	17.8	1	0.1775		
68	*Gardenia latifolia*	Damakurudu	6	8	5	5	24	4	6	0.15	100	1.04	6	1	0.06		
69	*Gmelina arborea*	Gomhari	1	3	1	5	10	4	2.5	0.06	100	1.04	2.5	1	0.025		
70	*Grewia helicterifolia*	Sunaragada	2	1	-	1	4	3	1	0.03	75	0.78	1.33	0.75	0.0178		
71	*Grewia tiliaefolia*	Dhaman	15	7	7	7	36	4	9	0.23	100	1.04	9	1	0.09		
72	*Helicteres isora*	Muraphal/ muri muri	-	2	1	6	9	3	2.25	0.06	75	0.78	3	0.75	0.04		
73	*Hemidesmus indicus*	Ananta mula	2	-	-	2	4	2	1	0.03	50	0.52	2	0.5	0.04		
74	*Holarrhena*	Kurei/kher	13	120	13	115	497	4	124.3	3.14	100	1.04	124	1	1.2425		

Sl. No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
	antidysenterica		2		0												
75	*Indigofera pulchella*	Girili	29	25	29	14	97	4	24.25	0.61	100	1.04	24.3	1	0.2425		
76	*Ixora arborea*	Bhuinkurwan/ telkurwan	10	-	2	3	15	3	3.75	0.09	75	0.78	5	0.75	0.0667		
77	*Jasminum arborescens*	Banmalli	1	2	1	-	4	3	1	0.03	75	0.78	1.33	0.75	0.0178		
78	*Kydia calycina*	Kapasia	8	5	1	4	18	4	4.5	0.11	100	1.04	4.5	1	0.045		
79	*Lannea coromandelica*	Mai	16	17	18	22	73	4	18.25	0.46	100	1.04	18.3	1	0.1825		
80	*Lantana camara*	Lantana/Bholu padi	-	-	-	2	2	1	0.5	0.01	25	0.26	2	0.25	0.08		
81	*Leucas aspera*	Gayas	-	-	-	3	3	1	0.75	0.02	25	0.26	3	0.25	0.12		
82	*Loranthus longiflorus*	Madanga	-	1	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
83	*Madhuca indica*	Mahula	126	100	101	96	423	4	105.8	2.67	100	1.04	106	1	1.0575		
84	*Mangifera indica*	Amba	2	1	-	3	6	3	1.5	0.04	75	0.78	2	0.75	0.0267		
85	*Manilkara hexandra*	Khirkoli	1	-	2	2	5	3	1.25	0.03	75	0.78	1.67	0.75	0.0222		
86	*Memecylon edule*	Dalsundra Niras	1	-	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
87	*Magnolia champaca*	Champa	1	2	-	-	3	2	0.75	0.02	50	0.52	1.5	0.5	0.03		
88	*Miliusa velutina*	Gandha palasa	10	4	-	2	16	3	4	0.1	75	0.78	5.33	0.75	0.0711		
89	*Mimosa himalayana*	Khirkit/Khirkichi	-	7	1	-	8	2	2	0.05	50	0.52	4	0.5	0.08		
90	*Mimosa pudica*	Lajwanti/Lajkulilata	-	-	-	1	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
91	*Mitragyna parvifolia*	Mundi	-	-	1	1	2	2	0.5	0.01	50	0.52	1	0.5	0.02		
92	*Morinda tinctoria*	Achhu	37	25	32	32	126	4	31.5	0.79	100	1.04	31.5	1	0.315		
93	*Nyctanthes arbortristis*	Gangasiuli	58	44	41	55	198	4	49.5	1.25	100	1.04	49.5	1	0.495		
94	*Ocimum basilicum*	Bantulasi	1	-	-	2	3	2	0.75	0.02	50	0.52	1.5	0.5	0.03		
95	*Ocimum sanctum*	Tulsi	2	-	-	1	3	2	0.75	0.02	50	0.52	1.5	0.5	0.03		
96	*Oroxylum indicum*	Phanaphana	-	1	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
97	*Desmodium oojeinense*	Bandhana Tinsa	1	3	5	6	15	4	3.75	0.09	100	1.04	3.75	1	0.0375		

Sl. No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
98	*Pavetta crassicaulis*	Kukurchhatia	-	1	-	1	2	2	0.5	0.01	50	0.52	1	0.5	0.02		
99	*Phoenix sylvestris*	Khajuri	6	5	2	6	19	4	4.75	0.12	100	1.04	4.75	1	0.0475		
100	*Phyllanthus collinus*	Jajangi	-	-	-	1	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
101	*Pogostemon benghalensis*	Poksunga	24	16	5	8	53	4	13.25	0.33	100	1.04	13.3	1	0.1325		
102	*Millettia pinnata*	Karanja	5	3	6	2	16	4	4	0.1	100	1.04	4	1	0.04		
103	*Premna herbacea*	Gudamari	2	-	-	-	2	1	0.5	0.01	25	0.26	2	0.25	0.08		
104	*Pterocarpus marsupium*	Piasal Bija	14	18	12	17	61	4	15.25	0.38	100	1.04	15.3	1	0.1525		
105	*Pterocarpus santalinus*	Rakta chandan	-	-	-	1	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
106	*Pterospermum acerifolium*	Muchukunda	1	1	2	-	4	3	1	0.03	75	0.78	1.33	0.75	0.0178		
107	*Pterospermum canescens*	Giringa	-	-	-	1	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
108	*Schleichera oleosa*	Kusuma	81	76	79	86	322	4	80.5	2.03	100	1.04	80.5	1	0.805		
109	*Scilla indica*	Banrasun	-	-	1	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
110	*Semecarpus anacardium*	Bhalia	22	9	13	18	62	4	15.5	0.39	100	1.04	15.5	1	0.155		
111	*Sesbania grandiflora*	Agasti	1	1	-	1	3	3	0.75	0.02	75	0.78	1	0.75	0.0133		
112	*Shorea robusta*	Sal	11 17	960	11 10	896	4083	4	1021	25.8	100	1.04	1021	1	10.208		
113	*Soymida febrifuga*	Rohini	6	3	7	6	22	4	5.5	0.14	100	1.04	5.5	1	0.055		
114	*Spondias mangifera*	Ambada	1	1	-	-	2	2	0.5	0.01	50	0.52	1	0.5	0.02		
115	*Sterculia urens*	Genduli	6	11	19	19	55	4	13.75	0.35	100	1.04	13.8	1	0.1375		
116	*Stereospermum suaveolens*	Padhel Chuin patuli	4	4	3	2	13	4	3.25	0.08	100	1.04	3.25	1	0.0325		
117	*Streblus asper*	Sahada	1	1	1	-	3	3	0.75	0.02	75	0.78	1	0.75	0.0133		
118	*Strychnos nuxvomica*	Kochila	7	1	-	2	10	3	2.5	0.06	75	0.78	3.33	0.75	0.0444		
119	*Strychnos potatorum*	Katakala Nirmala	5	16	11	6	38	4	9.5	0.24	100	1.04	9.5	1	0.095		
120	*Syzygium cumini*	Jamu	67	68	67	42	244	4	61	1.54	100	1.04	61	1	0.61		
121	*Tamarindus indica*	Tentuli	1	1	-	-	2	2	0.5	0.01	50	0.52	1	0.5	0.02		

Sl. No.	Species	Common Name	QUADRANT					Sps Quadrants	Density	Relative Density	Frequency	Relative Frequency	Abundance of Species	Association Index	Dispersal Pattern	Shannon Index (H)	Simpson Index
			NE	NW	SE	SW	Total										
122	*Tectona grandis*	Saguan	1	4	11	3	19	4	4.75	0.12	100	1.04	4.75	1	0.0475		
123	*Terminalia arjuna*	Arjuna	19	17	8	18	62	4	15.5	0.39	100	1.04	15.5	1	0.155		
124	*Terminalia belerica*	Bahada	12	29	19	10	70	4	17.5	0.44	100	1.04	17.5	1	0.175		
125	*Terminalia chebula*	Harida	29	33	30	36	128	4	32	0.81	100	1.04	32	1	0.32		
126	*Terminalia tomentosa*	Asana sahaja	201	197	182	171	751	4	187.8	4.74	100	1.04	188	1	1.8775		
127	*Thespesia lampas*	Banakapasi	4	2	1	3	10	4	2.5	0.06	100	1.04	2.5	1	0.025		
128	*Urena cinnata*	Jatjatiamota	1	2	1	-	4	3	1	0.03	75	0.78	1.33	0.75	0.0178		
129	*Ventilago denticulata*	Kantamaul	-	3	1	-	4	2	1	0.03	50	0.52	2	0.5	0.04		
130	*Vernonia cinerea*	Agnijal/Bana jalangi	22	-	2	6	30	3	7.5	0.19	75	0.78	10	0.75	0.1333		
131	*Vitex negundo*	Begunia	-	-	1	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
132	*Vitex peduncularis*	Chadaegudi	-	-	1	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
133	*Woodfordia fruticosa*	Dhatiki	49	28	20	29	126	4	31.5	0.79	100	1.04	31.5	1	0.315		
134	*Xylia xylocarpa*	Kangada	325	247	242	273	1087	4	271.8	6.86	100	1.04	272	1	2.7175		
135	*Ziziphus oenoplia*	Kanteikoli	4	3	3	7	17	4	4.25	0.11	100	1.04	4.25	1	0.0425		
136	*Ziziphus xylopyrus*	Ghanta	-	1	-	-	1	1	0.25	0.01	25	0.26	1	0.25	0.04		
TOTAL			**4340**	**3899**	**4036**	**3875**	####	**390**	**4038**	**102**	**9750**	**102**	**4105**	**97.5**	**42.899**		

Appendix – XXIX

The detailed IVI value of the Baripada Division for individual species

Sl No.	Scientific Name	Local Name	No. of plots of occurrence	No. of trees	Average Dia (in Mtr)	RD	RF	RBA	IVI
1	*Acacia auriculiformis*	Acacia	89	318	0.2	0.8633	1.1148	0.6764	2.6545
2	*Acacia catechu*	Khair	4	5	0.21	0.0136	0.0501	0.7458	0.8094
3	*Acacia leucophloea*	Gohira	8	13	0.16	0.0353	0.1002	0.4329	0.5684
4	*Acacia nilotica*	Babul	1	1	0.36	0.0027	0.0125	2.1916	2.2069
5	*Adina cordifolia*	Haldu (kurum)	71	167	0.21	0.4534	0.8893	0.7458	2.0884
6	*Aegle marmelos*	Bela	64	112	0.17	0.3041	0.8016	0.4887	1.5944
7	*Ailanthus excelsa*	Mahanimba	1	1	0.19	0.0027	0.0125	0.6105	0.6257
8	*Alangium lamarckii*	Ankula	6	7	0.15	0.019	0.0752	0.3805	0.4746
9	*Albizia chinensis*	Ghoralanjia	1	1	0.12	0.0027	0.0125	0.2435	0.2588
10	*Albizia procera*	Dhala Sirisa	15	7	0.13	0.019	0.1879	0.2858	0.4927
11	*Albizzia lebbeck*	Sirisa	31	65	0.21	0.1765	0.3883	0.7458	1.3105
12	*Albizzia stipulata*	Ghodalanja	1	1	0.1	0.0027	0.0125	0.1691	0.1843
13	*Alstonia scholaris*	Chatian	9	11	0.24	0.0299	0.1127	0.9741	1.1166
14	*Annona reticulata*	Ata/ Ramphal	4	6	0.14	0.0163	0.0501	0.3315	0.3978
15	*Annona squamosa*	Badhial/Sitaphal	1	3	0.16	0.0081	0.0125	0.4329	0.4536
16	*Anogeissus acuminta*	Phasi	339	906	0.11	2.4596	4.2461	0.2046	6.9103
17	*Anogeissus latifolia*	Dhaura	201	1216	0.22	3.3011	2.5176	0.8185	6.6372
18	*Neolamarckia cadamba*	Kadamba	1	1	0.15	0.0027	0.0125	0.3805	0.3957
19	*Antidesma diandrum*	Murmuri	1	1	0.15	0.0027	0.0125	0.3805	0.3957
20	*Artocarpus integrifolia*	Panasa	1	1	0.27	0.0027	0.0125	1.2328	1.248
21	*Artocarpus lacucha*	Jeutha	3	3	0.12	0.0081	0.0376	0.2435	0.2892
22	*Azadirachta indica*	Neem/Nimba	4	5	0.23	0.0136	0.0501	0.8946	0.9583
23	*Barringtonia acutangula*	Hinjal	2	4	0.2	0.0109	0.0251	0.6764	0.7123
24	*Bauhinia malabarica*	Ambthi	2	3	0.2	0.0081	0.0251	0.6764	0.7096
25	*Bauhinia purpurea*	Kanchana Barada	2	2	0.2	0.0054	0.0251	0.6764	0.7069
26	*Bauhinia retusa*	Choari	1	1	0.12	0.0027	0.0125	0.2435	0.2588
27	*Bauhinia variegata*	Kanchan	18	45	0.28	0.1222	0.2255	1.3258	1.6734
28	*Bixa orellana*	Sakta	22	26	0.19	0.0706	0.2756	0.6105	0.9566
29	*Bombax ceiba*	Simuli semal	36	53	0.22	0.1439	0.4509	0.8185	1.4133
30	*Borassus flabellifer*	Tala	1	2	0.13	0.0054	0.0125	0.2858	0.3037
31	*Boswellia serrata*	Salai	10	10	0.17	0.0271	0.1253	0.4887	0.6411
32	*Bridelia retusa*	Kasi	213	410	0.21	1.113	2.6679	0.7458	4.5267
33	*Buchanania lanzan*	Char	594	1881	0.17	5.1064	7.4401	0.4887	13.035
34	*Butea monosperma*	Palas	14	21	0.19	0.057	0.1754	0.6105	0.8428
35	*Butea parviflora*	Handiphuta	1	1	0.12	0.0027	0.0125	0.2435	0.2588
36	*Canthium didymum*	Dalsinga /Kumarchikini	4	11	0.16	0.0299	0.0501	0.4329	0.5129
37	*Careya arborea*	Kumbhi	202	286	0.17	0.7764	2.5301	0.4887	3.7953
38	*Caryota urens*	Salapa	2	2	0.17	0.0054	0.0251	0.4887	0.5192
39	*Casearia elliptica*	Khakada	155	343	0.15	0.9312	1.9414	0.3805	3.2531
40	*Cassia fistula*	Sunari	71	94	0.15	0.2552	0.8893	0.3805	1.525
41	*Cassia siamea*	Chakundi	7	31	0.21	0.0842	0.0877	0.7458	0.9176
42	*Cassine glauca*	Chauli (Mukha)	11	14	0.23	0.038	0.1378	0.8946	1.0704
43	*Catunaregam spinosa*	Salara/Mokam/Potua	14	33	0.15	0.0896	0.1754	0.3805	0.6454
44	*Ceiba pentandra*	Sweta simul	1	1	0.13	0.0027	0.0125	0.2858	0.301
45	*Chloroxylon swietenia*	Bheru	39	82	0.2	0.2226	0.4885	0.6764	1.3875
46	*Cleistanthus collinus*	Karada	169	608	0.15	1.6506	2.1168	0.3805	4.1478
47	*Cordia macleodii*	Samarsinga	9	15	0.16	0.0407	0.1127	0.4329	0.5864
48	*Crataeva religiosa*	Barun	2	2	0.15	0.0054	0.0251	0.3805	0.411
49	*Dalbergia latifolia*	Sisoo	103	161	0.2	0.4371	1.2901	0.6764	2.4036
50	*Dalbergia paniculata*	Barabakulia	13	18	0.22	0.0489	0.1628	0.8185	1.0302
51	*Dalbergia sissoo*	Sissoo	20	32	0.19	0.0869	0.2505	0.6105	0.9479
52	*Delonix regia*	Krushnachuda	2	23	0.24	0.0624	0.0251	0.9741	1.0615
53	*Dillenia pentagyna*	Rai	118	179	0.29	0.4859	1.478	1.4222	3.3861
54	*Diospyros embryopteris*	Mankada kendu	21	63	0.18	0.171	0.263	0.5479	0.982
55	*Diospyros melanoxylon*	kendu	477	1478	0.2	4.0124	5.9746	0.6764	10.663
56	*Diospyros montana*	Halda	90	204	0.18	0.5538	1.1273	0.5479	2.229
57	*Diospyros sylvatica*	Kalachua	49	111	0.19	0.3013	0.6137	0.6105	1.5256
58	*Elaeodendron glaucum*	Chauli	45	112	0.18	0.3041	0.5636	0.5479	1.4156
59	*Emblica officinalis*	Amla	41	67	0.14	0.1819	0.5135	0.3315	1.0269
60	*Erythrina indica*	Paldhua	3	4	0.31	0.0109	0.0376	1.6251	1.6736
61	*Erythrina suberosa*	Chaladhua	3	5	0.14	0.0136	0.0376	0.3315	0.3826

Sl No.	Scientific Name	Local Name	No. of plots of occurrence	No. of trees	Average Dia (in Mtr)	RD	RF	RBA	IVI
62	*Eucalyptus species*	Eucalyptus	8	103	0.2	0.2796	0.1002	0.6764	1.0563
63	*Eugenia heyneana*	Kathjamu	5	7	0.17	0.019	0.0626	0.4887	0.5704
64	*Feronia elephantum*	Kaitha	2	2	0.12	0.0054	0.0251	0.2435	0.274
65	*Ficus benghalensis*	Bara	21	23	0.53	0.0624	0.263	4.7502	5.0757
66	*Ficus glomerata*	Dimiri	10	20	0.18	0.0543	0.1253	0.5479	0.7275
67	*Ficus hispida*	Tambal	2	2	0.38	0.0054	0.0251	2.4419	2.4724
68	*Ficus religiosa*	Aswatha	5	6	0.38	0.0163	0.0626	2.4419	2.5208
69	*Ficus retusa*	Jari	12	14	0.33	0.038	0.1503	1.8416	2.0299
70	*Ficus virens*	Jida	8	11	0.2	0.0299	0.1002	0.6764	0.8065
71	*Gardenia latifolia*	Damkuruda	36	47	0.16	0.1276	0.4509	0.4329	1.0114
72	*Garuga pinnata*	Kenkat	2	2	0.15	0.0054	0.0251	0.3805	0.411
73	*Gmelina arborea*	Gamhari	43	56	0.19	0.152	0.5386	0.6105	1.3011
74	*Grewia tiliifolia*	Dhaman	34	140	0.18	0.3801	0.4259	0.5479	1.3538
75	*Hymenodictyon excelsum*	Kansa	6	15	0.18	0.0407	0.0752	0.5479	0.6638
76	*Ixora arborea*	Telkuruma/Bhuinkuruma	3	3	0.24	0.0081	0.0376	0.9741	1.0198
77	*Kydia calycina*	Kapasia	2	2	0.27	0.0054	0.0251	1.2328	1.2633
78	*Lagerstroemia parviflora*	Sidha	176	337	0.19	0.9149	2.2045	0.6105	3.7298
79	*Lagerstroemia speciosa*	Patuli	80	223	0.16	0.6054	1.002	0.4329	2.0403
80	*Lannea coromandelica*	Mai	230	509	0.23	1.3818	2.8808	0.8946	5.1572
81	*Limonia acidissima*	Kaitha	20	31	0.14	0.0842	0.2505	0.3315	0.6661
82	*Litsea glutinosa*	Jaisanda	1	2	0.11	0.0054	0.0125	0.2046	0.2226
83	*Macaranga peltata*	Gandha guharia	10	40	0.17	0.1086	0.1253	0.4887	0.7226
84	*Madhuca indica*	Mahula	451	1257	0.24	3.4124	5.649	0.9741	10.035
85	*Mangifera indica*	Amba	30	52	0.42	0.1412	0.3758	2.9831	3.5
86	*Memecylon edule*	Dalsundra/Niras	1	6	0.17	0.0163	0.0125	0.4887	0.5175
87	*Miliusa velutina*	Gandha palas	18	38	0.18	0.1032	0.2255	0.5479	0.8765
88	*Mitragyna parvifolia*	Mundi/Mitkania	21	39	0.22	0.1059	0.263	0.8185	1.1874
89	*Morinda tinctoria*	Anchhu	54	83	0.16	0.2253	0.6764	0.4329	1.3346
90	*Moringa oleifera*	Sajana	1	1	0.27	0.0027	0.0125	1.2328	1.248
91	*Murraya paniculata*	Kamini	2	9	0.23	0.0244	0.0251	0.8946	0.9441
92	*Naringi crenulata*	Benta	2	2	0.16	0.0054	0.0251	0.4329	0.4634
93	*Nyctanthes arbortristis*	Ganga siuli	1	5	0.16	0.0136	0.0125	0.4329	0.459
94	*Ochna obtusata*	Tangarchampa/Patharchampa	9	14	0.13	0.038	0.1127	0.2858	0.4365
95	*Oroxylum indicum*	Phanphana/Phanpuni	8	10	0.14	0.0271	0.1002	0.3315	0.4588
96	*Ougeinia oojeinensis*	Bandhan/Tinsa	78	155	0.21	0.4208	0.977	0.7458	2.1435
97	*Phoenix sylvestris*	Khajuri	6	9	0.14	0.0244	0.0752	0.3315	0.431
98	*Polyalthia cerasoides*	Patamasu/Gandhapalas	5	13	0.2	0.0353	0.0626	0.6764	0.7743
99	*Millettia pinnata*	Karanj	9	21	0.19	0.057	0.1127	0.6105	0.7802
100	*Protium serratum*	Protium	16	21	0.18	0.057	0.2004	0.5479	0.8053
101	*Pterocarpus marsupium*	Piasal/ Bijasal	115	251	0.24	0.6814	1.4404	0.9741	3.0959
102	*Pterospermum acerifolium*	Muchkunda	7	14	0.15	0.038	0.0877	0.3805	0.5062
103	*Pterospermum canescens*	Giringa	2	4	0.18	0.0109	0.0251	0.5479	0.5838
104	*Pterospermum suaveolens*	Padhel Chuin patuli	1	1	0.13	0.0027	0.0125	0.2858	0.301
105	*Samanea saman*	Bada chakunda	2	3	0.28	0.0081	0.0251	1.3258	1.359
106	*Saraca asoca*	Ashok	1	1	0.19	0.0027	0.0125	0.6105	0.6257
107	*Schleichera oleosa*	Kusum	325	727	0.25	1.9736	4.0708	1.0569	7.1013
108	*Semecarpus anacardium*	Bhalia	125	185	0.18	0.5022	1.5657	0.5479	2.6158
109	*Sesbania grandiflora*	Agasti	1	1	0.22	0.0027	0.0125	0.8185	0.8337
110	*Shorea robusta*	Sal	1114	19918	0.26	54.072	13.953	1.1432	69.169
111	*Soymida febrifuga*	Rohini	17	27	0.16	0.0733	0.2129	0.4329	0.7191
112	*Spathodea campanulata*	Turi Mysore queen	2	3	0.2	0.0081	0.0251	0.6764	0.7096
113	*Spondias mangifera*	Ambada	3	3	0.18	0.0081	0.0376	0.5479	0.5936
114	*Sterculia urens*	Genduli	58	114	0.15	0.3095	0.7265	0.3805	1.4164
115	*Sterculia villosa*	Kodala	11	20	0.18	0.0543	0.1378	0.5479	0.74
116	*Stereospermum colais*	Chhuinpatali	4	10	0.17	0.0271	0.0501	0.4887	0.566
117	*Streblus asper*	Sahada	18	27	0.17	0.0733	0.2255	0.4887	0.7875
118	*Strychnos nuxvomica*	Kochila	19	29	0.19	0.0787	0.238	0.6105	0.9272
119	*Strychnos potatorum*	Katakala	48	130	0.19	0.3529	0.6012	0.6105	1.5646
120	*Symplocos racemosa*	Lodha	21	40	0.18	0.1086	0.263	0.5479	0.9195
121	*Syzygium cumini*	Jamu	221	446	0.23	1.2108	2.7681	0.8946	4.8735
122	*Syzygium calophyllifolium*	Poijamu/Bhatjamu	25	39	0.18	0.1059	0.3131	0.5479	0.9669
123	*Syzygium operculata*	Pitajamu	2	2	0.25	0.0054	0.0251	1.0569	1.0874
124	*Tamarindus indica*	Tentuli	16	29	0.27	0.0787	0.2004	1.2328	1.5119
125	*Tectona grandis*	Saguan	29	19	0.13	0.0516	0.3632	0.2858	0.7006
126	*Terminalia arjuna*	Arjuna	27	43	0.29	0.1167	0.3382	1.4222	1.8771
127	*Terminalia bellirica*	Bahada	147	217	0.21	0.5891	1.8412	0.7458	3.1761
128	*Terminalia catappa*	Badam (Deshi)	1	1	0.25	0.0027	0.0125	1.0569	1.0722
129	*Terminalia chebula*	Harida	163	260	0.18	0.7058	2.0416	0.5479	3.2954

Sl No.	Scientific Name	Local Name	No. of plots of occurrence	No. of trees	Average Dia (in Mtr)	RD	RF	RBA	IVI
130	*Terminalia tomentosa*	Asan/ Sahaja	663	1391	0.2	3.7762	8.3044	0.6764	12.757
131	*Trewia nudiflora*	Panigambhar	7	11	0.2	0.0299	0.0877	0.6764	0.794
132	*Vitex leucoxylon*	Chadheigudi	1	1	0.27	0.0027	0.0125	1.2328	1.248
133	*Vitex peduncularis*	Chadeigudi	1	1	0.15	0.0027	0.0125	0.3805	0.3957
134	*Wendlandia tinctoria*	Telei	9	17	0.17	0.0462	0.1127	0.4887	0.6476
135	*Xylia dolabriformis*	Tangini	1	2	0.15	0.0054	0.0125	0.3805	0.3984
136	*Xylia xylocarpa*	Kangada	28	110	0.21	0.2986	0.3507	0.7458	1.3951
137	*Ziziphus mauritiana*	Barkoli	18	30	0.15	0.0814	0.2255	0.3805	0.6874
138	*Ziziphus xylopyrus*	Ghanta	1	1	0.14	0.0027	0.0125	0.3315	0.3467
		TOTAL	**8125**	**36747**	**26.98**	**99.758**	**101.77**	**98.241**	**299.77**

Appendix – XXX

CARBON STOCK IN TREE OUTSIDE FOREST

Name of the Division	ToF Area (in Ha.)	ToF Plantation Areas (in Ha.)	ToF Natural Forest (in Ha.)	Biomass (t/ha)	Total Biomass (t/ha) ToF Plantation Area	Total Biomass (t/ha) ToF Natural Forest	ToF Carbon Stock (t/ha) Plantation Area	ToF Carbon Stock (t/ha) Natural Forest	Total Division ToF Biomass (t/ha)	Division ToF Carbon Stock (t/ha)
Baripada Forest Division	5805.769	1175	4630.769	335.835	394606.125	1555174.307	197303.063	777587.154	1949780.432	974890.216

Appendix – XXXI

Carbon Stock of ToF Plantations

Name of the Range	Name of the Village	Area in Ha.	Total Biomass (t/ha)	Total Biomass (t/ha)	Carbon Stock (t/ha)
Bangiriposi	Baunsiapat	30.000	335.835	10075.050	5037.525
Bangiriposi	Baunsiapat	60.000	335.835	20150.100	10075.050
Bangiriposi	Uchagaon-Katisole	50.000	335.835	16791.750	8395.875
Bangiriposi	Uchagaon-Katisole	30.000	335.835	10075.050	5037.525
Bangiriposi	Umadeipur	15.000	335.835	5037.525	2518.763
Bangiriposi	Kandalia	15.000	335.835	5037.525	2518.763
Bangiriposi	Mahantipadasia	15.000	335.835	5037.525	2518.763
Bangiriposi	Balikhani	6.000	335.835	2015.010	1007.505
Bangiriposi	Rajaloka	14.000	335.835	4701.690	2350.845
Bangiriposi	Mahantipadasia	20.000	335.835	6716.700	3358.350
Bangiriposi	Sunamunhi	15.000	335.835	5037.525	2518.763
Bangiriposi	Jogibanda	10.000	335.835	3358.350	1679.175
Bangiriposi	Kandalia	10.000	335.835	3358.350	1679.175
Bangiriposi	Hijili	10.000	335.835	3358.350	1679.175
Bangiriposi	Jaganathpur	10.000	335.835	3358.350	1679.175
Bangiriposi	Anlatota	5.000	335.835	1679.175	839.588
Bangiriposi	Jaldiha	5.000	335.835	1679.175	839.588
Bangiriposi	Mahulisole	10.000	335.835	3358.350	1679.175
Bangiriposi	Kalapani	25.000	335.835	8395.875	4197.938
Bangiriposi	Mahulisole	15.000	335.835	5037.525	2518.763
Sub Total		**370.000**	**335.835**	**124258.950**	**62129.475**
Betnoti	Bhandarikula/	20.000	335.835	6716.700	3358.350
Betnoti	Sunahaja	40.000	335.835	13433.400	6716.700
Betnoti	Siliphudi	11.000	335.835	3694.185	1847.093
Betnoti	Raikama	10.000	335.835	3358.350	1679.175
Betnoti	Agada	20.000	335.835	6716.700	3358.350
Betnoti	Bidukudia	10.000	335.835	3358.350	1679.175
Sub Total		**111.000**	**335.835**	**37277.685**	**18638.843**
Deuli	Uphalgadia	20.000	335.835	6716.700	3358.350
Deuli	Gadia	25.000	335.835	8395.875	4197.938
Deuli	Gunthurdihi	20.000	335.835	6716.700	3358.350
Deuli	Purunapani	25.000	335.835	8395.875	4197.938
Deuli	Budhamara	10.000	335.835	3358.350	1679.175
Deuli	Budamara hill	5.000	335.835	1679.175	839.588
Sub Total		**105.000**	**335.835**	**35262.675**	**17631.338**
Dukura	Baligadia	25.000	335.835	8395.875	4197.938
Dukura	Subarna manjari	20.000	335.835	6716.700	3358.350
Dukura	Baincha	25.000	335.835	8395.875	4197.938

Name of the Range	Name of the Village	Area in Ha.	Total Biomass (t/ha)	Total Biomass (t/ha)	Carbon Stock (t/ha)
Dukura	Matiahudi	15.000	335.835	5037.525	2518.763
Dukura	Sansole	10.000	335.835	3358.350	1679.175
Dukura	Singtia	7.000	335.835	2350.845	1175.423
	Sub Total	**102.000**	**335.835**	**34255.170**	**17127.585**
Kaptipada	Haridachua	20.000	335.835	6716.700	3358.350
Kaptipada	Debagaon	20.000	335.835	6716.700	3358.350
Kaptipada	Salagaon	4.000	335.835	1343.340	671.670
Kaptipada	Khadikhania	20.000	335.835	6716.700	3358.350
Kaptipada	Kusumpur	20.000	335.835	6716.700	3358.350
Kaptipada	Sarisua	10.000	335.835	3358.350	1679.175
Kaptipada	Dughda	10.000	335.835	3358.350	1679.175
	Sub Total	**104.000**	**335.835**	**34926.840**	**17463.420**
Pithabata	Asanbani	8.000	335.835	2686.680	1343.340
Pithabata	Pokharia	30.000	335.835	10075.050	5037.525
Pithabata	Bhalubasa	10.000	335.835	3358.350	1679.175
Pithabata	Banatalapada	15.000	335.835	5037.525	2518.763
	Sub Total	**63.000**	**335.835**	**21157.605**	**10578.803**
Rasgobindpur	Baghajharan	5.000	335.835	1679.175	839.588
Rasgovindpur	Baghuasole	15.000	335.835	5037.525	2518.763
Rasgovindpur	Hemachandrapur	15.000	335.835	5037.525	2518.763
Rasgovindpur	Shyamanandapur	20.000	335.835	6716.700	3358.350
Rasgovindpur	Sarusole Ghagara, Bhalughera	20.000	335.835	6716.700	3358.350
Rasgovindpur	Sankhabhanga	50.000	335.835	16791.750	8395.875
Rasgovindpur	Jamsole	10.000	335.835	3358.350	1679.175
Rasgovindpur	Rangamatia	5.000	335.835	1679.175	839.588
Rasgovindpur	Harinasole	20.000	335.835	6716.700	3358.350
	Sub Total	**160.000**	**335.835**	**53733.600**	**26866.800**
Udala	Manikpur	10.000	335.835	3358.350	1679.175
Udala	B.C. Pur	10.000	335.835	3358.350	1679.175
Udala	Kutling	25.000	335.835	8395.875	4197.938
Udala	Realdah	50.000	335.835	16791.750	8395.875
Udala	Sindurgaoura	10.000	335.835	3358.350	1679.175
Udala	Arpata	10.000	335.835	3358.350	1679.175
Udala	Arpata	20.000	335.835	6716.700	3358.350
Udala	Kendumundi	15.000	335.835	5037.525	2518.763
Udala	Surukuna	10.000	335.835	3358.350	1679.175
	Sub Total	**160.000**	**335.835**	**53733.600**	**26866.800**
	Division Total	***1175.000***	***335.835***	***394606.125***	***197303.063***

Appendix – XXXII

CARBON STOCK OF DLC FOREST AREA OF BARIPADA FOREST DIVISION

SL. NO.	Name of Village	Village DLC Forest Area	Plantation areas	Natural Forest	Total Biomass (t/ha)	Total Biomass (t/ha) Plantation area	Total Biomass (t/ha) Natural Forest	Carbon stock(t/ha) Plantation area	Carbon stock(t/ha) Natural Forest	Total Village DLC Biomass (t/ha)	Total Village DLC Carbon stock(t/ha)
1	Kuladahoni	10.12	0.00	10.12	335.84	0.00	3397.76	0.00	1698.88	3397.76	1698.88
2	Kantisahi	8.09	0.00	8.09	335.84	0.00	2718.21	0.00	1359.11	2718.21	1359.11
3	Nedasole	4.86	0.00	4.86	335.84	0.00	1630.93	0.00	815.46	1630.93	815.46
4	Rathasole	5.66	0.00	5.66	335.84	0.00	1901.39	0.00	950.69	1901.39	950.69
5	Tungasole	2.27	0.00	2.27	335.84	0.00	763.82	0.00	381.91	763.82	381.91
6	San Nuagaon	2.53	0.00	2.53	335.84	0.00	848.08	0.00	424.04	848.08	424.04
7	Srichandanpur	2.55	0.00	2.55	335.84	0.00	856.24	0.00	428.12	856.24	428.12
8	Kothabilla	11.85	0.00	11.85	335.84	0.00	3979.46	0.00	1989.73	3979.46	1989.73
9	Sankhabhanga	4.73	0.00	4.73	335.84	0.00	1588.79	0.00	794.40	1588.79	794.40
10	Paikpada	2.29	0.00	2.29	335.84	0.00	767.89	0.00	383.95	767.89	383.95
11	Kainphulia	5.06	0.00	5.06	335.84	0.00	1698.88	0.00	849.44	1698.88	849.44
12	Panasia	7.05	0.00	7.05	335.84	0.00	2368.92	0.00	1184.46	2368.92	1184.46
13	Rajgarh	8.80	0.00	8.80	335.84	0.00	2954.70	0.00	1477.35	2954.70	1477.35
14	Bantalpada	6.16	0.00	6.16	335.84	0.00	2068.56	0.00	1034.28	2068.56	1034.28
15	Bhanjabati	5.00	0.00	5.00	335.84	0.00	1679.85	0.00	839.93	1679.85	839.93
16	Barpada	3.60	0.00	3.60	335.84	0.00	1208.24	0.00	604.12	1208.24	604.12
17	Gajodidamodarpur	4.05	0.00	4.05	335.84	0.00	1359.11	0.00	679.55	1359.11	679.55
18	Guhaldihi	11.03	0.00	11.03	335.84	0.00	3704.92	0.00	1852.46	3704.92	1852.46
19	Itamundia	18.09	18.09	0.00	335.84	6075.26	0.00	3037.63	0.00	6075.26	3037.63
20	Kamalasole	20.11	14.30	5.81	335.84	4802.44	1951.20	2401.22	975.60	6753.64	3376.82

SL. NO.	Name of Village	Village DLC Forest Area	Plantation areas	Natural Forest	Total Biomass (t/ha)	Total Biomass (t/ha) Plantation area	Total Biomass (t/ha) Natural Forest	Carbon stock(t/ha) Plantation area	Carbon stock(t/ha) Natural Forest	Total Village DLC Biomass (t/ha)	Total Village DLC Carbon stock(t/ha)
21	Patpur	2.51	0.00	2.51	335.84	0.00	842.65	0.00	421.32	842.65	421.32
22	Rangadiha	3.76	0.00	3.76	335.84	0.00	1262.61	0.00	631.30	1262.61	631.30
23	Khuntapal	3.18	0.00	3.18	335.84	0.00	1068.26	0.00	534.13	1068.26	534.13
24	Chhelia (B)	1.62	0.00	1.62	335.84	0.00	543.64	0.00	271.82	543.64	271.82
25	Belpal	1.42	0.00	1.42	335.84	0.00	475.69	0.00	237.84	475.69	237.84
26	Chhelia (A) Bidyadharpur	2.83	0.00	2.83	335.84	0.00	951.37	0.00	475.69	951.37	475.69
27	Dangira	1.94	0.00	1.94	335.84	0.00	652.37	0.00	326.19	652.37	326.19
28	Khanua	7.83	0.00	7.83	335.84	0.00	2629.87	0.00	1314.93	2629.87	1314.93
29	Ambadali	4.23	0.00	4.23	335.84	0.00	1420.27	0.00	710.13	1420.27	710.13
30	Jalghera	3.89	0.00	3.89	335.84	0.00	1307.46	0.00	653.73	1307.46	653.73
31	Ambadiha	7.32	0.00	7.32	335.84	0.00	2458.62	0.00	1229.31	2458.62	1229.31
32	Astia	33.19	0.00	33.19	335.84	0.00	11147.38	0.00	5573.69	11147.38	5573.69
33	Badarpur	1.62	0.00	1.62	335.84	0.00	543.64	0.00	271.82	543.64	271.82
34	Baghasahi	7.90	0.00	7.90	335.84	0.00	2651.62	0.00	1325.81	2651.62	1325.81
35	Bhaliapada	17.21	0.00	17.21	335.84	0.00	5780.28	0.00	2890.14	5780.28	2890.14
36	Bharadasul	5.50	0.00	5.50	335.84	0.00	1847.02	0.00	923.51	1847.02	923.51
37	Chahulia	3.31	3.31	0.00	335.84	1111.61	0.00	555.81	0.00	1111.61	555.81
38	Kochiasul	2.02	2.02	0.00	335.84	678.39	0.00	339.19	0.00	678.39	339.19
39	Sarumula	1.07	0.00	1.07	335.84	0.00	360.16	0.00	180.08	360.16	180.08
40	Musamari	8.48	0.00	8.48	335.84	0.00	2847.33	0.00	1423.66	2847.33	1423.66
41	Podapada	5.74	0.00	5.74	335.84	0.00	1928.57	0.00	964.29	1928.57	964.29
42	Rangamatia	14.99	0.00	14.99	335.84	0.00	5035.49	0.00	2517.74	5035.49	2517.74
43	Takadida	3.33	0.00	3.33	335.84	0.00	1117.18	0.00	558.59	1117.18	558.59

SL. NO.	Name of Village	Village DLC Forest Area	Plantation areas	Natural Forest	Total Biomass (t/ha)	Total Biomass (t/ha) Plantation area	Total Biomass (t/ha) Natural Forest	Carbon stock(t/ha) Plantation area	Carbon stock(t/ha) Natural Forest	Total Village DLC Biomass (t/ha)	Total Village DLC Carbon stock(t/ha)
44	Takadia	0.60	0.00	0.60	335.84	0.00	202.51	0.00	101.25	202.51	101.25
45	Mahulia	5.41	0.00	5.41	335.84	0.00	1818.48	0.00	909.24	1818.48	909.24
46	Thengatandi	2.19	0.00	2.19	335.84	0.00	733.92	0.00	366.96	733.92	366.96
47	Ambagadia	8.60	0.00	8.60	335.84	0.00	2886.74	0.00	1443.37	2886.74	1443.37
48	Anua (Mango)	17.65	0.00	17.65	335.84	0.00	5928.42	0.00	2964.21	5928.42	2964.21
49	Anua (KûRê)	2.31	0.00	2.31	335.84	0.00	776.05	0.00	388.02	776.05	388.02
50	Baunstata	74.67	0.00	74.67	335.84	0.00	25075.50	0.00	12537.75	25075.50	12537.75
51	Panchamania	30.15	0.00	30.15	335.84	0.00	10125.34	0.00	5062.67	10125.34	5062.67
52	Majanadiha	46.94	0.00	46.94	335.84	0.00	15765.63	0.00	7882.81	15765.63	7882.81
53	Dhansole	22.26	0.00	22.26	335.84	0.00	7475.08	0.00	3737.54	7475.08	3737.54
54	Khunta	3.24	0.00	3.24	335.84	0.00	1087.28	0.00	543.64	1087.28	543.64
55	Raghabpur	2.02	0.00	2.02	335.84	0.00	679.55	0.00	339.78	679.55	339.78
56	Gandagahali	8.52	0.00	8.52	335.84	0.00	2860.92	0.00	1430.46	2860.92	1430.46
57	Kapoi	1.46	1.46	0.00	335.84	490.32	0.00	245.16	0.00	490.32	245.16
58	Betnasia	0.89	0.89	0.00	335.84	298.89	0.00	149.45	0.00	298.89	149.45
59	Khuntapal	6.99	0.00	6.99	335.84	0.00	2347.18	0.00	1173.59	2347.18	1173.59
60	Olidihi	17.94	0.00	17.94	335.84	0.00	6026.27	0.00	3013.14	6026.27	3013.14
61	Sarasole	13.13	0.00	13.13	335.84	0.00	4408.94	0.00	2204.47	4408.94	2204.47
62	Valiagadia	2.63	0.00	2.63	335.84	0.00	883.42	0.00	441.71	883.42	441.71
63	Duarsuni	2.80	0.00	2.80	335.84	0.00	940.50	0.00	470.25	940.50	470.25
64	Jhatioda	1.42	0.00	1.42	335.84	0.00	475.69	0.00	237.84	475.69	237.84
65	Gopinathpur	1.60	0.00	1.60	335.84	0.00	536.85	0.00	268.42	536.85	268.42
66	Sudsudia	8.35	0.00	8.35	335.84	0.00	2805.19	0.00	1402.60	2805.19	1402.60
67	Sansal	7.34	0.00	7.34	335.84	0.00	2465.42	0.00	1232.71	2465.42	1232.71

SL. NO.	Name of Village	Village DLC Forest Area	Plantation areas	Natural Forest	Total Biomass (t/ha)	Total Biomass (t/ha) Plantation area	Total Biomass (t/ha) Natural Forest	Carbon stock(t/ha) Plantation area	Carbon stock(t/ha) Natural Forest	Total Village DLC Biomass (t/ha)	Total Village DLC Carbon stock(t/ha)
68	Kaptipada	12.14	0.00	12.14	335.84	0.00	4077.32	0.00	2038.66	4077.32	2038.66
69	Janakpur	2.81	0.00	2.81	335.84	0.00	943.22	0.00	471.61	943.22	471.61
70	Beldiha	4.01	0.00	4.01	335.84	0.00	1348.23	0.00	674.12	1348.23	674.12
71	Jamdiha	18.68	0.00	18.68	335.84	0.00	6274.99	0.00	3137.50	6274.99	3137.50
72	Jamdiha Hamlet (Satabass)	3.14	0.00	3.14	335.84	0.00	1054.67	0.00	527.33	1054.67	527.33
73	Chandrapur	12.81	0.00	12.81	335.84	0.00	4301.57	0.00	2150.78	4301.57	2150.78
74	Manikpur	4.57	0.00	4.57	335.84	0.00	1535.79	0.00	767.89	1535.79	767.89
75	Ghuntbani	5.80	0.00	5.80	335.84	0.00	1946.24	0.00	973.12	1946.24	973.12
76	Sialia (156)	2.46	0.00	2.46	335.84	0.00	826.34	0.00	413.17	826.34	413.17
77	Sialia (152) (B)	4.34	0.00	4.34	335.84	0.00	1458.32	0.00	729.16	1458.32	729.16
78	Balidiha	9.22	0.00	9.22	335.84	0.00	3097.40	0.00	1548.70	3097.40	1548.70
79	Belijoda	3.17	0.00	3.17	335.84	0.00	1064.18	0.00	532.09	1064.18	532.09
80	Atanati	4.70	0.00	4.70	335.84	0.00	1577.92	0.00	788.96	1577.92	788.96
81	Anandapur	5.17	0.00	5.17	335.84	0.00	1737.21	0.00	868.60	1737.21	868.60
82	Khaourdiha	16.24	0.00	16.24	335.84	0.00	5455.45	0.00	2727.72	5455.45	2727.72
83	Murari	3.40	0.00	3.40	335.84	0.00	1140.29	0.00	570.14	1140.29	570.14
84	Talakunda	4.64	0.00	4.64	335.84	0.00	1557.54	0.00	778.77	1557.54	778.77
85	Kulbandha	8.02	0.00	8.02	335.84	0.00	2692.39	0.00	1346.19	2692.39	1346.19
86	Girish Ch. Pur	4.86	0.00	4.86	335.84	0.00	1633.64	0.00	816.82	1633.64	816.82
87	Satpautia	50.32	0.00	50.32	335.84	0.00	16898.44	0.00	8449.22	16898.44	8449.22
88	Khejurdiha	4.19	0.00	4.19	335.84	0.00	1406.67	0.00	703.34	1406.67	703.34
89	Balimunduli (122)	23.55	0.00	23.55	335.84	0.00	7908.64	0.00	3954.32	7908.64	3954.32
90	Titia	45.18	0.00	45.18	335.84	0.00	15171.70	0.00	7585.85	15171.70	7585.85

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91	Jauhad	3.12	0.00	3.12	335.84	0.00	1047.87	0.00	523.94	1047.87	523.94
92	Badpheri	12.57	0.00	12.57	335.84	0.00	4220.02	0.00	2110.01	4220.02	2110.01
93	Satabasa	8.58	0.00	8.58	335.84	0.00	2881.30	0.00	1440.65	2881.30	1440.65
94	Budioder (Jamdiha Hamlet)	9.70	0.00	9.70	335.84	0.00	3256.42	0.00	1628.21	3256.42	1628.21
95	Ghuntabani (Nuagaon)	4.58	0.00	4.58	335.84	0.00	1538.51	0.00	769.25	1538.51	769.25
96	Shriram ch. Pur (Hamlet Matihandi)	17.06	2.55	14.51	335.84	856.38	4872.97	428.19	2436.48	5729.35	2864.67
97	Kainsari	6.54	0.00	6.54	335.84	0.00	2195.36	0.00	1097.68	2195.36	1097.68
98	B C Pur	26.03	0.00	26.03	335.84	0.00	8740.41	0.00	4370.20	8740.41	4370.20
99	Dhanghera	16.99	0.00	16.99	335.84	0.00	5705.53	0.00	2852.76	5705.53	2852.76
100	Hrisaloe	7.08	0.00	7.08	335.84	0.00	2378.43	0.00	1189.22	2378.43	1189.22
101	Hatisahi	6.65	0.00	6.65	335.84	0.00	2234.37	0.00	1117.18	2234.37	1117.18
102	Brundagadi	4.21	0.00	4.21	335.84	0.00	1414.83	0.00	707.41	1414.83	707.41
103	Gadigan	12.14	0.00	12.14	335.84	0.00	4077.32	0.00	2038.66	4077.32	2038.66
104	Raidihi	59.32	0.00	59.32	335.84	0.00	19920.41	0.00	9960.21	19920.41	9960.21
105	Badabeni	3.18	0.00	3.18	335.84	0.00	1069.62	0.00	534.81	1069.62	534.81
106	Khunt(Badaveni 372)	3.01	0.00	3.01	335.84	0.00	1011.17	0.00	505.59	1011.17	505.59
107	Sirathali	3.67	0.00	3.67	335.84	0.00	1234.07	0.00	617.03	1234.07	617.03
108	Gadadharekumaripur	3.30	0.00	3.30	335.84	0.00	1109.03	0.00	554.52	1109.03	554.52
109	Purunabaripada	13.07	0.00	13.07	335.84	0.00	4389.91	0.00	2194.96	4389.91	2194.96
110	Baundia	10.50	0.00	10.50	335.84	0.00	3525.52	0.00	1762.76	3525.52	1762.76
111	Aipata	8.09	0.00	8.09	335.84	0.00	2718.21	0.00	1359.11	2718.21	1359.11

SL. NO.	Name of Village	Village DLC Forest Area	Plantation areas	Natural Forest	Total Biomass (t/ha)	Total Biomass (t/ha) Plantation area	Total Biomass (t/ha) Natural Forest	Carbon stock(t/ha) Plantation area	Carbon stock(t/ha) Natural Forest	Total Village DLC Biomass (t/ha)	Total Village DLC Carbon stock(t/ha)
112	Takaetpur	21.50	0.00	21.50	335.84	0.00	7220.93	0.00	3610.46	7220.93	3610.46
113	Cndlima	3.18	0.00	3.18	335.84	0.00	1066.90	0.00	533.45	1066.90	533.45
114	Kuamora	8.54	0.00	8.54	335.84	0.00	2867.71	0.00	1433.86	2867.71	1433.86
115	Uperpadada	12.71	0.00	12.71	335.84	0.00	4268.95	0.00	2134.48	4268.95	2134.48
116	Kusumia	8.09	0.00	8.09	335.84	0.00	2715.49	0.00	1357.75	2715.49	1357.75
117	Sikidia	5.61	0.00	5.61	335.84	0.00	1883.72	0.00	941.86	1883.72	941.86
118	Chuliaposi	5.90	0.00	5.90	335.84	0.00	1981.58	0.00	990.79	1981.58	990.79
119	Adapal	15.62	0.00	15.62	335.84	0.00	5246.15	0.00	2623.07	5246.15	2623.07
120	Salamundali (Gharagadi Hamlet)	7.83	0.00	7.83	335.84	0.00	2628.51	0.00	1314.26	2628.51	1314.26
121	Salamundali (Nidharsahi Hamlet)	21.02	0.00	21.02	335.84	0.00	7060.55	0.00	3530.28	7060.55	3530.28
122	Govindpur	62.20	0.00	62.20	335.84	0.00	20889.45	0.00	10444.73	20889.45	10444.73
123	Haldipal	14.99	0.00	14.99	335.84	0.00	5035.49	0.00	2517.74	5035.49	2517.74
124	Jamsoli	5.23	0.00	5.23	335.84	0.00	1757.32	0.00	878.66	1757.32	878.66
125	Raghunathpur	2.12	0.00	2.12	335.84	0.00	712.17	0.00	356.09	712.17	356.09
126	Salabani	5.00	0.00	5.00	335.84	0.00	1678.50	0.00	839.25	1678.50	839.25
127	Jualia	12.09	0.00	12.09	335.84	0.00	4061.01	0.00	2030.50	4061.01	2030.50
128	Gada	6.80	0.00	6.80	335.84	0.00	2283.30	0.00	1141.65	2283.30	1141.65
129	Kirkichia	8.10	0.00	8.10	335.84	0.00	2719.57	0.00	1359.79	2719.57	1359.79
130	Dimagadia	8.09	0.00	8.09	335.84	0.00	2718.21	0.00	1359.11	2718.21	1359.11
131	Mouda	3.57	0.00	3.57	335.84	0.00	1198.73	0.00	599.37	1198.73	599.37
132	Parichipur	26.23	0.00	26.23	335.84	0.00	8809.72	0.00	4404.86	8809.72	4404.86
133	Debagan	32.06	0.00	32.06	335.84	0.00	10768.19	0.00	5384.10	10768.19	5384.10

SL. NO.	Name of Village	Village DLC Forest Area	Plantation areas	Natural Forest	Total Biomass (t/ha)	Total Biomass (t/ha) Plantation area	Total Biomass (t/ha) Natural Forest	Carbon stock(t/ha) Plantation area	Carbon stock(t/ha) Natural Forest	Total Village DLC Biomass (t/ha)	Total Village DLC Carbon stock(t/ha)
134	Pasuda	2.57	0.00	2.57	335.84	0.00	861.67	0.00	430.84	861.67	430.84
135	Raipada	2.40	0.00	2.40	335.84	0.00	805.95	0.00	402.97	805.95	402.97
136	Nahara	3.04	0.00	3.04	335.84	0.00	1019.33	0.00	509.66	1019.33	509.66
137	Kudialhunta	2.02	0.00	2.02	335.84	0.00	679.55	0.00	339.78	679.55	339.78
138	Chadada	5.05	0.00	5.05	335.84	0.00	1697.52	0.00	848.76	1697.52	848.76
139	Khejurdiha	0.98	0.00	0.98	335.84	0.00	330.26	0.00	165.13	330.26	165.13
140	Barakuli	2.02	0.00	2.02	335.84	0.00	676.83	0.00	338.42	676.83	338.42
141	Bangara	9.15	0.00	9.15	335.84	0.00	3071.58	0.00	1535.79	3071.58	1535.79
142	Potaldiha	4.89	0.00	4.89	335.84	0.00	1641.80	0.00	820.90	1641.80	820.90
143	Kuabuda	24.83	24.83	0.00	335.84	8338.78	0.00	4169.39	0.00	8338.78	4169.39
144	Bhangasole	3.59	3.59	0.00	335.84	1205.65	0.00	602.82	0.00	1205.65	602.82
145	Dubulabeda	6.48	6.48	0.00	335.84	2176.21	0.00	1088.11	0.00	2176.21	1088.11
146	Chandua	9.85	9.85	0.00	335.84	3307.97	0.00	1653.99	0.00	3307.97	1653.99
147	Dhadipada	11.36	11.36	0.00	335.84	3815.09	0.00	1907.54	0.00	3815.09	1907.54
148	Tikarpada	5.67	0.00	5.67	335.84	0.00	1902.75	0.00	951.37	1902.75	951.37
149	BADA SIMULIA	279.93	0.00	279.93	335.84	0.00	94009.34	0.00	47004.67	94009.34	47004.67
TOTAL		**1741.01**	**98.73**	**1642.30**		**33156.99**	**551541.47**	**16578.49**	**275770.73**	**584698.46**	**292349.23**

Appendix – XXXIII

PLANTATION WORKING CIRCLE ANNUAL SCHEDULE OF OPERATION

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
PITHABATA	Baldiha R.F.	36.722	3.327	10.000	10.000	13.395						
	Bhagabat Chandrapur R.F.	460.525	7.584	10.000	10.000	10.000	50.000	50.000	50.000	50.000	50.000	60.498
			20.000	20.000	20.000	20.000	20.000	12.443				
	Budhikhamari R.F.	326.632	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	11.130
			20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	10.502
			10.000	10.000	15.000							
	Dungurusahi R.F.	10.950	2.776			8.174						
	Hatikote R.F.	174.788		30.000	30.000	30.000	30.000	30.000	24.788			
	Lulung-Purunapani R.F.	84.041		10.000	10.000	10.000	10.000	10.000	10.000	10.000	14.041	
	Manchabandha R.F.	242.435	10.000	10.000	10.000	20.000	20.000	20.000	20.000	20.000	20.000	14.213
						10.000	10.000	18.222				
									10.000	10.000	10.000	10.000
	Asanabani P.R..F	57.030	10.000	10.000	10.000	19.030						8.000
	Gopalapur V.F.	4.000										4.000
	Srirampur V.F.	3.140	3.140									
	Gadadharapur V.F.	0.840										0.840
	Baunsda V.F.	0.940										0.940
	Dumuria V.F.	5.000										5.000
	Sub-total	***1407.043***	***96.827***	***140.000***	***145.000***	***170.599***	***170.000***	***170.665***	***144.788***	***120.000***	***124.041***	***125.123***
Plantation Series	**Forest Cover 1-10%**		**20.911**	**10.000**	**10.000**	**18.174**	**10.000**	**18.222**				
	Eucalyptus, Acacia & SFP		**3.140**									**10.780**
	Other Plantation		**10.000**	**20.000**	**25.000**	**10.000**						**8.000**
	Teak								**10.000**	**10.000**	**10.000**	**10.000**
	Blank Area		**72.776**	**100.000**	**100.000**	**112.425**	**100.000**	**92.443**	**74.788**	**50.000**	**54.041**	**24.715**
	Encroachment		**10.000**	**10.000**	**10.000**	**10.000**	**60.000**	**60.000**	**60.000**	**60.000**	**60.000**	**71.628**

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
DUKURA	Aghasole R.F.	32.987	3.115	6.152	10.000	13.720						
	Badsahi R.F.	203.868	13.110	40.000	40.000	40.758	20.000	5.000	10	10	10	15
	Bidhyadharpur R.F.	113.842	10.000	10.000	10.000	10.000	10.000	10.000	10.000	15.000	15.000	13.842
	Chakradharpur R.F.	87.711	4.103				10.000	10.000	15.000	15.000	15.000	18.608
	Chengua-Mangalpur R.F.	79.640	10.300				25.000	20	10.000	13.716	0.624	
	Deulia R.F.	136.581	10.000	10.000		15.000	15.000	22.994	15.000	15.000	15.000	18.587
	Gojodi-Damodarpur R.F.	19.049	11.401	7.648								
	Haldia R.F.	46.909	10.357	10.000	10.000	10.000					6.552	
	Itamundia R.F.	74.954	10.000	10.000	10.000	10.000	10.000	10.000	14.954			
	Jarkani R.F.	1.564						1.564				
	Kanpura R.F.	355.504	12.459	10.000	20.000	20.000	8.204	25.000	15.000	15.000		
			20.000	20.000	20.000	20.000	20.000	25.000	25.000	25.000	25.000	29.841
	Kuldiha R.F.	25.250	10.000	10.000	5.250							
	Pundala R.F.	17.970				5.000	12.587	0.383				
	Purunapani R.F.	17.214							6.274	4.427	6.513	
	Belpal R.F.	110.600	5.000	10.000	10.000	10.000	9.764	15.000	15.000	15.000	20.836	
	Dukura R.F.	36.665						1.731		12.402	10.000	12.532
	Itamundia-Jamuna R.F.	111.250	9.981			10.000	10.000	10.000	10.000	20.000	20.000	21.269
	Khanua R.F.	113.680	10.000	10.000	5.000	11.317	25.000	25.000	4.587	10.000	12.776	
	Kerko R.F.	110.070	3.027	10.000	10.000	10.000	15.000	11.538	15.000	0.505	20.000	15.000
	Nigirdha (A) P.R.F.	15.750	12.642		3.108							
	Nigirdha (B) P.R.F.	6.809		4.645	2.164							
	Kukurbhuka (1)P.R.F.	21.056			4.515							16.541
	Kukurbhuka (2)P.R.F.	54.308	10.000	10.000	10.000	10.000	14.308					
	Sanamakabadi P.R.F.	19.704			3.714				15.990			
	Budhabalang (A) P.R.F.	6.120	6.120									

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
DUKURA	Budhabalang (B) P.R.F.	6.971		6.971								
	Gopinathpur P.R.F.	260.820	25.000	25.000	25.000	25.000	25.000	25.000	25.000	21.700	30.000	34.120
	Manatri V.F.	6.400										6.400
	Bhupad V.F.	5.000								4.375	0.625	
	Manatri V.F.	3.480								3.480		
	Rangahidi V.F.	4.588			4.588							
	Ranibandha V.F.	3.440										3.440
	Khanua V.F.	6.000	6.000									
	Basipitha V.F.	10.000							10.000			
	Basipitha V.F.	8.120									8.120	
	Sub-total	***2133.874***	***212.615***	***210.416***	***203.339***	***220.795***	***229.863***	***218.210***	***216.805***	***200.605***	***216.046***	***205.180***
Plantation Series	**Forest Cover 1-10%**		***46.297***	***12.293***	***8.229***	***11.317***	***8.204***		***6.274***	***12.402***		***18.587***
	Eucalyptus, Acacia & SFP		***21.000***	***20.000***	***29.588***	***20.000***	***20.000***	***20.000***	***40.000***	***18.480***	***28.120***	***18.440***
	Other Plantation		***20.000***	***30.000***	***20.000***	***35.000***	***70.000***	***70.000***	***35.000***	***10.000***	***10.000***	***15.000***
	Teak							**5.000**				
	Blank Area		**77.502**	**103.123**	**100.522**	**105.758**	**106.659**	**79.532**	**85.531**	**78.802**	**117.176**	**131.884**
	Encroachment		**47.816**	**45.000**	**45.000**	**48.720**	**25.000**	**43.678**	**50.000**	**80.921**	**60.750**	**21.269**
RASGOVINDPUR	Amarda R.F.	388.733	10.000	15.531	1.000	30.801	60.000	60.000	10.000	60.000	70.000	71.401
	Betnasia R.F.	48.285	11.000	17.285	20.000							
	Baghajharan R.F.	111.406	27.032	5.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	9.374
	Baladia R.F.	52.380	10.000	10.000	10.000	10.000	12.380					
	Chitrada R.F.	139.984	15.000	15.000	15.000	15.000	15.000	10.000	13.718	20.000	19.400	1.866
	Jamsole R.F.	219.050	25.000	25.000	23.516	6.484	24.944	25.000	25.000	25.000	20.000	19.106
	Moroda R.F.	320.236	18.917		10.000	40.000	40.000	40.000	40.000	40.000	45.000	46.319
	Nalagaja R.F.	134.245		10.000	14.000	10.000	20.000	20.000	23.698	15.000	14.194	7.353
	Nichuapada R.F.	34.509	7.882	10.000	11.627		5.000					
	Nuhajhalia R.F.	50.500		25.558	20.000	2.942		2.000				
	Nunchatia R.F.	44.893	14.955	10.000	0.767				19.171			

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
RASGOVINDPUR	Sarumula R.F.	129.490	20.000	17.342	20.000	20.000		20.000	23.000			9.148
	Sukhilakhali R.F.	76.231	16.231	20.000	20.000	20.000						
	Chikitamatia V.F.	10.000										10.000
	Sarajharan V.F.	7.344							7.344			
	Pharajpur V.F.	5.000				5.000						
	Duarsuni V.F.	5.000								5.000		
	Nahiasoli V.F.	2.940			2.940							
	Jhatiada V.F.	5.000	5.000									
	Nalagaja V.F.	2.000					2.000					
	Chandanpur V.F.	3.500									3.500	
	Sub-total	***1790.726***	***181.017***	***180.716***	***178.850***	***170.227***	***189.324***	***187.000***	***171.931***	***175.000***	***182.094***	***174.567***
Plantation Series	**Forest Cover 1-10%**		***53.831***	***15.531***	***0.767***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***9.219***
	Eucalyptus, Acacia & SFP		***15.000***	***10.000***	***12.940***	***11.484***	***7.000***	***2.000***	***17.344***	***5.000***	***3.500***	***10.000***
	Other Plantation		***11.000***	***5.000***	***15.000***	***10.000***	***0.000***	***20.000***	***23.000***	***0.000***	***0.000***	***0.000***
	Teak		**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**25.000**	**25.000**	**25.000**	**20.000**	**19.106**
	Blank Area		**101.186**	**150.185**	**150.143**	**115.000**	**157.380**	**140.000**	**87.416**	**110.000**	**125.000**	**127.094**
	Encroachment		**0.000**	**0.000**	**0.000**	**33.743**	**24.944**	**0.000**	**19.171**	**35.000**	**33.594**	**9.148**
UDALA	Anantasahi R.F.	7.120	6.174	0.946								
	Belakuti R.F.	192.558	3.751	30.000	25.000	15.000	15.000	15.000	16.164	15.000	27.643	30.000
	Bhandagaon R.F.	122.210	20.000	20.871				20.000	17.800	19.869	20.000	3.670
	Charada R.F.	7.120			3.389	3.731						
	Dhaundia R.F.	317.268	15.000	10.553	15.000	15.000	15.000	15.000	15.000	15.000	15.000	16.746
			20.000	19.969	15.000	15.000	15.000	15.000	15.000	15.000	20.000	20.000
	Dimgadia R.F.	6.960	4.960	2.000								
	Dugdha R.F.	17.760	15.266	2.494								
	Ghantasila R.F.	5.340	5.340									
	Jaypur R.F.	17.823			9.993	7.830						
	Khunta R.F.	289.412	14.096	25.000	25.000	25.000	20.000	20.000	20.000	25.620		10.000
			10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	14.696

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
UDALA	Kuamara R.F.	229.530	15.000	15.000	2.447	30.000	30.214	30.000	26.892	25.000	25.000	29.977
	Kuriakhunta R.F.	4.673	4.673									
	Marsigaon R.F.	263.320	20.000	15.000	20.000	18.560	20.000	30.000	30.000	30.000	40.000	39.760
	Nahara R.F.	161.870	20.000	20.000	20.000	20.000	20.000	21.158	10.000	15.712	5.000	10.000
	Nuapada R.F.	157.150	20.000	20.000	20.000	20.000	20.000	14.685	20.000	22.465		
	Mundhakata R.F.	20.340									10.000	10.340
	Phuljhari R.F.	65.533	28.188	8.923		15.000	13.422					
	Purunabaripada R.F.	24.409			7.565			11.844				5.000
	Sialia R.F.	34.320							7.810		10.000	16.510
	Sunduria R.F.	2.430							2.430			
	Sirathali R.F.	74.140			10.000	10.000	16.459	10.000		12.681	15.000	
	Udala R.F.	274.811	40.000	40.000	40.000	40.000	34.799	17.316	15.000	17.696	15.000	15.000
	Purunabaripada mankadakenda V.F.	0.648	0.648									
	Kusunia Patpur V.F.	0.320		0.320								
	Bhalimunduli V.F.	3.900			3.900							
	Salabani V.F.	2.960				2.960						
	Sialia V.F.	2.880					2.880					
	Raghunathpur V.F.	4.660						4.660				
	Jamudiha V.F.	2.000								2.000		
	Nuagaon V.F.	13.324							13.324			
	Bahanada V.F.	1.300									1.300	
	Jalda V.F.	1.124										1.124
	Murari V.F.	0.992										0.992
	Gohira V.F.	5.000									5.000	
	Jogibandha V.F.	2.000								2.000		
	Jajpur`V.F.	14.884							14.884			
	Kochiladiha V.F.	15.000								1.640	13.360	
	Khunta V.F.	10.000						10.000				
	Khunta V.F.	3.756								3.756		

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
UDALA	Khunta V.F.	0.096				0.096						
	Khunta V.F.	6.148					6.148					
	Khunta V.F.	0.400		0.400								
	Khunta V.F.	12.600			12.600							
	Sridamchandrapur V.F.	1.376										1.376
	Sub-total	***2401.465***	***263.096***	***241.476***	***239.894***	***248.177***	***238.922***	***244.663***	***234.304***	***233.439***	***232.303***	***225.191***
Plantation Series	**Forest Cover 1-10%**		***65.995***	***10.553***	***2.447***	***0.000***	***0.000***	***0.000***	***0.000***	***17.696***	***0.000***	***3.670***
	Eucalyptus, Acacia & SFP		***15.648***	***15.720***	***31.500***	***18.056***	***26.148***	***24.660***	***43.208***	***24.396***	***21.300***	***18.492***
	Other Plantation		***20.000***	***72.000***	***65.000***	***70.000***	***45.214***	***15.000***	***15.000***	***34.869***	***55.000***	***45.000***
	Teak		**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Blank Area		**111.453**	**88.923**	**130.947**	**108.560**	**129.138**	**120.843**	**89.932**	**40.620**	**56.003**	**57.086**
	Encroachment		**50.000**	**54.280**	**10.000**	**51.561**	**38.422**	**84.160**	**86.164**	**115.858**	**100.000**	**100.943**
BETNOTI	Asanbani R.F.	**804.670**	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	60.000	64.773
			15.000	15.000	15.000	15.000	15.000	15.000	20.000	23.408	5.000	
			10.000	10.000	10.000	10.000	10.000	11.489				
	Asankhali R.F.	9.956							0.913	9.043		
	Badampur R.F.	437.149	15.000	16.944	25.000	25.000	25.000	32.000				
			30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	28.205
	Badguma R.F.	21.309				3.844			5.306	12.159		
	Baisinga R.F.	108.312	15.000	14.722		15.000	13.590			35.000	15.000	
	Balka R.F.	23.960			3.079			10.000	10.000	0.881		
	Bartana R.F.	126.955	10.000	10.000	10.000	10.000	10.000	12.426		15.000	19.529	30.000
	Basantapur R.F.	39.384				20.000	19.384					
	Beldiha R.F.	19.504	7.330				12.174					
	Bhimpur R.F.	18.290		3.674				8.000		6.616		
	Bishrampur R.F.	35.679	10.000		10.000	10.612			5.067			
	Chhatnna R.F.	124.091	10.000	12.180	15.000	15.000	15.000	15.000	22.062		19.849	
	Daldali R.F.	65.220		10.000	10.000	10.000	10.000	10.000		13.984	1.236	

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
BETNOTI	Dalki R.F.	387.077	25.000	25.000	25.000	25.000	25.000	25.000	27.147			11.402
			10.000	10.000	10.000	10.000	25.000	25.000	25.000	25.000	25.000	33.528
	Dumapada R.F.	61.532					10.000	10.000	10.000	10.000	10.000	11.532
	Durgapur R.F.	441.260	20.000	25.412	10.000	15.000						
				40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000	50.848
	Gad-deulia R.F.	58.730						20.000	18.730	5.000		15.000
	Gandigadha R.F.	441.091	6.549									
			45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	29.542
	Garudabasa R.F.	21.960			11.753		10.207					
	Gopalpur R.F.	10.880								8.000	2.880	
	Gobindapur R.F.	11.820										11.820
	Haripur R.F.	40.940		5.000		10.000	10.672		15.268			
	Hatijhuri R.F.	80.473	4.553				5.000		15.000	13.649	20.000	22.271
	Hempur R.F.	290.790					20.000			20.000	20.000	19.072
			20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	31.718
	Ajadiha R.F.	2.100	2.100									
	Jagannathpur R.F.	259.679	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	39.979	19.700
	Jarka R.F.	6.630		2.048			4.582					
	Jugal R.F.	86.330	20.000	17.846			15.000	15.000	18.484			
	Kalma R.F.	24.240	8.890		10.000		5.350					
	Kapoi R.F.	11.010		4.895			6.115					
	Ketakisole R.F.	27.690							18.949		8.741	
	Khadikapada R.F.	56.930		2.000		16.194		20.000	18.736			
	Khetrapatana R.F.	4.210						4.210				
	Khiripada R.F.	419.960					50.000	40.000	40.000	40.000	42.656	
			20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	27.304
	Krushnachandrapur R.F.	481.200	30.000	30.000	37.363	50.000	50.000				4.000	
			30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	39.837	
	Kochilakhunta R.F.	30.000								10.000	10.000	10.000

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
BETNOTI	Machhapada R.F.	62.810	26.930		17.993		5.077		12.810			
	Mamtapal R.F.	222.730	10.000	10.000	11.192	10.000	20.000	20.000	20.000	20.000	19.523	
					10.000	10.000	10.000	10.000	10.000	10.000	10.000	12.015
	Merda R.F.	171.095	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	11.095	
	Mohanpur R.F.	21.619	0.427		9.110		12.082					
	Nuagaon R.F.`	39.330		5.000					10.000	10.000	14.330	
	Phuljhari R.F.	50.000				20.000	30.000					
	Purunia R.F.	440.950	20.000	20.000	27.591	30.000	35.000	35.000	35.000	25.000	25.000	20.982
			20.000	20.000	20.000	20.000	20.000	20.000	20.000	27.377		
	Raikama R.F.	78.299	20.000	20.000	20.000	12.895				5.404		
	Rautra R.F.	53.075	4.019	5.000		20.000	16.709			7.347		
	Sarbana R.F.	37.058	6.428				10.000		15.348			5.282
	Thakurtota R.F.	73.330		25.000		1.388			10.000	10.000	10.000	16.942
	Bharadasole R.F.	17.777	4.881					12.896				
	Bhalukchua R.F.	35.027			15.000	14.727			5.300			
	Totapada R.F.	65.070	5.445	5.000			20.000	18.502		16.123		
	Tikayatpur R.F.	160.090		5.000	10.000	10.000	20.000	20.000	27.507	20.000	20.000	27.583
	Patpur RF	91.857	10.000	11.554	30.000	20.000	10.000	10.303				
	Kochilakhunta P.R.F.	26.801							10.000	16.789		0.012
	Bhalia P.R.F.	339.162	20.000	20.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	11.814
			25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	17.348	
	Kathapal V.F.	0.240		0.240								
	Chakulia V.F.	3.000			3.000							
	Karatpata V.F.	0.780				0.780						
	Chakulia V.F.	4.000					4.000					
	Analagadia (Matidahi) V.F.	3.060						3.060				
	Jhinkiria V.F.	1.600							1.600			
	Singida Munduli V.F.	3.320								3.320		
	Athabahia V.F.	1.700									1.700	

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
BETNOTI	Mendhamundia V.F.	2.100										2.100
	Anbagadia V.F.	12.664									12.664	
	Kalana V.F.	5.000								5.000		
	Rautrapur V.F.	5.000							5.000			
	Kalana V.F.	10.000						10.000				
	Tulajhuri V.F.	8.000					8.000					
	Asukanda V.F.	3.300				3.300						
	Angaria V.F.	0.560			0.560							
	Tikayatpur V.F.	0.800		0.800								
	Purunia V.F.	10.000	10.000									
	Purunia V.F.	10.000		10.000								
	Purunia V.F.	3.880			3.880							
	Purunia V.F.	6.560				6.560						
	Balaka V.F.	2.000					2.000					
	Raghupur V.F.	10.000						10.000				
	Raghupur V.F.	7.000							7.000			
	Raghupur V.F.	9.600								9.600		
	Raghupur V.F.	3.000									3.000	
	Raghupur V.F.	5.684										5.684
	Raghupur V.F.	11.232									11.232	
	Raghupur V.F.	7.000								7.000		
	Gadigaon V.F.	9.644							9.644			
	Gadadeuli V.F.	0.840						0.840				
	Gadadeuli V.F.	7.296					7.296					
	Nuagaon V.F.	3.200				3.200						
	Buguhuda V.F.	2.000			2.000							
	Sub-total	***7251.151***	***652.552***	***687.315***	***707.521***	***768.500***	***922.238***	***768.726***	***794.871***	***765.700***	***664.599***	***519.129***
Plantation Series	**Forest Cover 1-10%**		***112.421***	***98.210***	***51.862***	***13.844***	***15.077***	***11.489***	***0.000***	***0.000***	***0.000***	***11.402***
	Eucalyptus, Acacia & SFP		***36.930***	***68.040***	***39.440***	***63.840***	***136.296***	***58.900***	***58.244***	***64.920***	***50.476***	***37.784***

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
	Other Plantation		***58.890***	***45.000***	***65.000***	***100.000***	***90.000***	***80.000***	***30.000***	***30.000***	***15.000***	***25.000***
	Teak		**0.000**	**0.000**	**0.000**	**50.000**	**50.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Blank Area		**309.311**	**341.065**	**388.856**	**363.234**	**397.381**	**455.138**	**492.203**	**427.055**	**384.768**	**241.688**
	Encroachment		**135.000**	**135.000**	**162.363**	**177.582**	**233.484**	**163.199**	**214.424**	**243.725**	**214.355**	**203.255**
DEULI	Andhari R.F.	722.718	20.000	25.000	10.000	30.000	30.000	33.466		10.000		10.000
			60.000	60.000	50.852	60.000	60.000	60.000	60.000	60.000	60.000	23.400
	Chandua R.F.	1246.035	6.000	70.000	70.000	70.000	20.000	70.000	70.000	70.000	73.555	
			70.000	70.000	70.000	70.000	70.000	70.000	70.000	70.000	70.000	96.480
	Deuli R.F.	555.153	23.263	28.450	80.000	15.000	80.000	80.000	80.000	80.000	15.000	73.440
	Kuliana R.F.	733.037		15.000	20.000	25.000			15.000		50.000	53.972
			55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	55.000	59.065
	Suliapada R.F.	1027.099	20.000	100.000	100.000	100.000	100.000	20.000	100.000	100.000	100.000	86.865
			30.000	30.000	30.000	30.000	21.300	25.000	33.934			
	Badsole P.R.F.	60.927	59.194	1.733								
	Tangasole P.R.F.	24.986	18.419								0.606	5.961
	Kaliasole P.R.F.	134.729	30.000					30.000			43.150	31.579
	Dhalu Suliapada V.F.	1.060	1.060									
	Kasia V.F.	1.740		1.740								
	Handibhanga V.F.	2.468			2.468							
	Anlakuda V.F.	6.000				6.000						
	Sankhunta V.F.	2.000					2.000					
	Jalda V.F.	0.276						0.276				
	Sub-total	***4518.228***	***392.936***	***456.923***	***488.320***	***461.000***	***438.300***	***443.742***	***483.934***	***445.000***	***467.311***	***440.762***
Plantation Series	**Forest Cover 1-10%**		***71.682***	***101.733***	***100.000***	***130.000***	***51.300***	***103.466***	***70.000***	***70.000***	***123.555***	***53.972***
	Eucalyptus, Acacia & SFP		***21.060***	***16.740***	***12.468***	***21.000***	***22.000***	***20.276***	***15.000***	***10.000***	***15.000***	***10.000***
	Other Plantation		***26.000***	***53.450***	***20.000***	***25.000***	***0.000***	***25.000***	***0.000***	***0.000***	***0.000***	***0.000***
	Teak		**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
	Blank Area		**274.194**	**285.000**	**355.852**	**225.000**	**305.000**	**235.000**	**305.000**	**305.000**	**225.000**	**353.390**
	Encroachment		**0.000**	**0.000**	**0.000**	**60.000**	**60.000**	**60.000**	**93.934**	**60.000**	**103.756**	**23.400**
KAPTIPADA	Asanabani R.F.	175.465	3.988	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	11.477
	Nachhipur R.F.	229.000	20.000	4.900	25.000	25.000	25.000	25.000	25.000	25.000	25.000	29.100
	Sukhuapata Hill P.F.	45.000	25.000	20.000								
	Kaladahi V.F.	1.500		1.500								
	Pedagadia V.F.	0.220			0.220							
	Khaladi V.F.	2.112										2.112
	Sub-total	***453.297***	***48.988***	***46.400***	***45.220***	***45.000***	***45.000***	***45.000***	***45.000***	***45.000***	***45.000***	***42.689***
Plantation Series	**Forest Cover 1-10%**		***3.988***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***
	Eucalyptus, Acacia & SFP		***0.000***	***1.500***	***0.220***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***2.112***
	Other Plantation		***45.000***	***40.000***	***20.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***
	Teak		**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Blank Area		**0.000**	**0.000**	**25.000**	**45.000**	**45.000**	**45.000**	**45.000**	**45.000**	**45.000**	**40.577**
	Encroachment		**0.000**	**4.900**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
BANGRIPOSI	Dighi R.F.	515.940	5.000	5.000	5.000	5.000	5.000	5.000	5.000	10.000	10.000	10.000
			15.000	14.830	30.000	30.000	36.585	30.000	30.000	30.000	30.000	38.043
			20.000	20.000	20.000	20.000	20.000	20.000	20.000	26.482		
	Rangahudi R.F.	53.587	8.787	1.400							20.000	23.400
	Thakurani R.F.	287.124	23.127	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	23.997
	Juha P.R.F.	26.806		17.312		9.494						
	Manbhanj V.F.	3.940	3.940									
	Baghajhampa V.F.	8.000		8.000								
	Jarkani V.F.	7.000			7.000							
	Nata V.F.	7.000				7.000						
	Birsingh V.F.	0.600					0.600					
	Nohanatia V.F.	4.000						4.000				

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
BANGRIPOSI	Pahadpur V.F.	9.000							9.000			
	Heenachandrapur V.F.	9.000								9.000		
	Heenachandrapur V.F.	5.000									5.000	
	Jaivilla V.F.	0.532										0.532
	Sindurgoura V.F.	0.260										0.260
	Handibhanga V.F.	2.468									2.468	
	Bagbuda V.F.	4.000								4.000		
	Pokhariadiha V.F.	8.000							8.000			
	Govindpur V.F.	8.000						8.000				
	Bedhakudar V.F.	10.000					10.000					
	Gopinathpur V.F.	1.424				1.424						
	Pahadpur V.F.	1.500			1.500							
	Brundabanchandrapur V.F.	1.846		1.846								
	Brundabanchandrapur V.F.	4.500	4.500									
	Brundabanchandrapur V.F.	0.720		0.720								
	Kuabuda V.F.	12.000	12.000									
	Kuabuda V.F.	5.000		5.000								
	Kuabuda V.F.	8.000			8.000							
	Kuabuda V.F.	10.608				10.608						
	Kuabuda V.F.	5.000					5.000					
	Pokharia V.F.	6.208						6.208				
	Pokharia V.F.	4.000							4.000			
	Pokharia V.F.	10.000								10.000		
	Pokharia V.F.	4.000									4.000	
	Pokharia V.F.	1.608										1.608
	Pokharia V.F.	0.788										0.788

Name of Range	Name of Forest Block	Area under PWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
BANGRIPOSI	Pokharia V.F.	6.000									6.000	
	Pokharia V.F.	3.000								3.000		
	Pokharia V.F.	2.108							2.108			
	Joka V.F.	8.000						8.000				
	Jharpokharia V.F.	0.540					0.540					
	Jharpokharia V.F.	2.000				2.000						
	Bagbuda V.F.	0.400			0.400							
	Bagbuda V.F.	0.640		0.640								
	Banakati V.F.	3.088	3.088									
	Sub-total	***1073.235***	***95.442***	***104.748***	***101.900***	***115.526***	***107.725***	***111.208***	***108.108***	***122.482***	***107.468***	***98.628***
Plantation Series	**Forest Cover 1-10%**		***46.914***	***32.142***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***
	Eucalyptus, Acacia & SFP		***28.528***	***21.206***	***14.900***	***26.032***	***21.140***	***31.208***	***28.108***	***36.000***	***27.468***	***13.188***
	Other Plantation		***0.000***	***0.000***	***30.000***	***30.000***	***36.585***	***0.000***	***0.000***	***0.000***	***0.000***	***0.000***
	Teak		**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
	Blank Area		**0.000**	**30.000**	**37.000**	**39.494**	**30.000**	**60.000**	**60.000**	**60.000**	**80.000**	**85.440**
	Encroachment		**20.000**	**21.400**	**20.000**	**20.000**	**20.000**	**20.000**	**20.000**	**26.482**	**0.000**	**0.000**
DivisionTotal		***21029.019***	***1943.473***	***2067.994***	***2110.044***	***2199.824***	***2341.372***	***2189.214***	***2199.741***	***2107.226***	***2038.862***	***1831.269***

Appendix – XXXIV

REHABILITATION WORKING CIRCLE ANNUAL SCHEDULE OF OPERATION

Name of Range	Sl. No.	Name of RF/ PRF/ PF/ VF	RWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
PITHABATA	1	Baldiha R.F.	72.408	30.000	42.408								
	2	B.C. Pur R.F.	334.955	30.000	30.000	30.000	30.000	47.000	30.000	30.000	30.000	30.000	47.955
	3	Budhikhamari R.F.	529.988	50.000	50.000	50.000	50.000	64.994	50.000	50.000	50.000	50.000	64.994
	4	Hatikote R.F.	378.932	40.000	40.000	40.000	40.000	29.000	40.000	40.000	40.000	40.000	29.932
	5	Lulung-Purunapani R.F.	139.269	30.000	39.000				30.000	40.269	0.000	0.000	0.000
	6	Manchabandha R.F.	771.525	80.000	80.000	80.000	80.000	65.000	80.000	80.000	80.000	80.000	66.525
		Sub-total	**2227.077**	**260.000**	**281.408**	**200.000**	**200.000**	**205.994**	**230.000**	**240.269**	**200.000**	**200.000**	**209.406**
DUKURA	7	Aghasole RF	4.563	4.563									
	8	Badsahi R.F.	136.832	30.000	38.416	30.000	38.416						
	9	Bidhyadharpur R.F.	124.918	30.000	32.459	30.000	32.459						
	10	Chakradharpur R.F.	53.599	30.000	23.599								
	11	Deulia R.F.	105.089	25.000	27.000	25.000	28.089						
	12	Gojodi-Damodarpur R.F.	13.971										13.971
	13	Haldia R.F.	5.091										5.091
	14	Itamundia R.F.	36.416					36.416					
	15	Jarkani R.F.	9.116					9.116					
	16	Kanpura R.F.	177.456					30.000	30.000	28.728	30.000	30.000	28.728
	17	Purunapani R.F.	25.516						25.516				
	18	Dukura R.F.	126.085							30.000	33.000	30.000	33.085
	19	Nigirdha (B) P.R.F.	30.311						30.311				
	20	Kukurbhuka (1)P.R.F.	101.764					30.000	20.882	30.000	20.882		
	21	Kukurbhuka (2)P.R.F.	70.272									40.000	30.272
	22	Sanamakabadi P.R.F.	109.296			54.648	54.648						

Name of Range	Sl. No.	Name of RF/ PRF/ PF/ VF	RWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
	23	Budhabalang (A) P.R.F.	40.440							40.440			
	24	Budhabalang (B) P.R.F.	69.029								30.000	39.029	
	25	Gopinathpur P.R.F.	305.580	30.000	30.000	30.000	30.000	32.000	30.000	30.000	30.000	30.000	33.580
		Sub-total	**1545.344**	**149.563**	**151.474**	**169.648**	**183.612**	**137.532**	**136.709**	**159.168**	**143.882**	**169.029**	**144.727**
RASGOVINDPUR	26	Amarda R.F.	1122.819	110.000	110.000	110.000	110.000	121.000	110.000	110.000	110.000	110.000	121.819
	27	Betnasia R.F.	61.945	30.000	31.945								
	28	Baghajharan R.F.	34.144			34.144							
	29	Baladia R.F.	43.450				43.450						
	30	Chitrada R.F.	269.856			30.000	30.000	30.000	44.000	30.000	30.000	30.000	45.856
	31	Moroda R.F.	1144.054	115.000	115.000	115.000	115.000	112.000	115.000	115.000	115.000	115.000	112.054
	32	Nalagaja R.F.	126.045	30.000	33.000	30.000	33.045						
	33	Nichuapada R.F.	17.771							17.771			
	34	Nunchatia R.F.	103.377	30.000	21.000	30.000	22.377						
	35	Sarumula R.F.	200.350					30.000	30.000	40.000	30.000	30.000	40.350
	36	Sukhilakhali R.F.	154.329						40.000	37.000	40.000	37.329	
		Sub-total	**3278.140**	**315.000**	**310.945**	**349.144**	**353.872**	**293.000**	**339.000**	**349.771**	**325.000**	**322.329**	**320.079**
UDALA	37	Dhaundia R.F.	206.722	30.000	30.000	43.000	30.000	30.000	43.722				
	38	Dugdha R.F.	17.530							17.530			
	39	Khunta R.F.	133.988							30.000	36.000	30.000	37.988
	40	Nuapada R.F.	167.230	40.000	43.000	40.000	44.230						
	41	Phuljhari R.F.	250.117					40.000	40.000	45.000	40.000	40.000	45.117
	42	Kuriakhunta R.F.	2.777										2.777
	43	Puruna Baripada R.F.	1.441										1.441
	44	Jaypur R.F.	9.977										9.977
	45	Belakuti R.F.	30.822									30.822	
	46	Udala R.F.	259.119	30.000	30.000	30.000	39.000	30.000	30.000	30.000	40.119		
		Sub-total	**1079.723**	**100.000**	**103.000**	**113.000**	**113.230**	**100.000**	**113.722**	**122.530**	**116.119**	**100.822**	**97.300**

Name of Range	Sl. No.	Name of RF/ PRF/ PF/ VF	RWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
BETNOTI	47	Badampur R.F.	515.102	50.000	50.000	50.000	50.000	57.000	50.000	50.000	50.000	50.000	58.102
	48	Asankhali R.F.	2.874	2.874									
	49	Badguma R.F.	7.661	7.661									
	50	Bartana R.F.	67.935		30.000	37.935							
	51	Basantapur R.F.	74.416				40.000	34.416					
	52	Beldiha R.F.	22.096						22.096				
	53	Bishrampur R.F.	6.571						6.571				
	54	Chhatnna R.F.	267.369			30.000	30.000	30.000	43.000	30.000	30.000	30.000	44.369
	55	Dalki R.F.	440.893	45.000	45.000	45.000	45.000	40.000	45.000	45.000	45.000	45.000	40.893
	56	Dumapada R.F.	158.018							40.000	39.000	40.000	39.018
	57	Durgapur R.F.	516.280	50.000	50.000	50.000	50.000	58.000	50.000	50.000	50.000	50.000	58.280
	58	Gandigadha R.F.	625.290	60.000	60.000	60.000	60.000	72.000	60.000	60.000	60.000	60.000	73.290
	59	Garudabasa R.F.	49.910	49.910									
	60	Hatijhuri R.F.	28.637		28.637								
	61	Jagannathpur R.F.	191.561		30.000	30.000	35.000	30.000	30.000	36.561			
	62	Jugal R.F.	218.460	35.000	35.000	39.000	35.000	35.000	39.460				
	63	Kapoi R.F.	98.250							30.000	30.000	38.250	
	64	Ketakisole R.F.	11.640							11.640			
	65	Khadikapada R.F.	18.180								18.180		
	66	K.C. Pur R.F.	771.710	75.000	75.000	75.000	75.000	85.000	75.000	75.000	75.000	75.000	86.710
	67	Kochilakhunta R.F.	229.320	40.000	40.000	34.000	40.000	40.000	35.320				
	68	Merda R.F.	324.725	40.000	40.000	40.000	42.000	40.000	40.000	40.000	42.725		
	69	Mohanpur R.F.	13.511										13.511
	70	Phuljhari R.F.	167.420							40.000	40.000	47.420	40.000
	71	Raikama R.F.	103.041	51.000	52.041								
	72	Rautra R.F.	66.085			30.000	36.085						
	73	Sarbana R.F.	4.062										4.062
	74	Bharadasole R.F.	32.893									32.893	

Name of Range	Sl. No.	Name of RF/ PRF/ PF/ VF	RWC	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
	75	Bhalukchua R.F.	164.403						40.000	42.000	40.000	42.403	
	76	Patpur RF	49.023										49.023
	77	Kochilakhunta P.R.F.	72.199	40.000	32.199								
	78	Bhalia P.R.F.	0.998			0.998							
		Sub-total	**5320.533**	**546.445**	**567.877**	**521.933**	**538.085**	**521.416**	**536.447**	**550.201**	**519.905**	**510.966**	**507.258**
DEULI	79	Andhari R.F.	8.912	8.912									
	80	Chandua R.F.	1818.245	180.000	180.000	180.000	180.000	189.000	180.000	180.000	180.000	180.000	189.245
	81	Deuli R.F.	1822.907	180.000	180.000	180.000	180.000	191.000	180.000	180.000	180.000	180.000	191.907
	82	Kuliana R.F.	465.843	45.000	45.000	45.000	45.000	52.000	45.000	45.000	45.000	45.000	53.843
	83	Suliapada R.F.	1854.461	180.000	180.000	180.000	180.000	207.000	180.000	180.000	180.000	180.000	207.461
	84	Badsole P.R.F.	156.103	40.000	38.000	40.000	38.103						
	85	Tangasole P.R.F.	206.694					35.000	35.000	33.000	35.000	35.000	33.694
	86	Kaliasole P.R.F.	185.431	30.000	30.000	32.000	30.000	30.000	33.431				
		Sub-total	**6518.596**	**663.912**	**653.000**	**657.000**	**653.103**	**704.000**	**653.431**	**618.000**	**620.000**	**620.000**	**676.150**
KAPTIPADA	87	Asanabani R.F.	87.095	40.000	47.095								
	88	Sukhuapata Hill P.F.	46.990			46.990							
		Sub-total	**134.085**	**40.000**	**47.095**	**46.990**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
BANGRIPOSI	89	Rangahudi R.F.	33.083	33.083									
	90	Thakurani R.F.	209.896		35.000	35.000	34.000	35.000	35.000	35.896			
	91	Juha P.R.F.	59.234								30.000	29.234	
	92	Pimpudijharan P.F.	60.970	30.000	30.970								
	93	Kapadiha P.F.	10.730										10.730
	94	Ambadiha P.F.	14.030										14.030
	95	Hill Block-1 P.F.	712.750	70.000	70.000	70.000	70.000	76.000	70.000	70.000	70.000	70.000	76.750
	96	Maheshpur P.F.	98.430			30.000	30.000	38.430					
		Sub-total	**1199.123**	**133.083**	**135.970**	**135.000**	**134.000**	**149.430**	**105.000**	**105.896**	**100.000**	**99.234**	**101.510**
Division Total		***96 Forest Blocks***	***21302.621***	***2208.003***	***2250.769***	***2192.715***	***2175.902***	***2111.372***	***2114.309***	***2145.835***	***2024.906***	***2022.380***	***2056.430***

Appendix – XXXV

CARBON STOCK OF REVENUE FORESTS OF BARIPADA FOREST DIVISION

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1	Murari	5.15	335.84	1728.78	864.39
2	Adapal	32.20	335.84	10814.40	5407.20
3	Adhamangdpr	0.00	335.84	0.00	0.00
4	Adiomara	0.21	335.84	72.03	36.02
5	Adipur	4.24	335.84	1422.98	711.49
6	Adlaikula	2.65	335.84	891.57	445.79
7	Agad	2.72	335.84	913.32	456.66
8	Agada	82.02	335.84	27546.35	13773.18
9	Agana	22.08	335.84	7415.28	3707.64
10	Agaria	0.30	335.84	100.57	50.29
11	Agasole	1.54	335.84	516.46	258.23
12	Agnikumari	0.56	335.84	188.92	94.46
13	Ahanleami	11.16	335.84	3748.41	1874.21
14	Ahari	0.01	335.84	2.72	1.36
15	Akarsila	8.50	335.84	2854.12	1427.06
16	Aktapal	1.57	335.84	525.97	262.99
17	Aladia	0.53	335.84	179.40	89.70
18	Algaria	0.92	335.84	309.88	154.94
19	Alkaleatia	1.98	335.84	665.96	332.98
20	Alubani	13.76	335.84	4620.96	2310.48
21	Amarda	4.63	335.84	1553.46	776.73
22	Ambadali	11.74	335.84	3941.41	1970.70
23	Ambadiha	33.90	335.84	11383.87	5691.93
24	Ambadumvi	5.26	335.84	1766.84	883.42
25	Ambajoda	20.57	335.84	6906.97	3453.49
26	Ambapunja	5.59	335.84	1878.28	939.14
27	Ambikadeipur	39.43	335.84	13240.41	6620.20
28	Ambua	10.11	335.84	3393.69	1696.84
29	Analasole	4.97	335.84	1667.62	833.81
30	Ananda Pur	1.35	335.84	452.58	226.29
31	Ananta Pur	17.75	335.84	5962.40	2981.20
32	Anantasahi	5.01	335.84	1681.21	840.61
33	Andhari	50.30	335.84	16893.14	8446.57
34	Andharia	1.00	335.84	337.06	168.53
35	Andharisole	1.10	335.84	369.68	184.84
36	Andharjoda	28.24	335.84	9483.84	4741.92
37	Andirapal	5.61	335.84	1885.08	942.54
38	Angarapada	7.23	335.84	2427.36	1213.68
39	Angargadia	27.76	335.84	9322.11	4661.05
40	Angargodia	1.56	335.84	524.61	262.31
41	Angargudia	3.29	335.84	1104.95	552.48
42	Angaria	31.08	335.84	10439.29	5219.65
43	Angarkandia	0.95	335.84	318.03	159.02

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
44	Anlasuti	5.37	335.84	1804.89	902.45
45	Anlatada	5.46	335.84	1834.79	917.40
46	Anondabrada	3.79	335.84	1273.48	636.74
47	Anua	7.68	335.84	2578.22	1289.11
48	Aradiha	0.40	335.84	135.91	67.96
49	Arjunbaria	10.06	335.84	3378.74	1689.37
50	Arjundiha	3.07	335.84	1030.20	515.10
51	Arpata	5.55	335.84	1863.33	931.67
52	Asana	8.24	335.84	2765.78	1382.89
53	Asanbani	27.52	335.84	9241.92	4620.96
54	Asdiasahi	6.07	335.84	2038.66	1019.33
55	Ashanabani	137.79	335.84	46273.47	23136.73
56	Astagadia	0.00	335.84	0.00	0.00
57	Astajharan	3.24	335.84	1087.28	543.64
58	Astapura	3.97	335.84	1334.64	667.32
59	Asthapura	0.04	335.84	12.23	6.12
60	Astia	6.44	335.84	2163.70	1081.85
61	Asukanda	0.66	335.84	220.18	110.09
62	Atanati	5.66	335.84	1900.03	950.01
63	Atebapuchhula	1.35	335.84	453.94	226.97
64	Athangan	2.02	335.84	678.19	339.10
65	Athapada	9.58	335.84	3215.78	1607.89
66	Athilagadi	0.66	335.84	220.18	110.09
67	Auzakhunta	0.23	335.84	78.83	39.41
68	Bacharibandha	0.84	335.84	282.69	141.35
69	Bachhuripada	0.03	335.84	10.87	5.44
70	Bachhuripal	0.00	335.84	0.00	0.00
71	Bad Bramhanmara	7.22	335.84	2424.64	1212.32
72	Bad Nuagaon	0.57	335.84	192.99	96.50
73	Badachotra	0.59	335.84	198.43	99.21
74	Badadangua	2.36	335.84	793.72	396.86
75	Badafeni	19.47	335.84	6537.30	3268.65
76	Badakaranjia	2.30	335.84	773.33	386.67
77	Badakhaladi	214.61	335.84	72073.37	36036.69
78	Badal	4.09	335.84	1374.06	687.03
79	Badaligar	24.13	335.84	8102.99	4051.49
80	Badamamudia	2.85	335.84	956.81	478.41
81	Badampada	390.35	335.84	131092.67	65546.33
82	Badampur	3.55	335.84	1193.29	596.65
83	Badaolia	3.96	335.84	1329.21	664.60
84	Badapathara	10.28	335.84	3450.77	1725.38
85	Badaraikali	1.15	335.84	385.99	192.99
86	Badasole	2.84	335.84	952.73	476.37
87	Badbadi	2.10	335.84	706.73	353.37
88	Badbadtalia	6.84	335.84	2296.89	1148.44
89	Badbanga	2.71	335.84	909.24	454.62
90	Badbanicha	2.74	335.84	920.11	460.06

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
91	Badbelakutti	0.91	335.84	307.16	153.58
92	Badbila	0.42	335.84	139.99	69.99
93	Badbilla	5.80	335.84	1948.96	974.48
94	Badbramono	2.82	335.84	947.30	473.65
95	Baddakoi	5.14	335.84	1726.06	863.03
96	Baddhinkia	0.55	335.84	184.84	92.42
97	Badfera	12.27	335.84	4120.81	2060.40
98	Badgogibandha	3.67	335.84	1234.07	617.03
99	Badgopalpur	1.19	335.84	399.58	199.79
100	Badgudia	28.67	335.84	9627.90	4813.95
101	Badhaksole	3.11	335.84	1043.79	521.90
102	Badhangan	9.64	335.84	3236.03	1618.02
103	Badhi	2.28	335.84	765.18	382.59
104	Badjad	54.83	335.84	18414.52	9207.26
105	Badjamleani	3.35	335.84	1126.70	563.35
106	Badjunbani	9.80	335.84	3291.75	1645.88
107	Badjunpal	5.89	335.84	1978.86	989.43
108	Badkachimbila	0.28	335.84	95.14	47.57
109	Badkaritippod	4.99	335.84	1675.78	837.89
110	Badkerko	13.82	335.84	4641.35	2320.67
111	Badkhaman	51.44	335.84	17274.23	8637.12
112	Badmachana	0.00	335.84	0.00	0.00
113	Badmundhabeni	2.14	335.84	718.97	359.48
114	Badnachana	8.58	335.84	2882.66	1441.33
115	Badpeta	13.43	335.84	4511.28	2255.64
116	Badputuk	0.80	335.84	269.10	134.55
117	Badrahunch.Pur	5.10	335.84	1712.47	856.24
118	Badsarasposi	3.35	335.84	1125.34	562.67
119	Badsatsole	0.35	335.84	118.24	59.12
120	Badsingaria	12.69	335.84	4262.16	2131.08
121	Badsole	26.85	335.84	9016.31	4508.15
122	Badsolrisabla	2.28	335.84	766.54	383.27
123	Badsua	0.40	335.84	135.91	67.96
124	Badsukhilakhal	1.86	335.84	623.83	311.91
125	Badtilou	16.84	335.84	5653.88	2826.94
126	Badtungadhua	24.01	335.84	8063.57	4031.79
127	Badvolia	5.75	335.84	1932.65	966.32
128	Bagalpur	13.63	335.84	4576.11	2288.05
129	Bagbuda	12.16	335.84	4084.11	2042.06
130	Bagdafa	196.70	335.84	66059.74	33029.87
131	Bagdiha	1.21	335.84	407.73	203.87
132	Baghaharon	21.12	335.84	7091.81	3545.91
133	Baghaleasa	3.82	335.84	1284.35	642.18
134	Baghara	0.08	335.84	25.82	12.91
135	Baghasahi	1.59	335.84	535.49	267.74
136	Baghomara	3.79	335.84	1273.48	636.74
137	Baghuapal	1.76	335.84	589.85	294.93
138	Baghuasole	70.62	335.84	23716.39	11858.20

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
139	Bagjhampa	7.88	335.84	2644.82	1322.41
140	Bahadasahi	0.33	335.84	110.09	55.04
141	Bahagadia	7.47	335.84	2508.91	1254.45
142	Bahalda	25.18	335.84	8456.36	4228.18
143	Bahanada	5.31	335.84	1781.79	890.89
144	Baidikotha	13.35	335.84	4485.05	2242.52
145	Baidipur	0.18	335.84	59.80	29.90
146	Baidpur	0.52	335.84	173.97	86.98
147	Baigmbadia	0.13	335.84	43.49	21.75
148	Baikuntaha	13.59	335.84	4563.88	2281.94
149	Baikunthapur	1.87	335.84	626.55	313.27
150	Baincha	11.51	335.84	3865.30	1932.65
151	Bainchaniha	0.00	335.84	0.00	0.00
152	Bairat Pur	39.62	335.84	13307.00	6653.50
153	Baisabad	0.72	335.84	243.28	121.64
154	Baisinga	1.19	335.84	400.94	200.47
155	Bakichua	5.13	335.84	1723.35	861.67
156	Balabhadrapur	13.55	335.84	4550.69	2275.35
157	Balarampur	19.76	335.84	6635.15	3317.58
158	Baldia	42.61	335.84	14308.66	7154.33
159	Baliadhipa	9.49	335.84	3187.10	1593.55
160	Balichaturi	0.75	335.84	252.79	126.40
161	Balichhatara	9.16	335.84	3077.02	1538.51
162	Balichua	30.41	335.84	10213.68	5106.84
163	Balidam	2.17	335.84	728.48	364.24
164	Balideha	3.03	335.84	1016.61	508.31
165	Balidiha	14.08	335.84	4729.69	2364.84
166	Balijada	0.08	335.84	27.18	13.59
167	Balijoda	7.83	335.84	2631.23	1315.61
168	Balijodi	1.16	335.84	390.06	195.03
169	Balikhani	4.67	335.84	1567.05	783.52
170	Balimundali	9.29	335.84	3120.51	1560.25
171	Balimundoli	3.61	335.84	1213.68	606.84
172	Balipal	4.78	335.84	1603.74	801.87
173	Balka	9.08	335.84	3049.83	1524.92
174	Bampur	0.00	335.84	0.00	0.00
175	Banakati	2.95	335.84	990.79	495.39
176	Banakoti	0.23	335.84	77.47	38.73
177	Banamalipur	19.64	335.84	6595.74	3297.87
178	Bandhagada	6.71	335.84	2254.76	1127.38
179	Bandhames	0.00	335.84	0.00	0.00
180	Bandhasahi	0.16	335.84	53.01	26.50
181	Banduda	2.93	335.84	983.99	492.00
182	Bangaon	7.52	335.84	2526.58	1263.29
183	Bangei	0.81	335.84	271.82	135.91
184	Bangra	4.68	335.84	1571.13	785.56
185	Bani	1.76	335.84	589.85	294.93
186	Baniabasa	2.53	335.84	850.80	425.40

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
187	Bankala	18.22	335.84	6120.05	3060.03
188	Bankati	2.89	335.84	969.04	484.52
189	Bankisole	53.03	335.84	17808.36	8904.18
190	Bantalpada	7.02	335.84	2356.69	1178.34
191	Baouli	0.74	335.84	248.72	124.36
192	Baradehi	12.14	335.84	4077.32	2038.66
193	Baragadia	1.92	335.84	644.22	322.11
194	Bargriposi	2.62	335.84	880.70	440.35
195	Barihapal	0.96	335.84	320.75	160.37
196	Barpada	0.88	335.84	296.29	148.14
197	Barsahi	2.14	335.84	720.33	360.16
198	Bartana	4.12	335.84	1384.93	692.46
199	Barubeda	19.73	335.84	6627.00	3313.50
200	Basartapary	6.94	335.84	2330.87	1165.43
201	Bathadibandi	0.71	335.84	239.20	119.60
202	Baunsabani	65.12	335.84	21868.01	10934.00
203	Baunsakantia	13.22	335.84	4438.84	2219.42
204	Baunsbudhi	0.68	335.84	229.69	114.84
205	Baura	33.82	335.84	11358.05	5679.02
206	Bautisole	14.15	335.84	4752.79	2376.40
207	Bedapal	1.13	335.84	377.83	188.92
208	Bedhakudar	4.48	335.84	1504.53	752.26
209	Bedhi	1.72	335.84	576.26	288.13
210	Begunabindha	0.50	335.84	167.17	83.58
211	Beguniabani	1.61	335.84	540.92	270.46
212	Beguniadiha	4.31	335.84	1447.45	723.72
213	Begunicdihs	13.72	335.84	4607.37	2303.68
214	Belafal	1.52	335.84	509.66	254.83
215	Belaghari	1.57	335.84	528.69	264.35
216	Belam	0.00	335.84	1.36	0.68
217	Belbaria	0.74	335.84	247.36	123.68
218	Beldamgiri	0.87	335.84	293.57	146.78
219	Beldiha	23.49	335.84	7889.61	3944.80
220	Beldihia	38.72	335.84	13003.92	6501.96
221	Belpal	3.21	335.84	1077.77	538.89
222	Belpalsanlil	1.21	335.84	407.73	203.87
223	Belrisole	2.12	335.84	713.53	356.77
224	Benagan	1.93	335.84	648.29	324.15
225	Benapatia	0.04	335.84	13.59	6.80
226	Benasul	2.34	335.84	784.20	392.10
227	Benipur	1.97	335.84	660.53	330.26
228	Benipuria	0.56	335.84	187.56	93.78
229	Benta	7.45	335.84	2500.75	1250.38
230	Besarpani	11.33	335.84	3805.50	1902.75
231	Betanasia	3.70	335.84	1243.58	621.79
232	Betnasia	4.11	335.84	1379.49	689.75
233	Betnota	0.29	335.84	96.50	48.25
234	Bhadialiha	0.42	335.84	139.99	69.99

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
235	Bhadua	45.45	335.84	15264.12	7632.06
236	Bhadua Sol	12.47	335.84	4187.40	2093.70
237	Bhaduabeda	15.55	335.84	5221.68	2610.84
238	Bhadusole	10.45	335.84	3510.57	1755.28
239	Bhagabandh	9.72	335.84	3265.93	1632.97
240	Bhagabandha	9.27	335.84	3113.71	1556.86
241	Bhagalatchpur	59.80	335.84	20082.14	10041.07
242	Bhaguli	2.04	335.84	683.63	341.82
243	Bhairangisul	5.83	335.84	1958.47	979.24
244	Bhalghati	1.32	335.84	441.71	220.85
245	Bhaliadiha	0.81	335.84	270.46	135.23
246	Bhaliadihi	3.69	335.84	1238.15	619.07
247	Bhaliapada	0.81	335.84	273.18	136.59
248	Bhaliasole	25.06	335.84	8416.94	4208.47
249	Bhalikcheea	61.91	335.84	20791.60	10395.80
250	Bhalubasa	11.98	335.84	4024.31	2012.16
251	Bhaluchua	1.96	335.84	659.17	329.58
252	Bhalughera	10.85	335.84	3645.12	1822.56
253	Bhaluki	4.05	335.84	1359.11	679.55
254	Bhandankula	3.17	335.84	1064.18	532.09
255	Bhandar	447.86	335.84	150406.78	75203.39
256	Bhandarikuda	0.28	335.84	92.42	46.21
257	Bhandaripal	38.25	335.84	12846.27	6423.13
258	Bhanjabati	0.16	335.84	54.36	27.18
259	Bharadasol	0.41	335.84	138.63	69.31
260	Bharatchapur	1.62	335.84	543.64	271.82
261	Bharbadi	6.77	335.84	2273.78	1136.89
262	Bhardgan	1.27	335.84	425.40	212.70
263	Bhatchhatar	9.94	335.84	3337.96	1668.98
264	Bhatiapada	0.14	335.84	47.57	23.78
265	Bhaulbeda	2.10	335.84	704.02	352.01
266	Bhekhela	0.00	335.84	1.36	0.68
267	Bhimatali	0.49	335.84	164.45	82.23
268	Bhimpur	6.64	335.84	2228.93	1114.47
269	Bhola	0.74	335.84	247.36	123.68
270	Bholagadia	12.04	335.84	4044.70	2022.35
271	Bholagodia	1.22	335.84	409.09	204.55
272	Bholesole	4.58	335.84	1538.51	769.25
273	Bholgh	39.14	335.84	13143.91	6571.96
274	Bholshoti	3.12	335.84	1046.51	523.26
275	Bhramargola	1.35	335.84	453.94	226.97
276	Bhrungasole	2.37	335.84	796.44	398.22
277	Bhugudakota	57.76	335.84	19397.16	9698.58
278	Bhupad	21.65	335.84	7271.22	3635.61
279	Bhurakunoli	8.52	335.84	2862.28	1431.14
280	Bhuraleami	1.28	335.84	430.84	215.42
281	Bhurangiasol	1.59	335.84	532.77	266.38
282	Bhurudiha	1.71	335.84	573.54	286.77

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
283	Bhurudubani	11.64	335.84	3908.79	1954.39
284	Bhurudukala	4.16	335.84	1397.16	698.58
285	Bhuskunda	0.13	335.84	42.13	21.07
286	Bhuyangoda	33.99	335.84	11416.49	5708.24
287	Bichaklonic	0.02	335.84	8.15	4.08
288	Bidukudia	34.23	335.84	11493.96	5746.98
289	Bidyadhar Nagar	88.15	335.84	29602.68	14801.34
290	Bidyadhar Pur	0.41	335.84	138.63	69.31
291	Bidyadharpur	0.16	335.84	53.01	26.50
292	Bigasole	1.88	335.84	630.63	315.31
293	Bijabani	10.12	335.84	3397.76	1698.88
294	Bilas	3.64	335.84	1221.29	610.65
295	Binaoppur	6.05	335.84	2033.22	1016.61
296	Bireswarpur	1.62	335.84	543.64	271.82
297	Bishnugaon	27.24	335.84	9148.14	4574.07
298	Bishnupal	1.16	335.84	388.70	194.35
299	Bishnupur	41.38	335.84	13895.50	6947.75
300	Bisipul	0.16	335.84	54.36	27.18
301	Bklpur	3.62	335.84	1216.40	608.20
302	Bnambkapur	1.61	335.84	542.28	271.14
303	Bnumdaleanchandre Pur	32.25	335.84	10830.44	5415.22
304	Bnumdgadi	9.66	335.84	3245.54	1622.77
305	Bodhimuha	7.54	335.84	2533.37	1266.69
306	Bounskantia	5.50	335.84	1848.38	924.19
307	Brahampur	0.00	335.84	0.00	0.00
308	Bramanmara	3.30	335.84	1109.03	554.52
309	Budheerana	3.78	335.84	1269.40	634.70
310	Budhikhamari	39.67	335.84	13321.95	6660.98
311	Bunapura	45.52	335.84	15287.22	7643.61
312	Chadada	22.77	335.84	7646.33	3823.16
313	Chadakota	2.02	335.84	679.55	339.78
314	Chadeigal	9.00	335.84	3021.29	1510.65
315	Chahalapada	0.98	335.84	328.90	164.45
316	Chahlapada	89.01	335.84	29892.17	14946.08
317	Chahulia	54.73	335.84	18381.90	9190.95
318	Chakamadhapur	0.15	335.84	50.29	25.14
319	Chakdar	0.28	335.84	95.14	47.57
320	Chakendapada	159.73	335.84	53642.54	26821.27
321	Chakradharpur	6.31	335.84	2117.49	1058.74
322	Chaksuliapada	0.38	335.84	127.76	63.88
323	Challliasole	0.01	335.84	4.08	2.04
324	Champalcharta	0.23	335.84	78.83	39.41
325	Champardahori	0.76	335.84	255.51	127.76
326	Chanabadar	3.24	335.84	1087.28	543.64
327	Chanchipada	1.25	335.84	418.60	209.30
328	Chandabila	2.76	335.84	926.91	463.46
329	Chandabilla	12.04	335.84	4043.34	2021.67

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
330	Chandanmulch	0.96	335.84	323.47	161.73
331	Chandanpur	12.34	335.84	4143.91	2071.96
332	Chanddiha	0.23	335.84	76.11	38.05
333	Chandobila	1.62	335.84	543.64	271.82
334	Chandra Pur	6.00	335.84	2015.55	1007.78
335	Chandrapur	32.53	335.84	10925.85	5462.93
336	Chandua	58.06	335.84	19497.73	9748.86
337	Charcharic	7.02	335.84	2358.05	1179.02
338	Charmania	6.74	335.84	2262.91	1131.46
339	Chaturigadiamali	0.55	335.84	183.48	91.74
340	Chaudauchaturi	14.57	335.84	4892.78	2446.39
341	Chaulaghari	2.85	335.84	958.17	479.08
342	Cheeasul	15.12	335.84	5078.98	2539.49
343	Chekamaro	1.60	335.84	538.21	269.10
344	Chenaposi	1.47	335.84	494.71	247.36
345	Chenenadhua	6.84	335.84	2295.53	1147.76
346	Chengranagara	2.46	335.84	827.70	413.85
347	Chhachinapada	2.37	335.84	795.08	397.54
348	Chhadeipahadi	9.87	335.84	3314.86	1657.43
349	Chhalunia	21.50	335.84	7220.93	3610.46
350	Chhatna	5.22	335.84	1751.89	875.94
351	Chhatrai Pur	10.57	335.84	3549.98	1774.99
352	Chhatraipur	10.61	335.84	3562.22	1781.11
353	Chhatrama	2.14	335.84	720.33	360.16
354	Chheliabeda	0.00	335.84	1.36	0.68
355	Chhelikani	3.65	335.84	1224.55	612.28
356	Chhotaraipur	23.04	335.84	7737.39	3868.69
357	Chhuadim	1.44	335.84	485.20	242.60
358	Chhuruni	7.27	335.84	2441.77	1220.88
359	Chianpada	0.25	335.84	85.62	42.81
360	Chicleasa	39.55	335.84	13283.90	6641.95
361	Chikitamatia	15.38	335.84	5164.60	2582.30
362	Chilima	2.02	335.84	679.55	339.78
363	Chillia(B)	2.57	335.84	864.39	432.20
364	Chinchagoru	0.00	335.84	0.00	0.00
365	Chirlekenpur	0.73	335.84	244.64	122.32
366	Chitakhola	2.16	335.84	724.40	362.20
367	Chitauda	1.46	335.84	492.00	246.00
368	Chitrada	5.71	335.84	1917.70	958.85
369	Chokapur	2.53	335.84	848.08	424.04
370	Choudoupur	0.41	335.84	137.27	68.63
371	Chuadapa	6.42	335.84	2156.90	1078.45
372	Chuhat	47.77	335.84	16042.88	8021.44
373	Chuinposi	109.35	335.84	36724.39	18362.20
374	Chuliaposi	8.19	335.84	2750.83	1375.41
375	Chundiha	0.99	335.84	331.62	165.81
376	Dabak	49.97	335.84	16780.88	8390.44
377	Dahanibada	0.36	335.84	120.96	60.48

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
378	Daharada	0.28	335.84	95.14	47.57
379	Dahigaon	0.68	335.84	226.97	113.49
380	Dahiohi	32.53	335.84	10925.85	5462.93
381	Dakai	0.21	335.84	72.03	36.02
382	Dakaianlnama	2.27	335.84	762.46	381.23
383	Dalaidihi	0.28	335.84	95.14	47.57
384	Daldali	3.04	335.84	1022.05	511.02
385	Dalki	3.06	335.84	1027.48	513.74
386	Damlarudahar	3.20	335.84	1075.05	537.53
387	Damleanudihi	1.34	335.84	448.50	224.25
388	Damodar Pur	0.85	335.84	285.41	142.71
389	Danadamodarpur	33.35	335.84	11201.75	5600.87
390	Dananuagam	1.37	335.84	460.74	230.37
391	Dangarbila	0.08	335.84	27.18	13.59
392	Dangarsahi	1.25	335.84	419.96	209.98
393	Dantamasole	2.83	335.84	951.37	475.69
394	Dantiamuhan	58.86	335.84	19766.83	9883.42
395	Darakholi	8.90	335.84	2987.31	1493.66
396	Dardiasole	20.01	335.84	6720.78	3360.39
397	Dardora	4.06	335.84	1361.82	680.91
398	Dariha	3.25	335.84	1090.00	545.00
399	Daripal	8.95	335.84	3004.98	1502.49
400	Darkhali	0.47	335.84	156.30	78.15
401	Darunia	1.61	335.84	540.92	270.46
402	Daudida	5.50	335.84	1845.67	922.83
403	Daundia	0.50	335.84	168.53	84.26
404	Debagan	20.15	335.84	6765.63	3382.81
405	Debakisol	26.43	335.84	8876.32	4438.16
406	Debala	11.39	335.84	3824.52	1912.26
407	Debsol	0.04	335.84	14.95	7.48
408	Demfaceda	7.24	335.84	2430.08	1215.04
409	Dengam	5.98	335.84	2008.76	1004.38
410	Dengapalia	4.27	335.84	1433.86	716.93
411	Deolipat	0.14	335.84	47.57	23.78
412	Deomehapada	0.01	335.84	4.08	2.04
413	Deopada	0.04	335.84	14.95	7.48
414	Deula	0.91	335.84	307.16	153.58
415	Deulia	5.54	335.84	1861.97	930.99
416	Dewanbahali	312.17	335.84	104835.97	52417.99
417	Dhabalang	0.03	335.84	10.87	5.44
418	Dhabasole	0.73	335.84	244.64	122.32
419	Dhabonisole	1.30	335.84	434.91	217.46
420	Dhadasahi	7.06	335.84	2371.64	1185.82
421	Dhadipada	31.22	335.84	10485.50	5242.75
422	Dhaikhati	21.18	335.84	7112.20	3556.10
423	Dhakhaman	6.93	335.84	2326.79	1163.39
424	Dhalanimari	4.07	335.84	1367.26	683.63
425	Dhalia	179.77	335.84	60371.47	30185.74

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
426	Dhamadharpur	3.26	335.84	1095.44	547.72
427	Dhamaghena	0.55	335.84	186.20	93.10
428	Dhamarout	0.00	335.84	0.00	0.00
429	Dhanampur	0.97	335.84	326.19	163.09
430	Dhanasahi	0.58	335.84	194.35	97.18
431	Dhanasala	0.00	335.84	0.00	0.00
432	Dhandarisole	4.70	335.84	1577.92	788.96
433	Dhanderpur	11.20	335.84	3760.65	1880.32
434	Dhanghera	35.67	335.84	11977.80	5988.90
435	Dhanpur	0.45	335.84	150.86	75.43
436	Dhanputa	4.45	335.84	1495.02	747.51
437	Dhansole	3.63	335.84	1220.48	610.24
438	Dhansul	120.55	335.84	40485.04	20242.52
439	Dhanukdiha	0.96	335.84	322.11	161.05
440	Dhapada	155.93	335.84	52366.34	26183.17
441	Dharamapura	4.90	335.84	1647.24	823.62
442	Dhasipur	1.36	335.84	456.66	228.33
443	Dhatika	13.11	335.84	4403.50	2201.75
444	Dhawdenpri	8.70	335.84	2920.72	1460.36
445	Dhenkinenjia	9.01	335.84	3025.37	1512.68
446	Dhilaigatan	0.06	335.84	21.75	10.87
447	Dhinkimenjie	1.04	335.84	350.65	175.32
448	Dhireidihi	5.38	335.84	1807.61	903.81
449	Dhobaleens	0.63	335.84	210.66	105.33
450	Dhobani	6.87	335.84	2307.76	1153.88
451	Dhobanisol	0.89	335.84	299.00	149.50
452	Dhobanisole	15.59	335.84	5235.27	2617.64
453	Dhoboinisole	4.76	335.84	1598.31	799.15
454	Dhomapal	2.01	335.84	675.48	337.74
455	Dhulinda	0.14	335.84	47.57	23.78
456	Dhumakheta	2.04	335.84	684.99	342.49
457	Digambar	0.14	335.84	46.21	23.10
458	Dighi	72.00	335.84	24181.21	12090.60
459	Dighi(M)	0.16	335.84	53.01	26.50
460	Digudha	223.55	335.84	75074.28	37537.14
461	Dillisahar	80.20	335.84	26933.40	13466.70
462	Dimagodia	12.70	335.84	4264.87	2132.44
463	Dimoi Gadia	0.39	335.84	130.47	65.24
464	Dimpal	3.18	335.84	1068.26	534.13
465	Dinabandhu Pur	10.87	335.84	3649.20	1824.60
466	Dingore	4.39	335.84	1474.63	737.31
467	Dohamunda	3.04	335.84	1019.33	509.66
468	Dolibani	2.23	335.84	748.87	374.43
469	Dolipada	372.45	335.84	125082.57	62541.28
470	Dorkantia	9.07	335.84	3045.76	1522.88
471	Dualari	6.28	335.84	2109.33	1054.67
472	Duamunisole	0.75	335.84	251.43	125.72
473	Duamuria	7.89	335.84	2648.90	1324.45

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
474	Duarsuni	20.85	335.84	7003.47	3501.74
475	Dubulabeda	36.42	335.84	12231.95	6115.98
476	Dudhakundi	13.59	335.84	4563.88	2281.94
477	Dudhiasol	0.04	335.84	13.59	6.80
478	Dudhiasole	21.08	335.84	7079.58	3539.79
479	Dugudha	5.07	335.84	1702.96	851.48
480	Duhishibura	0.04	335.84	13.59	6.80
481	Dukura	0.33	335.84	110.09	55.04
482	Duldaradhanger	4.86	335.84	1630.93	815.46
483	Dumapada	0.64	335.84	213.38	106.69
484	Dumuria	2.44	335.84	818.18	409.09
485	Duntuni	5.97	335.84	2006.04	1003.02
486	Duomurdeta	23.05	335.84	7741.47	3870.73
487	Durgapur	54.35	335.84	18251.43	9125.71
488	Dutikadeipur	2.21	335.84	740.71	370.36
489	Duvia	3.46	335.84	1163.39	581.70
490	Edalbeda	0.50	335.84	168.53	84.26
491	Ekadali	0.38	335.84	126.40	63.20
492	Ekdali	36.69	335.84	12323.01	6161.51
493	Engotpui	1.21	335.84	407.73	203.87
494	Faljahari	1.04	335.84	350.65	175.32
495	Fatamasahi	0.00	335.84	0.00	0.00
496	Fotkisoli	171.21	335.84	57496.96	28748.48
497	Fulghari	38.21	335.84	12832.68	6416.34
498	Fulihari	0.53	335.84	179.40	89.70
499	Fuljhara	9.88	335.84	3317.58	1658.79
500	Gabapal	1.76	335.84	592.57	296.29
501	Gadadhar Kumari Pur Sasan	3.19	335.84	1072.74	536.37
502	Gaddolia	21.02	335.84	7059.19	3529.60
503	Gadigam	26.23	335.84	8809.72	4404.86
504	Gadighoti	115.89	335.84	38919.35	19459.67
505	Gadubhanja	26.06	335.84	8751.28	4375.64
506	Gagannath Pur	13.08	335.84	4391.27	2195.64
507	Gaipanikhia	8.19	335.84	2750.83	1375.41
508	Gaipuria	3.21	335.84	1076.41	538.21
509	Gaishahia	0.81	335.84	271.82	135.91
510	Gajadidandarpur	5.92	335.84	1987.01	993.51
511	Gambharia	3.27	335.84	1098.16	549.08
512	Gampada	1.36	335.84	458.02	229.01
513	Gamugadha	3.09	335.84	1038.36	519.18
514	Ganaul	17.35	335.84	5825.13	2912.56
515	Gandapal	0.52	335.84	173.97	86.98
516	Gandhasoli	0.03	335.84	9.51	4.76
517	Gandidhar	6.03	335.84	2025.07	1012.53
518	Gandigadha	4.64	335.84	1558.89	779.45
519	Gangaraj	8.60	335.84	2888.10	1444.05

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
520	Gangasole	16.87	335.84	5664.75	2832.38
521	Gardimesa	2.64	335.84	886.14	443.07
522	Gargadia	163.35	335.84	54860.30	27430.15
523	Garudabasa	5.35	335.84	1798.10	899.05
524	Gaudagom	2.82	335.84	945.94	472.97
525	Gaudapatna	0.00	335.84	1.36	0.68
526	Gaudmundali	0.89	335.84	299.00	149.50
527	Gayalmara	0.80	335.84	267.74	133.87
528	Gendagadia	66.52	335.84	22338.26	11169.13
529	Gendakhal	6.13	335.84	2057.69	1028.84
530	Gendapokhari	43.42	335.84	14581.84	7290.92
531	Gerupal	0.81	335.84	271.82	135.91
532	Ghadjamda	0.97	335.84	324.83	162.41
533	Ghagara	27.15	335.84	9118.24	4559.12
534	Ghagarce	0.81	335.84	270.46	135.23
535	Ghanshanc	1.79	335.84	600.72	300.36
536	Ghantasila	8.06	335.84	2705.98	1352.99
537	Ghasamari	1.94	335.84	652.37	326.19
538	Ghatiabuda	1.21	335.84	405.01	202.51
539	Ghiajodi	7.30	335.84	2453.19	1226.59
540	Ghiliriseami	6.38	335.84	2141.95	1070.98
541	Ghinkimisul	6.92	335.84	2322.71	1161.36
542	Ghipura	2.20	335.84	737.99	369.00
543	Ghodabandha	0.36	335.84	120.96	60.48
544	Ghodapal	2.80	335.84	941.86	470.93
545	Gholmuhan	3.15	335.84	1058.74	529.37
546	Ghugpura	1.24	335.84	417.25	208.62
547	Ghuma	6.36	335.84	2136.51	1068.26
548	Ghuntabani	0.93	335.84	311.24	155.62
549	Ghusuna	6.69	335.84	2246.60	1123.30
550	Gidhinisole	1.91	335.84	640.14	320.07
551	Girishchandrapur	9.07	335.84	3047.11	1523.56
552	Gobhardhansole	11.41	335.84	3831.32	1915.66
553	Gobindachandrapur	13.35	335.84	4485.05	2242.52
554	Gobindapur	1.38	335.84	462.10	231.05
555	Gobindpur	6.88	335.84	2311.84	1155.92
556	Godargodi	46.97	335.84	15773.78	7886.89
557	Godia	29.28	335.84	9831.77	4915.89
558	Godipokhari	2.02	335.84	679.55	339.78
559	Gohalmara	0.41	335.84	138.63	69.31
560	Gohira	17.62	335.84	5916.19	2958.09
561	Goholamunda	0.38	335.84	127.76	63.88
562	Gokulpur	480.18	335.84	161260.60	80630.30
563	Golagoan	2.13	335.84	716.25	358.12
564	Golagodia	26.93	335.84	9043.49	4521.74
565	Golamandakota	1.41	335.84	474.33	237.16

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
566	Gomali	0.53	335.84	178.04	89.02
567	Gomdali	4.83	335.84	1622.77	811.39
568	Gomeighaty	0.02	335.84	5.44	2.72
569	Gomlapur	2.29	335.84	767.89	383.95
570	Gomundi	0.01	335.84	2.72	1.36
571	Gopalpur	19.21	335.84	6450.32	3225.16
572	Gopiabandha	1.50	335.84	502.87	251.43
573	Gopinathpur	4.31	335.84	1448.81	724.40
574	Gothapura	8.09	335.84	2718.21	1359.11
575	Goudadiha	1.21	335.84	407.73	203.87
576	Goudgan	13.10	335.84	4399.42	2199.71
577	Goudgaon	16.14	335.84	5418.75	2709.38
578	Goudruma	2.02	335.84	679.55	339.78
579	Goudunidabha	4.60	335.84	1543.94	771.97
580	Gourch.Pur	192.10	335.84	64515.38	32257.69
581	Goyalkota	1.16	335.84	390.06	195.03
582	Guabehera	1.81	335.84	607.52	303.76
583	Gualilahauga	0.04	335.84	14.95	7.48
584	Guddiha	18.87	335.84	6337.51	3168.75
585	Gudkanthi	1.21	335.84	407.73	203.87
586	Gugal	1.60	335.84	538.21	269.10
587	Guhaghalia	2.35	335.84	789.64	394.82
588	Guhaldiha	10.38	335.84	3484.75	1742.37
589	Guheldiwa	8.71	335.84	2924.80	1462.40
590	Gundihudi	2.43	335.84	815.46	407.73
591	Gundurilocha	0.07	335.84	23.10	11.55
592	Gungasahi	1.30	335.84	436.27	218.14
593	Haadiha	6.18	335.84	2075.35	1037.68
594	Hainasol	8.53	335.84	2864.99	1432.50
595	Haladipada	2.42	335.84	811.39	405.69
596	Haladipal	5.48	335.84	1838.87	919.43
597	Haldia	7.96	335.84	2674.72	1337.36
598	Haldibani	4.86	335.84	1630.93	815.46
599	Haldipada	18.62	335.84	6254.60	3127.30
600	Haldipal	2.83	335.84	950.01	475.01
601	Handibhanga	58.62	335.84	19685.29	9842.64
602	Handidhua	1.05	335.84	352.01	176.00
603	Harikrusnapur	10.78	335.84	3620.66	1810.33
604	Haripur	19.00	335.84	6381.00	3190.50
605	Harisol	7.54	335.84	2532.01	1266.01
606	Hatasahi	3.67	335.84	1234.07	617.03
607	Hatiamoda	6.48	335.84	2174.57	1087.28
608	Hatibari	6.04	335.84	2029.14	1014.57
609	Hatijhuri	87.63	335.84	29428.71	14714.36
610	Hatikut	82.84	335.84	27819.53	13909.77
611	Hatimoda	5.36	335.84	1800.81	900.41
612	Hatipatuka	1.17	335.84	394.14	197.07
613	Henseldihi	2.00	335.84	670.04	335.02

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
614	Heolachandrapa y	80.38	335.84	26993.20	13496.60
615	Hill Block 160	238.05	335.84	79943.95	39971.98
616	Hill Block 161	89.32	335.84	29996.82	14998.41
617	Hill Block 171	7.77	335.84	2610.84	1305.42
618	Hill Block 172	0.94	335.84	316.67	158.34
619	Hill Block 173	49.45	335.84	16605.55	8302.78
620	Hill Block 174	1.43	335.84	479.76	239.88
621	Hill Block 175	1.30	335.84	434.91	217.46
622	Hill Block 176	1.25	335.84	421.32	210.66
623	Hill Block 177	6.32	335.84	2122.92	1061.46
624	Hill Block 178	5.07	335.84	1701.60	850.80
625	Hill Block 179	5.59	335.84	1876.92	938.46
626	Hill Block 180	16.06	335.84	5392.93	2696.47
627	Hill Block 181	1.07	335.84	360.16	180.08
628	Hill Block 182	10.10	335.84	3390.97	1695.48
629	Hill Block 183	1.48	335.84	496.07	248.04
630	Hill Block 184	2.63	335.84	882.06	441.03
631	Hill Block 8	1.37	335.84	459.38	229.69
632	Hill Block 85	44.86	335.84	15067.04	7533.52
633	Hill Block No 74	112.09	335.84	37643.15	18821.57
634	Hill Block-1	184.91	335.84	62100.25	31050.13
635	Hill Block-151	48.75	335.84	16371.79	8185.89
636	Hill Block-171	5.68	335.84	1908.18	954.09
637	Hill Block-173	69.99	335.84	23505.73	11752.87
638	Hill Block-2	96.01	335.84	32243.42	16121.71
639	Hill Block-75	2.49	335.84	835.85	417.92
640	Hinjalgadia	3.56	335.84	1196.01	598.01
641	Hinjalgodia	150.36	335.84	50497.57	25248.78
642	Hirapur	0.05	335.84	17.67	8.83
643	Hodoladibagun	1.09	335.84	366.96	183.48
644	Hotapur	5.64	335.84	1893.23	946.62
645	Ichinda	39.02	335.84	13105.86	6552.93
646	Idar	2.48	335.84	831.77	415.89
647	Inkidapal	1.21	335.84	407.73	203.87
648	Itahai	0.21	335.84	70.67	35.34
649	Itamundia	15.01	335.84	5039.56	2519.78
650	Jadabani	10.11	335.84	3396.40	1698.20
651	Jadajam	7.32	335.84	2457.26	1228.63
652	Jadida	862.54	335.84	289671.75	144835.88
653	Jadidiha	7.17	335.84	2407.38	1203.69
654	Jadipal	2.66	335.84	892.93	446.47
655	Jadukhunta	4.33	335.84	1455.60	727.80
656	Jadunathpur'	55.04	335.84	18483.84	9241.92
657	Jadurghera	0.85	335.84	284.05	142.03
658	Jaganaltici	7.64	335.84	2567.35	1283.68
659	Jaganathpur	2.83	335.84	951.37	475.69
660	Jagannathpur	5.26	335.84	1766.84	883.42

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
661	Jalachai	3.59	335.84	1205.53	602.76
662	Jalda	6.07	335.84	2040.02	1020.01
663	Jaldeha	4.28	335.84	1437.93	718.97
664	Jalnanda	0.02	335.84	6.80	3.40
665	Jalshati	83.78	335.84	28134.85	14067.42
666	Jamabani	5.64	335.84	1893.23	946.62
667	Jambhirapal	10.30	335.84	3457.56	1728.78
668	Jambirapal	3.07	335.84	1030.20	515.10
669	Jambirdilf	3.64	335.84	1221.84	610.92
670	Jamda	5.54	335.84	1861.97	930.99
671	Jamdanda	98.66	335.84	33132.28	16566.14
672	Jamdapal	30.34	335.84	10187.86	5093.93
673	Jamleakheri	2.14	335.84	720.33	360.16
674	Jampal	5.90	335.84	1980.22	990.11
675	Jamsol	0.81	335.84	271.82	135.91
676	Jamsole	40.93	335.84	13747.35	6873.68
677	Jamsuli	0.10	335.84	32.62	16.31
678	Jamudicsole	0.56	335.84	187.56	93.78
679	Jamudiha	162.83	335.84	54684.97	27342.49
680	Jamuhad	3.52	335.84	1183.78	591.89
681	Jamuna	1.00	335.84	337.06	168.53
682	Jamunadeipur	10.81	335.84	3630.17	1815.09
683	Janakpur	1.17	335.84	394.14	197.07
684	Janudahi	5.67	335.84	1902.75	951.37
685	Jarada	1.26	335.84	422.68	211.34
686	Jarapur	0.00	335.84	0.00	0.00
687	Jarkani	0.40	335.84	135.91	67.96
688	Jasanoltpr	5.58	335.84	1875.57	937.78
689	Jatiadiha	1.21	335.84	407.73	203.87
690	Jatipur	2.83	335.84	951.37	475.69
691	Jaunti	0.05	335.84	16.31	8.15
692	Jayaghuntia	6.75	335.84	2266.99	1133.49
693	Jaybilla	1.62	335.84	543.64	271.82
694	Jaypur	0.31	335.84	104.65	52.33
695	Jerkani	3.48	335.84	1170.19	585.09
696	Jerki	6.14	335.84	2063.12	1031.56
697	Jhakamoki	0.40	335.84	135.91	67.96
698	Jhaliamira	14.76	335.84	4958.02	2479.01
699	Jharbeda	0.64	335.84	216.10	108.05
700	Jharia	21.64	335.84	7267.14	3633.57
701	Jharpokharia	5.44	335.84	1828.00	914.00
702	Jhatiada	21.67	335.84	7276.65	3638.33
703	Jhilidam	29.14	335.84	9785.56	4892.78
704	Jhiliribani	13.35	335.84	4485.05	2242.52
705	Jhimei	0.40	335.84	135.91	67.96
706	Jhinei	76.38	335.84	25651.76	12825.88
707	Jhinkinia	13.02	335.84	4372.24	2186.12
708	Jhinkpada	1.57	335.84	527.33	263.67

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
709	Jhinkpahadi	0.52	335.84	175.32	87.66
710	Jhirani	9.64	335.84	3236.03	1618.02
711	Jiani	11.63	335.84	3904.71	1952.36
712	Jikayatpur	0.00	335.84	0.00	0.00
713	Jitbhol	2.95	335.84	989.43	494.71
714	Jobartana	5.87	335.84	1970.70	985.35
715	Jogibandha	19.21	335.84	6453.03	3226.52
716	Jogindra Das Jot	23.47	335.84	7882.81	3941.41
717	Joka	8.74	335.84	2935.67	1467.83
718	Jualia	29.78	335.84	10000.30	5000.15
719	Jualimora	1.19	335.84	400.94	200.47
720	Jualiruma	1.21	335.84	407.73	203.87
721	Judiabandha	6.82	335.84	2288.73	1144.37
722	Judidar	0.59	335.84	199.79	99.89
723	Jugdiha	1.24	335.84	417.25	208.62
724	Juhari	1.45	335.84	487.92	243.96
725	Juna	0.26	335.84	88.34	44.17
726	Junbani	2.63	335.84	884.78	442.39
727	Jungle Block	276.00	335.84	92691.00	46345.50
728	Junpada	5.06	335.84	1700.24	850.12
729	Jurka	2.72	335.84	913.32	456.66
730	Juruka	13.75	335.84	4618.24	2309.12
731	Jyantipata Sonic Yam Diha	79.02	335.84	26536.54	13268.27
732	Kacheyachunta	1.24	335.84	415.89	207.94
733	Kadabahali	59.95	335.84	20132.43	10066.22
734	Kadadiha	0.04	335.84	12.23	6.12
735	Kadakotha	29.09	335.84	9767.89	4883.95
736	Kadaliapal	2.10	335.84	706.73	353.37
737	Kadamdiha	0.68	335.84	229.69	114.84
738	Kadamsole	0.49	335.84	164.45	82.23
739	Kadapatia	1.61	335.84	542.28	271.14
740	Kadatalasa	0.21	335.84	72.03	36.02
741	Kaddamasul	0.57	335.84	190.27	95.14
742	Kadipal	0.33	335.84	110.09	55.04
743	Kadualband	0.42	335.84	141.35	70.67
744	Kaduarni	6.33	335.84	2125.64	1062.82
745	Kahneibandha	4.59	335.84	1539.87	769.93
746	Kailarchpur	8.80	335.84	2956.05	1478.03
747	Kainfalia	1.79	335.84	600.72	300.36
748	Kainfulia	17.09	335.84	5740.86	2870.43
749	Kainsari	2.46	335.84	824.98	412.49
750	Kainthora	0.22	335.84	74.75	37.38
751	Kakaband	2.91	335.84	975.84	487.92
752	Kakarisole	1.62	335.84	543.64	271.82
753	Kakarpani	0.40	335.84	135.91	67.96
754	Kakhareekhunta	68.83	335.84	23115.67	11557.83
755	Kaklar	193.15	335.84	64867.39	32433.70

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
756	Kalabadia	0.62	335.84	206.58	103.29
757	Kaladahi	428.74	335.84	143985.01	71992.50
758	Kaladam	147.53	335.84	49544.84	24772.42
759	Kalajamuna	3.57	335.84	1197.37	598.69
760	Kalajhinei	27.21	335.84	9137.27	4568.63
761	Kalama	42.69	335.84	14335.85	7167.92
762	Kalamgadia	229.90	335.84	77209.43	38604.72
763	Kalapahada	2.95	335.84	989.43	494.71
764	Kalapani	6.88	335.84	2310.48	1155.24
765	Kalarafulia	0.08	335.84	27.18	13.59
766	Kaliaman	11.04	335.84	3706.28	1853.14
767	Kaliasole	13.77	335.84	4625.04	2312.52
768	Kalimeghi	0.10	335.84	33.98	16.99
769	Kallchi	1.20	335.84	402.30	201.15
770	Kaltia	1.89	335.84	634.70	317.35
771	Kamalasole	10.52	335.84	3533.67	1766.84
772	Kamarpal	0.57	335.84	191.63	95.82
773	Kamarpal,	2.83	335.84	951.37	475.69
774	Kamata	1.76	335.84	589.85	294.93
775	Kanakpada	2.12	335.84	712.17	356.09
776	Kanarjonta	1.18	335.84	396.86	198.43
777	Kanchanpal	2.97	335.84	997.58	498.79
778	Kandalia	2.89	335.84	971.76	485.88
779	Kanderaso	0.04	335.84	14.95	7.48
780	Kangakula-2	3.15	335.84	1058.74	529.37
781	Kangigadi	17.35	335.84	5825.13	2912.56
782	Kanhupura	6.45	335.84	2167.77	1083.89
783	Kanianahuli	10.55	335.84	3544.55	1772.27
784	Kanimohali	1.88	335.84	631.98	315.99
785	Kanimolile	12.33	335.84	4139.84	2069.92
786	Kanjia	8.16	335.84	2739.96	1369.98
787	Kanjiamunda	9.77	335.84	3282.24	1641.12
788	Kanjiasole	8.17	335.84	2742.68	1371.34
789	Kankaratelia	21.98	335.84	7381.30	3690.65
790	Kankini	11.28	335.84	3787.83	1893.91
791	Kantamara	1.08	335.84	361.52	180.76
792	Kantapal	0.40	335.84	135.91	67.96
793	Kanthalia	6.40	335.84	2150.11	1075.05
794	Kanti Sahi	0.24	335.84	81.55	40.77
795	Kantiali	1.91	335.84	640.14	320.07
796	Kapadiha	6.21	335.84	2084.87	1042.43
797	Kaplipada	3.15	335.84	1057.38	528.69
798	Kapoi	0.43	335.84	145.42	72.71
799	Kaptipada	1.47	335.84	494.71	247.36
800	Kaptisole	2.50	335.84	838.57	419.28
801	Karamsul	3.40	335.84	1143.01	571.50
802	Karanjia	3.98	335.84	1336.00	668.00
803	Karapada	2.37	335.84	795.08	397.54

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
804	Kararjapal	0.40	335.84	135.91	67.96
805	Karatmala	0.96	335.84	323.47	161.73
806	Karatpat	34.28	335.84	11511.62	5755.81
807	Karikichia	0.78	335.84	262.31	131.15
808	Karkachia	4.13	335.84	1386.29	693.14
809	Kartpata	16.13	335.84	5417.40	2708.70
810	Kasafialia	0.00	335.84	0.00	0.00
811	Kashadehi	1.62	335.84	543.64	271.82
812	Kashipal	7.21	335.84	2421.93	1210.96
813	Kasiabeda	6.59	335.84	2213.98	1106.99
814	Kasibeda	5.14	335.84	1724.71	862.35
815	Kasidehi	8.83	335.84	2965.57	1482.78
816	Kasthapathara	2.12	335.84	712.17	356.09
817	Kathachua	34.87	335.84	11711.41	5855.71
818	Kathagohele	2.95	335.84	992.15	496.07
819	Kathapal	1.08	335.84	364.24	182.12
820	Kathapal	7.02	335.84	2358.05	1179.02
821	Kathapalsamulso manathpur	0.32	335.84	107.37	53.68
822	Katharama	40.87	335.84	13726.97	6863.48
823	Kathashirsi	15.52	335.84	5212.17	2606.09
824	Kathasirsi	1.34	335.84	449.86	224.93
825	Kathpal	0.42	335.84	141.35	70.67
826	Kathuabeda	17.49	335.84	5875.41	2937.71
827	Katuria	44.45	335.84	14928.42	7464.21
828	Kaudia	37.03	335.84	12435.82	6217.91
829	Kaudikhani	4.00	335.84	1342.80	671.40
830	Kehduhota	3.81	335.84	1280.28	640.14
831	Kendua	5.54	335.84	1859.26	929.63
832	Kenduchhahia	6.77	335.84	2273.78	1136.89
833	Kendudiha	9.03	335.84	3033.52	1516.76
834	Kendugodi	0.64	335.84	216.10	108.05
835	Kendujher	4.05	335.84	1359.11	679.55
836	Kendukhunta	4.63	335.84	1553.46	776.73
837	Kendumundi	16.48	335.84	5532.92	2766.46
838	Kepeingpad	33.04	335.84	11094.38	5547.19
839	Kesherpry	1.58	335.84	530.05	265.03
840	Keshipur	4.53	335.84	1520.84	760.42
841	Keshorpur	2.44	335.84	819.54	409.77
842	Kesuriasde	0.57	335.84	190.27	95.14
843	Ketadihi	4.45	335.84	1495.02	747.51
844	Kethisul	10.54	335.84	3540.47	1770.24
845	Keutunimari	42.10	335.84	14137.42	7068.71
846	Khadi Khania	162.61	335.84	54611.58	27305.79
847	Khadiabusa	7.04	335.84	2363.48	1181.74
848	Khadiasole	1.57	335.84	525.97	262.99
849	Khadikadapa	14.61	335.84	4906.37	2453.19
850	Khadikapada	0.22	335.84	74.75	37.38

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
851	Khadikasol	5.14	335.84	1727.42	863.71
852	Khadikhal	0.25	335.84	85.62	42.81
853	Khadimadaranga	0.13	335.84	44.85	22.43
854	Khadipahadi	2.23	335.84	750.23	375.11
855	Khadisul	7.23	335.84	2428.72	1214.36
856	Khaikhia	0.14	335.84	46.21	23.10
857	Khairaleami	82.15	335.84	27589.84	13794.92
858	Khairbani	4.10	335.84	1375.41	687.71
859	Khaladi	26.15	335.84	8782.54	4391.27
860	Khalapada	19.40	335.84	6515.55	3257.78
861	Khandadeola	0.46	335.84	153.58	76.79
862	Khandia	4.05	335.84	1359.11	679.55
863	Khansapal	0.34	335.84	114.16	57.08
864	Khanua	6.88	335.84	2310.48	1155.24
865	Khanurpar	21.03	335.84	7061.91	3530.96
866	Kharderpada	0.36	335.84	120.96	60.48
867	Khejurdiha	3.81	335.84	1278.92	639.46
868	Khejuria	15.52	335.84	5210.81	2605.41
869	Kherana	0.78	335.84	262.31	131.15
870	Khetapada	1.34	335.84	448.50	224.25
871	Khetrapatna	4.84	335.84	1626.85	813.42
872	Khiripada	1.13	335.84	377.83	188.92
873	Khudaputuli	4.71	335.84	1583.36	791.68
874	Khunta	12.11	335.84	4066.44	2033.22
875	Khunta Bil	125.66	335.84	42199.96	21099.98
876	Khuntabil	40.55	335.84	13618.24	6809.12
877	Khuntadahi	0.58	335.84	194.35	97.18
878	Khuntapal	23.89	335.84	8022.80	4011.40
879	Khuntusmipur	8.63	335.84	2897.61	1448.81
880	Khurantia	20.18	335.84	6776.50	3388.25
881	Khutopal	0.05	335.84	17.67	8.83
882	Kiajhari	1.39	335.84	466.17	233.09
883	Kiakhali	5.48	335.84	1838.87	919.43
884	Kirikichia	1.50	335.84	502.87	251.43
885	Kisamtandi	0.42	335.84	139.99	69.99
886	Kisandahi	0.40	335.84	135.91	67.96
887	Kochila Diha	83.06	335.84	27894.28	13947.14
888	Kodamdiha	0.11	335.84	35.34	17.67
889	Koelilaghoti	2.43	335.84	815.46	407.73
890	Kohi	1.33	335.84	447.15	223.57
891	Kohikihi	0.00	335.84	0.00	0.00
892	Kojidihi	0.36	335.84	119.60	59.80
893	Kolbandh	2.52	335.84	846.72	423.36
894	Kolialam	5.42	335.84	1821.20	910.60
895	Kolidiha	0.40	335.84	135.91	67.96
896	Kontasole	54.09	335.84	18165.81	9082.90
897	Kontisahi	10.82	335.84	3632.89	1816.44
898	Kothabadi	1.21	335.84	407.73	203.87

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
899	Kothabilla	37.76	335.84	12681.81	6340.91
900	Kothapal	0.01	335.84	4.08	2.04
901	Kritariapal	0.00	335.84	0.00	0.00
902	Krushnapur	28.33	335.84	9513.74	4756.87
903	Krusnachandrapur	7.03	335.84	2360.77	1180.38
904	Kuabuda	69.67	335.84	23397.00	11698.50
905	Kuagothana	40.95	335.84	13752.79	6876.39
906	Kuamara	0.43	335.84	144.07	72.03
907	Kuanarpal	1.32	335.84	444.43	222.21
908	Kuanrpal	75.49	335.84	25351.40	12675.70
909	Kuanrpur	5.46	335.84	1833.43	916.72
910	Kuapal	4.45	335.84	1495.02	747.51
911	Kuchiasole	10.93	335.84	3672.30	1836.15
912	Kudiapal	21.04	335.84	7067.35	3533.67
913	Kuduakhunta	6.68	335.84	2242.52	1121.26
914	Kuehiasul	15.52	335.84	5210.81	2605.41
915	Kuilisuta	6.65	335.84	2234.37	1117.18
916	Kukudaanda	5.07	335.84	1704.32	852.16
917	Kukudajodi	14.39	335.84	4831.62	2415.81
918	Kukudakhumpi	3.80	335.84	1274.84	637.42
919	Kukukudapada	4.09	335.84	1372.70	686.35
920	Kukurdima	2.23	335.84	747.51	373.75
921	Kuladahoni	8.24	335.84	2767.14	1383.57
922	Kuliana	1.98	335.84	664.60	332.30
923	Kulipal	3.96	335.84	1329.21	664.60
924	Kulkutha	0.06	335.84	20.39	10.19
925	Kumbharduvi	0.04	335.84	14.95	7.48
926	Kumbharmundhakata	0.52	335.84	173.97	86.98
927	Kumudabadi	62.19	335.84	20886.74	10443.37
928	Kumudasole	1.33	335.84	445.79	222.89
929	Kunchibouice	0.18	335.84	59.80	29.90
930	Kundabai	7.62	335.84	2557.84	1278.92
931	Kundalbani	1.21	335.84	407.73	203.87
932	Kundalia Sol	7.15	335.84	2401.54	1200.77
933	Kundalpani	15.96	335.84	5360.31	2680.16
934	Kundeea	3.86	335.84	1295.23	647.61
935	Kundhai	1.05	335.84	352.01	176.00
936	Kundhei	0.85	335.84	285.41	142.71
937	Kundhie	6.38	335.84	2143.31	1071.65
938	Kundiapani	7.69	335.84	2583.66	1291.83
939	Kunthi	0.00	335.84	0.00	0.00
940	Kuradhika	2.17	335.84	730.25	365.12
941	Kuradiha	3.91	335.84	1312.90	656.45
942	Kurkotia	0.03	335.84	10.87	5.44
943	Kusadiha	0.55	335.84	183.48	91.74
944	Kusambandha	3.89	335.84	1304.74	652.37

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945	Kusuda	1.95	335.84	655.09	327.54
946	Kusumasole	3.26	335.84	1095.44	547.72
947	Kusumi	2.36	335.84	791.00	395.50
948	Kusumpotia	2.03	335.84	682.27	341.14
949	Kusunpur	2.36	335.84	791.00	395.50
950	Kutinimari	0.88	335.84	294.93	147.46
951	Kutling	94.15	335.84	31619.59	15809.80
952	Labanyadeipur	119.25	335.84	40048.77	20024.38
953	Lahara	3.08	335.84	1032.92	516.46
954	Laxanasahi	0.04	335.84	12.23	6.12
955	Laxmidharpur	0.18	335.84	59.80	29.90
956	Laxmiposhi	1.21	335.84	407.73	203.87
957	Luhomolic	8.20	335.84	2753.55	1376.77
958	Machhia	5.77	335.84	1939.44	969.72
959	Madanasahi	1.15	335.84	384.63	192.31
960	Madasahi	0.05	335.84	17.67	8.83
961	Madhakhupt	1.32	335.84	441.71	220.85
962	Madhapanda	0.19	335.84	63.88	31.94
963	Madhapur	18.58	335.84	6241.01	3120.51
964	Madhupur	5.26	335.84	1766.84	883.42
965	Madhuria	3.87	335.84	1299.30	649.65
966	Magaramora	7.41	335.84	2488.52	1244.26
967	Magasuria	0.95	335.84	319.39	159.69
968	Maghanitopa	0.68	335.84	226.97	113.49
969	Mahalibasa	1.12	335.84	375.11	187.56
970	Mahalisole	10.92	335.84	3666.87	1833.43
971	Mahalpatra	0.42	335.84	142.71	71.35
972	Mahukula	0.38	335.84	126.40	63.20
973	Mahulabani	4.73	335.84	1588.79	794.40
974	Mahuldiha	0.64	335.84	216.10	108.05
975	Mahuldihi	1.72	335.84	577.62	288.81
976	Mahulia	15.23	335.84	5114.31	2557.16
977	Mahulkantia	0.22	335.84	73.39	36.70
978	Mahulkarkorkactia	3.64	335.84	1223.20	611.60
979	Mahulleami	0.61	335.84	203.87	101.93
980	Mahulpankha	690.27	335.84	231815.44	115907.72
981	Mahupura	3.10	335.84	1042.43	521.22
982	Mahuri	1.36	335.84	458.02	229.01
983	Maitrapur	0.59	335.84	197.07	98.54
984	Majan	26.58	335.84	8926.61	4463.30
985	Majanadiha	0.13	335.84	44.85	22.43
986	Majhigadia	838.96	335.84	281751.70	140875.85
987	Makeenda	6.06	335.84	2035.94	1017.97
988	Malguja	8.17	335.84	2742.68	1371.34
989	Malharpada	3.08	335.84	1035.64	517.82
990	Malideha	0.16	335.84	53.01	26.50
991	Malihati	5.16	335.84	1732.86	866.43

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
992	Maluli	2.11	335.84	708.09	354.05
993	Manadakenda	19.17	335.84	6436.72	3218.36
994	Manandi	47.28	335.84	15877.07	7938.54
995	Manbhanj	16.50	335.84	5542.43	2771.22
996	Manika	0.40	335.84	135.91	67.96
997	Manikpur	28.05	335.84	9421.73	4710.86
998	Manisamundia	0.43	335.84	145.42	72.71
999	Mankadapada	539.87	335.84	181308.77	90654.38
1000	Mankadkenda	4.22	335.84	1416.19	708.09
1001	Mankaduenda	0.53	335.84	176.68	88.34
1002	Mankandapan	3.24	335.84	1087.28	543.64
1003	Mantri	8.05	335.84	2701.90	1350.95
1004	Marale	1.59	335.84	535.49	267.74
1005	Marangtandi	4.25	335.84	1425.70	712.85
1006	Marchanda Pur	3.18	335.84	1068.26	534.13
1007	Markundi	3.24	335.84	1087.28	543.64
1008	Marsigam	0.45	335.84	149.50	74.75
1009	Marudihi	1.30	335.84	437.63	218.82
1010	Masarda	2.41	335.84	808.67	404.33
1011	Masimaleah	0.35	335.84	118.24	59.12
1012	Masimasul	7.64	335.84	2567.35	1283.68
1013	Masinakati	0.47	335.84	159.02	79.51
1014	Mathasahi	0.91	335.84	304.44	152.22
1015	Mathiabhanga	1.02	335.84	343.85	171.93
1016	Matiali	1.21	335.84	407.73	203.87
1017	Mauda	20.11	335.84	6753.40	3376.70
1018	Mayarojia	0.54	335.84	182.12	91.06
1019	Mayusasur	6.01	335.84	2019.63	1009.82
1020	Megha	0.85	335.84	285.41	142.71
1021	Mendhamundia	2.43	335.84	815.46	407.73
1022	Merda	8.36	335.84	2806.55	1403.28
1023	Mihisasuri	4.20	335.84	1410.75	705.38
1024	Mleagadia	45.93	335.84	15425.85	7712.92
1025	Modauka	37.57	335.84	12617.94	6308.97
1026	Mohabilla	2.59	335.84	871.19	435.59
1027	Mohamola	0.18	335.84	61.16	30.58
1028	Mohanpur	327.17	335.84	109874.18	54937.09
1029	Mohantipolasia	0.11	335.84	36.70	18.35
1030	Mohespur	11.97	335.84	4020.23	2010.12
1031	Mohuldiha	7.67	335.84	2576.86	1288.43
1032	Mohulia	1.60	335.84	535.76	267.88
1033	Mondabeguniehi hs	3.20	335.84	1073.69	536.85
1034	Monharpur	0.44	335.84	146.78	73.39
1035	Moninckathi	4.37	335.84	1466.47	733.24
1036	Morada	4.42	335.84	1485.50	742.75
1037	Mudrajadi	34.40	335.84	11552.40	5776.20
1038	Muktapur	1.70	335.84	572.18	286.09

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1039	Mumdhabani	14.97	335.84	5028.69	2514.35
1040	Munachali	0.00	335.84	0.00	0.00
1041	Mundhabahisamilmora	4.23	335.84	1418.91	709.45
1042	Mundhabanisamilmora	0.33	335.84	110.09	55.04
1043	Mundhakati	5.47	335.84	1836.15	918.08
1044	Mundhakota	5.82	335.84	1953.03	976.52
1045	Mundripal	46.57	335.84	15640.59	7820.29
1046	Murei	0.49	335.84	165.81	82.91
1047	Murgapoladi	2.15	335.84	721.69	360.84
1048	Murigidhari	0.28	335.84	95.14	47.57
1049	Murukundia	1.54	335.84	517.82	258.91
1050	Musagadia	1.28	335.84	430.84	215.42
1051	Musamari	1.66	335.84	557.23	278.62
1052	Mushakhai	10.01	335.84	3361.07	1680.53
1053	Muturkda	8.30	335.84	2787.53	1393.76
1054	Nabakishore Pur	4.75	335.84	1594.23	797.12
1055	Nabara	5.70	335.84	1913.62	956.81
1056	Nabedi	3.85	335.84	1293.87	646.93
1057	Nachhipur	87.10	335.84	29250.67	14625.34
1058	Nachhipuria	5.95	335.84	1997.89	998.94
1059	Nadiaghal	2.07	335.84	695.86	347.93
1060	Nadigaon	3.00	335.84	1007.10	503.55
1061	Nadpur	7.39	335.84	2480.37	1240.18
1062	Nafari	26.33	335.84	8842.34	4421.17
1063	Nagarasole	4.08	335.84	1371.34	685.67
1064	Nagasole	1.87	335.84	627.91	313.95
1065	Nahasan	8.45	335.84	2836.45	1418.23
1066	Naihasol	2.10	335.84	704.02	352.01
1067	Nakhara	3.53	335.84	1186.50	593.25
1068	Nakhora	0.45	335.84	152.22	76.11
1069	Nangalkata	183.65	335.84	61674.85	30837.43
1070	Nantasohi	0.40	335.84	135.91	67.96
1071	Naraharipur	10.90	335.84	3660.07	1830.04
1072	Narangau	9.46	335.84	3176.23	1588.11
1073	Naranpur	6.59	335.84	2212.62	1106.31
1074	Narasingbeda	44.95	335.84	15094.23	7547.11
1075	Nathamalia	3.80	335.84	1277.56	638.78
1076	Nato	190.94	335.84	64125.32	32062.66
1077	Naupada	10.57	335.84	3551.34	1775.67
1078	Nayabasan	0.20	335.84	67.96	33.98
1079	Nayabasanta Pur	0.70	335.84	236.48	118.24
1080	Nayabasantapur	4.49	335.84	1507.25	753.62
1081	Nayabrajamudapa	0.96	335.84	322.11	161.05
1082	Nayakenduhehol	3.15	335.84	1057.38	528.69
1083	Nayaradhanagar	2.46	335.84	826.34	413.17
1084	Nayaramya	29.61	335.84	9943.22	4971.61

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1085	Neda	1.22	335.84	409.09	204.55
1086	Nedasole	2.44	335.84	818.18	409.09
1087	Nedavadi	0.08	335.84	25.82	12.91
1088	Nelhapal	4.05	335.84	1359.11	679.55
1089	Nichufpada	8.00	335.84	2686.95	1343.48
1090	Nilakanthapur	1.40	335.84	468.89	234.45
1091	Nimuhan	0.47	335.84	159.02	79.51
1092	Nischinapur	6.12	335.84	2054.97	1027.48
1093	Nitai	9.10	335.84	3055.27	1527.63
1094	Nodhabani	24.39	335.84	8192.69	4096.34
1095	Nodhakundia	2.78	335.84	933.71	466.85
1096	Nota	3.06	335.84	1027.48	513.74
1097	Nuadihi	14.55	335.84	4887.34	2443.67
1098	Nuagan	147.32	335.84	49474.84	24737.42
1099	Nuagaon	29.80	335.84	10007.09	5003.55
1100	Nuagou	25.25	335.84	8480.82	4240.41
1101	Nuanagar	13.06	335.84	4385.83	2192.92
1102	Nuasahi	26.77	335.84	8989.12	4494.56
1103	Nududiha	0.38	335.84	127.76	63.88
1104	Nuhakhute	0.38	335.84	129.12	64.56
1105	Nuhamalia	8.17	335.84	2744.03	1372.02
1106	Nulaomalia	6.12	335.84	2056.33	1028.16
1107	Nulomalic	5.97	335.84	2004.68	1002.34
1108	Nunia	0.71	335.84	239.20	119.60
1109	Nunkua	5.47	335.84	1836.15	918.08
1110	Nurunia	2.57	335.84	863.03	431.52
1111	Olidihi	0.14	335.84	47.57	23.78
1112	Ophalgodia	7.90	335.84	2652.97	1326.49
1113	Orachandabilla	12.11	335.84	4067.80	2033.90
1114	Paansia	10.79	335.84	3623.38	1811.69
1115	Padapada	0.92	335.84	309.88	154.94
1116	Padasia	0.51	335.84	172.61	86.30
1117	Padmapokhari	231.96	335.84	77901.35	38950.68
1118	Padmapur	4.48	335.84	1504.53	752.26
1119	Padugirisole	5.45	335.84	1829.36	914.68
1120	Pagadadar	8.71	335.84	2924.80	1462.40
1121	Paikbasa	1.62	335.84	543.64	271.82
1122	Paikgugpura	3.06	335.84	1026.12	513.06
1123	Paikpada	3.56	335.84	1196.01	598.01
1124	Paiksahi	0.93	335.84	313.95	156.98
1125	Pakhanisole	3.75	335.84	1259.89	629.95
1126	Paktia	36.07	335.84	12112.35	6056.17
1127	Palabani	1.22	335.84	410.45	205.22
1128	Palasbadha	11.68	335.84	3923.74	1961.87
1129	Palashbadha	29.35	335.84	9856.23	4928.12
1130	Paliasol	2.19	335.84	733.92	366.96
1131	Palo	42.37	335.84	14228.48	7114.24
1132	Palodpry	3.32	335.84	1115.83	557.91

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1133	Palsa	4.30	335.84	1443.64	721.82
1134	Paltorchokodi	3.37	335.84	1130.78	565.39
1135	Panasbeda	0.21	335.84	72.03	36.02
1136	Panasdiha	1.16	335.84	390.06	195.03
1137	Panchabhaya	4.48	335.84	1503.17	751.59
1138	Panchmania	4.95	335.84	1663.55	831.77
1139	Pandusole	1.40	335.84	468.89	234.45
1140	Panijia	14.98	335.84	5031.41	2515.70
1141	Panisol	1.87	335.84	626.55	313.27
1142	Panudaskhuta	0.57	335.84	192.99	96.50
1143	Panulia	0.74	335.84	247.36	123.68
1144	Paramanand	6.81	335.84	2287.37	1143.69
1145	Parasbadi	209.94	335.84	70504.96	35252.48
1146	Parasia	1.44	335.84	483.84	241.92
1147	Pareelisan	0.00	335.84	0.00	0.00
1148	Parehhipur	1.40	335.84	468.89	234.45
1149	Pariahuli	2.93	335.84	982.63	491.32
1150	Pariakuli	2.23	335.84	747.51	373.75
1151	Pariauda	39.28	335.84	13191.48	6595.74
1152	Parichlipur	0.21	335.84	70.67	35.34
1153	Pasasmunduli	7.88	335.84	2647.54	1323.77
1154	Pasuda	3.14	335.84	1056.03	528.01
1155	Patagadia	0.08	335.84	28.54	14.27
1156	Patallundia	7.40	335.84	2485.80	1242.90
1157	Pathara	18.13	335.84	6090.15	3045.08
1158	Patharghara	83.37	335.84	27997.58	13998.79
1159	Pathari	0.46	335.84	153.58	76.79
1160	Patharnesa	4.53	335.84	1520.84	760.42
1161	Pathenaga	5.26	335.84	1766.84	883.42
1162	Pathunikata	1.64	335.84	551.80	275.90
1163	Patirmisa	6.40	335.84	2150.11	1075.05
1164	Patisari	26.69	335.84	8961.94	4480.97
1165	Patornesa	0.67	335.84	225.61	112.81
1166	Patpur	37.71	335.84	12662.79	6331.39
1167	Patrara	0.19	335.84	62.52	31.26
1168	Patua	0.16	335.84	54.36	27.18
1169	Pedagadi	10.88	335.84	3653.28	1826.64
1170	Phania	4.80	335.84	1613.26	806.63
1171	Phatakusum	1.04	335.84	349.29	174.65
1172	Phulabadia	113.95	335.84	38268.47	19134.24
1173	Phulabadia-Hill	1.59	335.84	535.49	267.74
1174	Pianpudighaoran	16.69	335.84	5603.59	2801.80
1175	Pingu	19.04	335.84	6393.23	3196.62
1176	Pinguli	1.68	335.84	562.67	281.33
1177	Pithabata	1.21	335.84	407.73	203.87
1178	Podadiha	2.71	335.84	910.60	455.30
1179	Pokharia	75.14	335.84	25235.87	12617.94
1180	Pokharidhia	18.05	335.84	6062.97	3031.49

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1181	Polasia	13.69	335.84	4599.21	2299.61
1182	Ponasdiha	7.26	335.84	2436.88	1218.44
1183	Pondabila	0.23	335.84	77.47	38.73
1184	Pondasole	24.45	335.84	8210.36	4105.18
1185	Pondavila	2.21	335.84	743.43	371.72
1186	Potoldiha	43.16	335.84	14493.50	7246.75
1187	Prafulla Ch Pur	76.41	335.84	25662.63	12831.32
1188	Praharajpur	28.30	335.84	9504.23	4752.11
1189	Prasanna Ch.Pur	94.81	335.84	31841.13	15920.56
1190	Pratappur	3.87	335.84	1300.66	650.33
1191	Pratapur	1.49	335.84	500.15	250.08
1192	Pratibhapur	2.94	335.84	988.07	494.03
1193	Pratimadeipur	3.35	335.84	1125.34	562.67
1194	Prornachpur	0.00	335.84	0.00	0.00
1195	Protapch.Pur	6.51	335.84	2185.44	1092.72
1196	Puani	0.02	335.84	5.44	2.72
1197	Puapoka	114.82	335.84	38560.54	19280.27
1198	Pudmatalia	2.85	335.84	956.81	478.41
1199	Pudpada	1.62	335.84	545.00	272.50
1200	Pundal	1.62	335.84	543.64	271.82
1201	Pundra	0.48	335.84	161.73	80.87
1202	Purastmpur	3.49	335.84	1172.91	586.45
1203	Purikhatua	0.20	335.84	66.60	33.30
1204	Purinda	2.70	335.84	906.52	453.26
1205	Purnachandrapur	1.21	335.84	407.73	203.87
1206	Purnachandrapur -1	15.79	335.84	5301.87	2650.94
1207	Purnachandrapur -2	62.25	335.84	20904.40	10452.20
1208	Purulapani	56.86	335.84	19096.79	9548.40
1209	Purumapumi	3.51	335.84	1179.70	589.85
1210	Purumia	71.81	335.84	24117.33	12058.66
1211	Purunabaripada	4.62	335.84	1550.74	775.37
1212	Purunacam	6.02	335.84	2022.35	1011.17
1213	Purunapani	33.66	335.84	11303.68	5651.84
1214	Purunapanii	69.61	335.84	23377.98	11688.99
1215	Purusohampur	5.77	335.84	1936.73	968.36
1216	Pusigaon	0.26	335.84	88.34	44.17
1217	Putharehatia	4.23	335.84	1421.62	710.81
1218	Rabgium	2.39	335.84	801.87	400.94
1219	Radhikasol	0.23	335.84	76.11	38.05
1220	Radho	18.73	335.84	6288.58	3144.29
1221	Raeeilara	0.40	335.84	135.91	67.96
1222	Ragdha	0.00	335.84	1.36	0.68
1223	Raghabpur	3.57	335.84	1198.73	599.37
1224	Raghunathpur	47.04	335.84	15798.24	7899.12
1225	Raghupur	15.49	335.84	5202.66	2601.33
1226	Rahhai	3.51	335.84	1179.70	589.85

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1227	Raibal	3.04	335.84	1022.05	511.02
1228	Raidandia	76.79	335.84	25787.26	12893.63
1229	Raidiha	1.31	335.84	438.99	219.50
1230	Raigadi	2.49	335.84	837.21	418.60
1231	Raikama	108.30	335.84	36371.03	18185.51
1232	Raipada	1.85	335.84	621.11	310.56
1233	Raisol	1.41	335.84	472.97	236.48
1234	Rajaloka	0.42	335.84	141.35	70.67
1235	Rajat Nagar	64.70	335.84	21729.38	10864.69
1236	Rajgarh	53.39	335.84	17930.68	8965.34
1237	Rajkadjharan	2.50	335.84	839.93	419.96
1238	Ralakadia	0.04	335.84	12.23	6.12
1239	Ramachandra Pur	182.84	335.84	61404.39	30702.20
1240	Ramachandrapur	9.87	335.84	3314.86	1657.43
1241	Ramchandrapur	1.44	335.84	483.84	241.92
1242	Ramgamatia	11.30	335.84	3793.26	1896.63
1243	Rangadiha	3.50	335.84	1174.27	587.13
1244	Rangalepur	0.15	335.84	51.65	25.82
1245	Rangamahia	1.32	335.84	441.71	220.85
1246	Rangamatia	54.22	335.84	18207.94	9103.97
1247	Rangapani	0.03	335.84	9.51	4.76
1248	Rangibeda	4.80	335.84	1611.90	805.95
1249	Rangisole	15.64	335.84	5251.58	2625.79
1250	Raniapal	1.95	335.84	653.73	326.86
1251	Ranibandha	4.99	335.84	1674.42	837.21
1252	Ranibhol	11.74	335.84	3941.41	1970.70
1253	Ranipandh	1.31	335.84	440.35	220.18
1254	Ranisoree	0.00	335.84	0.00	0.00
1255	Rasunia	1.55	335.84	519.18	259.59
1256	Ratanpur	4.98	335.84	1673.06	836.53
1257	Rathasole	43.63	335.84	14652.52	7326.26
1258	Rathipur	0.03	335.84	10.87	5.44
1259	Rauipal	3.54	335.84	1190.44	595.22
1260	Rekana	0.20	335.84	66.60	33.30
1261	Riridhapur	5.96	335.84	2001.96	1000.98
1262	Routaraipur	0.23	335.84	78.83	39.41
1263	Routra	0.61	335.84	205.22	102.61
1264	Rukuni	7.16	335.84	2404.26	1202.13
1265	Sabandiha	1.00	335.84	335.70	167.85
1266	Sadamandatur	13.72	335.84	4608.73	2304.36
1267	Sadheikola	2.11	335.84	709.45	354.73
1268	Sagunabasa	22.44	335.84	7537.60	3768.80
1269	Sagunapada	0.62	335.84	209.30	104.65
1270	Sahabani	0.44	335.84	148.14	74.07
1271	Sahadagodi	0.64	335.84	213.38	106.69
1272	Sahadasuni	0.17	335.84	57.08	28.54
1273	Saharbeda	2.30	335.84	773.33	386.67

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1274	Saitpur	0.87	335.84	293.57	146.78
1275	Sakhua Pata Hill	1778.80	335.84	597384.00	298692.00
1276	Sakua	10.73	335.84	3604.35	1802.17
1277	Salabani	1.17	335.84	391.42	195.71
1278	Salakata	1.66	335.84	555.87	277.94
1279	Salaleami	93.13	335.84	31275.74	15637.87
1280	Salasohisamilmu ndakutic	0.92	335.84	308.52	154.26
1281	Salbani	19.15	335.84	6432.65	3216.32
1282	Salbani Samil Nahandasul	20.44	335.84	6863.48	3431.74
1283	Salchua	539.39	335.84	181145.68	90572.84
1284	Salgon	6.93	335.84	2328.15	1164.07
1285	Salmunduli	155.72	335.84	52297.03	26148.51
1286	Saluadhar	3.13	335.84	1051.95	525.97
1287	Samapanda	4.52	335.84	1516.76	758.38
1288	Samarandrapur	5.23	335.84	1757.32	878.66
1289	Samlidihi	4.60	335.84	1543.94	771.97
1290	Samnuagou	0.28	335.84	92.42	46.21
1291	Samsingaria	3.20	335.84	1075.05	537.53
1292	San Bramhanmara	3.08	335.84	1035.64	517.82
1293	San Nugaon	38.14	335.84	12809.57	6404.79
1294	Sanakhaladi	43.78	335.84	14701.45	7350.72
1295	Sanamamudia	0.60	335.84	201.15	100.57
1296	Sanasatsol	0.77	335.84	258.23	129.12
1297	Sanasole	2.57	335.84	864.39	432.20
1298	Sanatanpur	9.66	335.84	3245.54	1622.77
1299	Sanbadtalia	2.38	335.84	800.51	400.26
1300	Sanbelakuti	5.00	335.84	1678.50	839.25
1301	Sanbhadua	4.77	335.84	1602.39	801.19
1302	Sandakoi	4.55	335.84	1528.99	764.50
1303	Sandei	7.22	335.84	2423.29	1211.64
1304	Sandhenkic	0.23	335.84	76.11	38.05
1305	Sangadihi	5.67	335.84	1902.75	951.37
1306	Sangudgudia	3.53	335.84	1185.14	592.57
1307	Sanhrisol	32.96	335.84	11069.92	5534.96
1308	Sanjambani	0.83	335.84	277.26	138.63
1309	Sanjunpal	5.77	335.84	1939.44	969.72
1310	Sankadadiha	4.82	335.84	1617.34	808.67
1311	Sankaranjia	31.81	335.84	10682.57	5341.29
1312	Sankhabangha	7.75	335.84	2602.69	1301.34
1313	Sankhabhanga	26.68	335.84	8960.58	4480.29
1314	Sankhadar	3.24	335.84	1087.28	543.64
1315	Sankhajad	1.01	335.84	338.42	169.21
1316	Sankhamood	0.96	335.84	320.75	160.37
1317	Sankharipada	0.87	335.84	292.21	146.10
1318	Sankhuntapal	0.50	335.84	167.17	83.58
1319	Sankoehicmorc	2.02	335.84	679.55	339.78

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1320	Sankucha	5.64	335.84	1893.23	946.62
1321	Sanmundhabani	3.84	335.84	1291.15	645.58
1322	Sannachana	0.68	335.84	228.33	114.16
1323	Sanpathara	0.92	335.84	308.52	154.26
1324	Sanpur	0.21	335.84	69.31	34.66
1325	Sanpusia	6.62	335.84	2222.14	1111.07
1326	Sanraikali	0.07	335.84	24.46	12.23
1327	Sansa	0.11	335.84	36.70	18.35
1328	Sansamoda	1.53	335.84	512.38	256.19
1329	Sansarasposi	5.99	335.84	2010.12	1005.06
1330	Sansimulia	0.32	335.84	107.37	53.68
1331	Sansole	10.93	335.84	3669.59	1834.79
1332	Sansonsabilla	10.74	335.84	3607.07	1803.53
1333	Santara	1.66	335.84	558.59	279.30
1334	Santisul	1.19	335.84	399.58	199.79
1335	Santragosode	1.60	335.84	538.21	269.10
1336	Sanvalia	2.89	335.84	971.76	485.88
1337	Sanyasi	0.23	335.84	78.83	39.41
1338	Sapanchua	0.86	335.84	289.49	144.74
1339	Sarada	9.58	335.84	3217.00	1608.50
1340	Saradiha	98.86	335.84	33200.23	16600.12
1341	Saramala	0.68	335.84	229.69	114.84
1342	Sarapankha	0.26	335.84	86.98	43.49
1343	Sarasbhila	5.04	335.84	1693.45	846.72
1344	Saraskana	0.88	335.84	296.29	148.14
1345	Sarat	94.78	335.84	31830.25	15915.13
1346	Saratchandrapur	1.62	335.84	543.64	271.82
1347	Sarbeswarpur	0.00	335.84	1.36	0.68
1348	Sareidihi	5.31	335.84	1781.79	890.89
1349	Sargachhida	9.58	335.84	3218.36	1609.18
1350	Sargada	3.43	335.84	1152.52	576.26
1351	Saripada	0.23	335.84	76.11	38.05
1352	Sarisakatha	1.12	335.84	376.47	188.24
1353	Sarsole	9.26	335.84	3109.63	1554.82
1354	Sartika Pur	1.77	335.84	593.93	296.96
1355	Sarujharan	14.28	335.84	4796.28	2398.14
1356	Satapautia	20.31	335.84	6819.99	3410.00
1357	Satdharia	0.55	335.84	183.48	91.74
1358	Sathilo	1.80	335.84	604.80	302.40
1359	Satpapia	2.07	335.84	694.50	347.25
1360	Satpoutia	6.63	335.84	2227.57	1113.79
1361	Satsul	12.14	335.84	4075.96	2037.98
1362	Sayalighati	4.76	335.84	1599.67	799.83
1363	Shamakhunta	1.62	335.84	543.64	271.82
1364	Shikarghati	9.81	335.84	3294.47	1647.24
1365	Shiripur	3.18	335.84	1069.62	534.81
1366	Sialia	4.52	335.84	1518.12	759.06
1367	Sialia152	20.32	335.84	6824.07	3412.03

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1368	Sialia156	0.39	335.84	130.47	65.24
1369	Sialia157	0.06	335.84	19.03	9.51
1370	Sialia158	1.08	335.84	362.88	181.44
1371	Sialia159	12.45	335.84	4180.07	2090.03
1372	Siamasundarpur	3.64	335.84	1223.20	611.60
1373	Sikhakheata	4.77	335.84	1601.03	800.51
1374	Sikidia	0.45	335.84	151.40	75.70
1375	Sila	3.97	335.84	1334.64	667.32
1376	Silgida	3.96	335.84	1329.21	664.60
1377	Silida	11.20	335.84	3762.00	1881.00
1378	Silipuria	1.86	335.84	625.19	312.59
1379	Silphodi	6.17	335.84	2071.28	1035.64
1380	Simila	0.12	335.84	39.41	19.71
1381	Similaleandh	1.55	335.84	521.90	260.95
1382	Simogodoa	0.30	335.84	99.21	49.61
1383	Sindahu Pur	0.10	335.84	32.62	16.31
1384	Sindargoura	2.83	335.84	951.37	475.69
1385	Sinduria	8.50	335.84	2854.12	1427.06
1386	Sindurjoda	12.36	335.84	4149.35	2074.67
1387	Singanpuva	0.91	335.84	307.16	153.58
1388	Singargoura	0.22	335.84	73.39	36.70
1389	Singidida	0.01	335.84	2.72	1.36
1390	Singlamundali	5.85	335.84	1963.91	981.95
1391	Singmore	33.43	335.84	11227.57	5613.79
1392	Singtia	4.67	335.84	1568.41	784.20
1393	Sirapal	3.04	335.84	1019.33	509.66
1394	Sirathali	9.09	335.84	3053.91	1526.96
1395	Sirishchandrapur	4.75	335.84	1595.59	797.80
1396	Sirsa	7.95	335.84	2670.64	1335.32
1397	Sirsapal	0.25	335.84	82.91	41.45
1398	Smapokhari	15.90	335.84	5339.93	2669.96
1399	Solagadia	141.76	335.84	47606.75	23803.38
1400	Sompokhari	2.45	335.84	823.62	411.81
1401	Sopanchua	0.40	335.84	135.91	67.96
1402	Souri	0.53	335.84	178.04	89.02
1403	Srabanaghati	75.14	335.84	25234.51	12617.26
1404	Sricandanpur	3.39	335.84	1137.57	568.79
1405	Srichandarpur	32.38	335.84	10872.85	5436.42
1406	Sridamchandra Pur	27.32	335.84	9174.37	4587.19
1407	Srileatphapur	24.00	335.84	8059.50	4029.75
1408	Srinath Pur	0.06	335.84	21.75	10.87
1409	Srinathpur	1.84	335.84	617.03	308.52
1410	Sripadmanjari Pur	146.55	335.84	49215.93	24607.97
1411	Srirampur	6.79	335.84	2279.22	1139.61
1412	Subarnamayari	11.18	335.84	3753.85	1876.92
1413	Subdasahi	0.69	335.84	231.05	115.52

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1414	Sudiam	0.40	335.84	135.91	67.96
1415	Sudusudia	48.29	335.84	16218.21	8109.10
1416	Sukhilaharsanul	19.04	335.84	6393.23	3196.62
1417	Sukhilehol	24.04	335.84	8074.45	4037.22
1418	Sukhuapada	8.54	335.84	2869.07	1434.54
1419	Sukilakhali	3.01	335.84	1011.17	505.59
1420	Sukuapata	280.87	335.84	94327.37	47163.68
1421	Sumahaja	4.86	335.84	1632.29	816.14
1422	Sunakaria	0.47	335.84	157.66	78.83
1423	Sunamohini	0.44	335.84	146.78	73.39
1424	Sunaposi	36.33	335.84	12199.33	6099.67
1425	Sunaria	12.93	335.84	4342.34	2171.17
1426	Sundhal	5.40	335.84	1814.41	907.20
1427	Sungadia	0.84	335.84	281.33	140.67
1428	Suniapual	2.43	335.84	815.46	407.73
1429	Surukuna	9.86	335.84	3310.78	1655.39
1430	Swrapvilla	43.40	335.84	14576.41	7288.20
1431	Tadakisole	6.22	335.84	2090.30	1045.15
1432	Tadhi	2.09	335.84	702.66	351.33
1433	Tadki	26.03	335.84	8741.77	4370.88
1434	Tadkijharam	8.95	335.84	3006.34	1503.17
1435	Taginuagan	3.04	335.84	1020.69	510.34
1436	Takadida	0.07	335.84	23.10	11.55
1437	Taladiha	2.02	335.84	679.55	339.78
1438	Talanda	2.91	335.84	978.56	489.28
1439	Talapadia	5.17	335.84	1736.94	868.47
1440	Talbani	3.07	335.84	1031.56	515.78
1441	Taldiha	0.45	335.84	149.50	74.75
1442	Talghera	4.05	335.84	1359.11	679.55
1443	Talia	19.52	335.84	6556.33	3278.16
1444	Talkunda	1.90	335.84	637.42	318.71
1445	Talpada	3.78	335.84	1270.76	635.38
1446	Taltikiri	1.21	335.84	405.01	202.51
1447	Tambagadi	2.44	335.84	820.90	410.45
1448	Tamgama	1.48	335.84	496.07	248.04
1449	Tamkiasole	8.82	335.84	2962.85	1481.43
1450	Tangasole	15.39	335.84	5167.32	2583.66
1451	Taradapal	1.94	335.84	651.01	325.51
1452	Taradasal	2.65	335.84	888.86	444.43
1453	Tarana	7.64	335.84	2564.63	1282.32
1454	Tarasul	61.36	335.84	20608.12	10304.06
1455	Tasarada	0.18	335.84	59.80	29.90
1456	Tekpada	0.89	335.84	300.36	150.18
1457	Teldihudi	2.77	335.84	929.63	464.81
1458	Teldol	0.40	335.84	135.91	67.96
1459	Telia	4.42	335.84	1482.78	741.39
1460	Tentala	14.65	335.84	4919.96	2459.98
1461	Tentali	0.15	335.84	50.29	25.14

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1462	Tentaposi	4.58	335.84	1538.51	769.25
1463	Tentulibati	0.12	335.84	39.41	19.71
1464	Tentuligan	2.48	335.84	834.49	417.25
1465	Tentuligaon	2.02	335.84	678.19	339.10
1466	Tentulisole	13.63	335.84	4578.83	2289.41
1467	Thakur Tota	35.64	335.84	11969.64	5984.82
1468	Thengatandi	0.16	335.84	53.01	26.50
1469	Tiakati	0.45	335.84	150.86	75.43
1470	Tiansi	0.60	335.84	201.15	100.57
1471	Tikaitpur	1.34	335.84	451.22	225.61
1472	Tikarapada	0.13	335.84	43.49	21.75
1473	Tikarbati	3.49	335.84	1171.55	585.77
1474	Tikargadia	3.76	335.84	1262.61	631.30
1475	Tikarpada	6.56	335.84	2204.47	1102.23
1476	Tikayatpur	58.88	335.84	19773.63	9886.81
1477	Tila	5.61	335.84	1882.36	941.18
1478	Tilada	3.51	335.84	1179.70	589.85
1479	Tilajodia	1.52	335.84	509.66	254.83
1480	Tilapada	45.87	335.84	15404.10	7702.05
1481	Tilaposi	2.34	335.84	785.56	392.78
1482	Tilaugadia	4.62	335.84	1550.74	775.37
1483	Tilou	0.81	335.84	271.82	135.91
1484	Tirildihi	16.19	335.84	5436.42	2718.21
1485	Titila	1.30	335.84	436.27	218.14
1486	Titiri	1.72	335.84	577.62	288.81
1487	Tolagodia	339.82	335.84	114124.10	57062.05
1488	Tolakchuin	13.93	335.84	4678.04	2339.02
1489	Tolokpi	2.93	335.84	985.35	492.68
1490	Tovagodi	1.96	335.84	659.17	329.58
1491	Trilachoupur	0.03	335.84	10.87	5.44
1492	Tubulubhadu	13.09	335.84	4395.35	2197.67
1493	Tulasibani	4.35	335.84	1461.04	730.52
1494	Tulasichaunra	0.87	335.84	293.57	146.78
1495	Tungagambhani	11.76	335.84	3949.56	1974.78
1496	Tungasole	81.21	335.84	27273.17	13636.59
1497	Tupra	3.21	335.84	1077.77	538.89
1498	Uamadipur	11.31	335.84	3798.70	1899.35
1499	Uandana	14.29	335.84	4799.00	2399.50
1500	Udala 12	42.71	335.84	14342.64	7171.32
1501	Udala 10	0.05	335.84	16.31	8.15
1502	Udala 9	0.02	335.84	5.44	2.72
1503	Udala Ii	4.20	335.84	1409.39	704.70
1504	Udala No 3	0.34	335.84	112.81	56.40
1505	Udala No 5	0.46	335.84	154.94	77.47
1506	Udala No 6	0.11	335.84	36.70	18.35
1507	Udala-2	14.22	335.84	4775.90	2387.95
1508	Udalatown No-1	0.32	335.84	107.37	53.68
1509	Udalibal	0.16	335.84	54.36	27.18

SL. NO.	MOUJA	AREA (HA)	Biomass (t/ha)	Total Revenue Forest Biomass (t/ha)	Revenue Forest Carbon stock (t/ha)
1510	Udipura	9.14	335.84	3068.86	1534.43
1511	Ufalgodia	10.10	335.84	3390.97	1695.48
1512	Uhantapal	0.00	335.84	0.00	0.00
1513	Ukasol	9.36	335.84	3144.97	1572.49
1514	Unapura	6.96	335.84	2336.30	1168.15
1515	Unchabali	0.12	335.84	39.41	19.71
1516	Upar Taldiha	23.82	335.84	7999.70	3999.85
1517	Uparkadada	2.04	335.84	684.99	342.49
1518	Uphalgodia	5.81	335.84	1951.68	975.84
1519	Urmala	36.97	335.84	12416.79	6208.39
1520	Uthaninuagan	3.84	335.84	1289.79	644.90
1521	Uttarpal	0.06	335.84	20.39	10.19
1522	Uttarpala	0.43	335.84	145.42	72.71
1523	Yoda	4.63	335.84	1553.46	776.73
1524	Zulepalasia	0.87	335.84	290.85	145.42
Grand Total		**29064.48**	**-**	**9760871.26**	**4880435.63**

Appendix – XXXVI

V.S.S CONSTITUTED OUTSIDE PLAN AREA

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Revenue Forest Block Total
1	kaptipada	Sarisua	Sripadmanjari	Sripadmanjari	Kalamgodia	Sripadmanjari U.D.P.F.	57	57
2	Deuli	Suliapada	Bada Bhalia	Bada Bhalia	Bada Bhalia	Bada Bhalia U.D.P.F.	120	120
3	Deuli	Deuli	Badadamahila	Badadamahila	Kujidihi	Badada U.D.P.F.	25	25
4	Dukura	Digdiga	Baghuahudi	Sansole	Rangamatia	Baghuadudi U.D.P.F.	50	50
5	Pithabata	-do-	Baidikotha (Gandeburu)	Baidikotha (Gandeburu)	-do-	Baidikotha U.D.P.F.	50	50
6	Pithabata	Haldibani	Barudihi	Barudihi	Gendapokhari	Barudihi UDPF	30	30
7	Pithabata	Haldibani	Barudihi	Barudihi	Patihinja	Baudihi U.D.P.F.	50	50
8	Bangriposi	-do-	Uchagoan	Uchagoan	Bagbuda	Baunsiapat U.D.P.F..	100	100
9	Rasgovindpur	-do-	Khenkasahi	Khenkasahi	Nakichua	Betnasia U.D.P.F.	30	30
10	kaptipada	kaptipada	Bholaghati	BholaGhati	kaptipada	Bholaghati U.D.P.F.	55	55
11	Deuli	Deuli	Bholesole	Bholesole	Kanimahuli	Bholesole U.D.P.F.	40.25	40.25
12	Deuli	-do-	Chenaposi	Chenaposi	-do-	Chenaposi U.D.P.F.	75.25	75.25
13	kaptipada	kaptipada	Dangarchua	Dangarchua	Debala	Dangarchua U.D.P.F.	67	67
14	Deuli	-do-	Darudihi	Darudihi	Baghra	Darudihi U.D.P.F.	30	30
15	Bangriposi	-do-	Digarisole	Digarisole	Joka	Digarisole U.D.P.F.	50	50
16	Deuli	-do-	Dudhiasole	Dudhiasole	Kujidihi	Dudhiasole U.D.P.F.	25	25
17	Kaptipada	-do-	Gayalmara	Gayalmara	-do-	Gayalmara U.U.D.P.F..	30	30

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Revenue Forest Block Total
18	Pithabata	Haldibani	Gendapokhari	Gendapokhari	Gendapokhari	Gendapokhari U.D.P.F.	116	116
19	Pithabata	Haldibani	Netaji	Jagannathpur	Gendapokhari	Jaganthpur U.D.P.F.	51	51
20	Deuli	Deuli	Jalghati	Jalghati	Chuat	Jalghati U.D.P.F.	50	50
21	Kaptipada	Kaptipada	Jharanghati	Jharanghati	Kaptipada	Jharanghati U.D.P.F.	30	120
22	Kaptipada	Kaptipada	Salaghati	Salaghati	Kaptipada		30	
23	Kaptipada	-do-	Tikarapada	Tikarapada	Mankadapada		30	
24	Kaptipada	-do-	Tangaria	Tangaria	Mankadapada		30	
25	Deuli	Chandua	Rambha kakharusole	kakharusole	Chandua	Kakharusole U.D.P.F..	100	100
26	Pithabata	-do-	Kantasola	Kantasola	Kantasola	Kantasola U.D.P.F.	50	50
27	Dukura	Tadki	Maa kanyanagari	Hatikot	Jadunathpur	Kanthalhudi U.D.P.F.	105	180
28	Dukura	Tadki	Maa Kanthalu	Jadunathpur	Jadunathpur		75	
29	Deuli	Deuli	Dhenkinanjia Katarikata.	Dhenkinanjia	Kujidihi	Katarikata U.D.P.F.	111.2	111.2
30	Dukura	-do-	Khasadiha	Khasadiha	Kujidihi	Khasadiha U.D.P.F.	50	125.7
31	Dukura	Digdiga	Godipokhari	Godipokhari	Kochilaghati		75.7	
32	kaptipada	kaptipada	khuntabil	khuntabil	Mankodapoda Village Forest	Khuntabil U.D.P.F.	66	66
33	Pithabata	Balidiha	Kitadihi	Kitadihi	Kalapathar	Kitadihi U.D.P.F.	150	150
34	Dukura	Digdiga	Maa Ambika	Besarpani	Kendua	Konthalhudi U.D.P.F.	52	52
35	Deuli	Suliapada	Kuladahani	Kuladahani	Badbhalia	Kuladahani U.D.P.F.	155	155
36	Betnoti	-do-	Sagadabhanga	Sagadabhanga	Kuchilakhuna	Mahulia U.D.P.F.	50	50
37	Bangriposi	-do-	Matikhani	Matikhani	-do-	Matikhani UDPF	80	80
38	Pithabata	Haldibani	Jhaliburu	Mudrajodi	Kalapathar	Mudrajodi U.D.P.F.	113	113

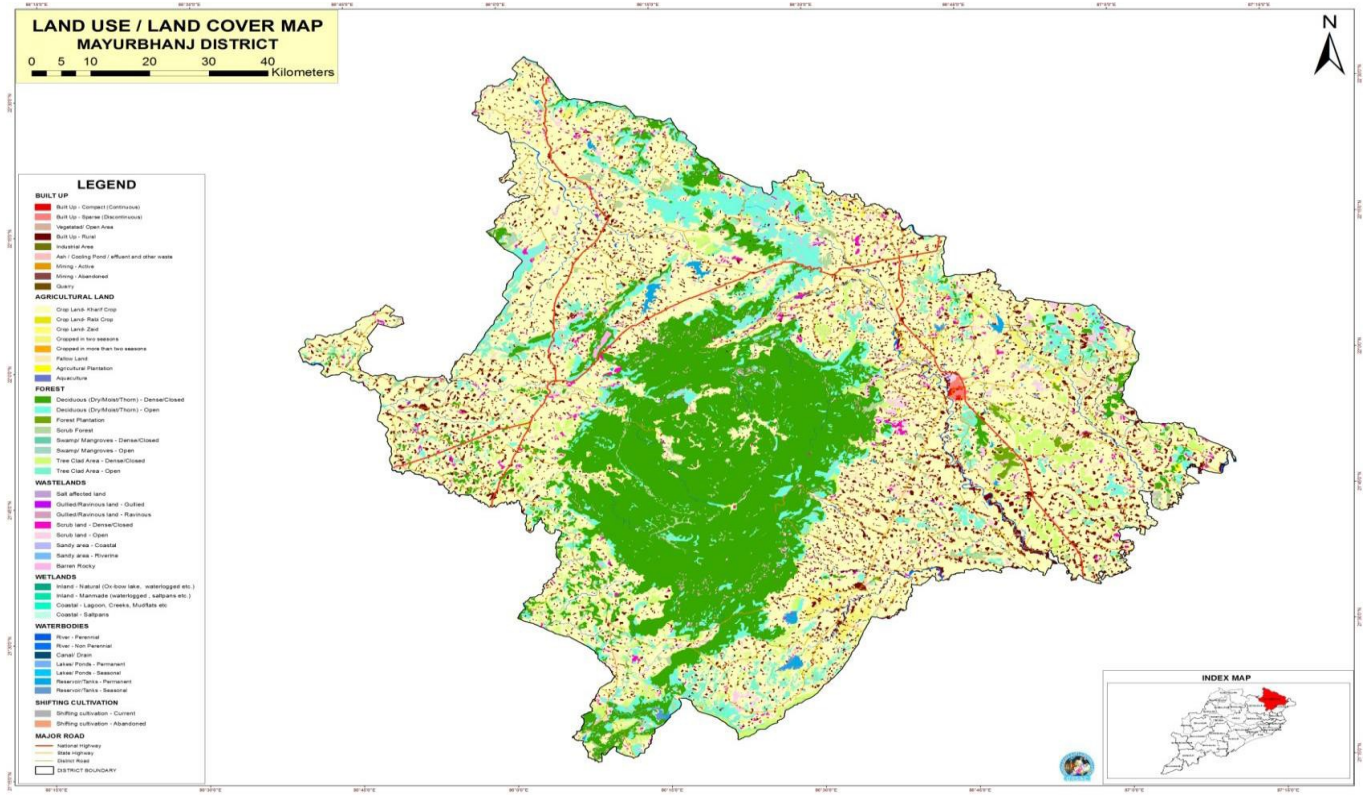
Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Revenue Forest Block Total
39	Pithabata	Haldibani	Mundhabani	Mundhabani	Gendapokhari	Mundhabani UDPF	58.21	58.21
40	Udala	-do-	Banasathi kendra Nabra	Banasathi kendra Nabra	Bahubandha	Nabra U.D.P.F.	161	161
41	Bangriposi	-do-	Nafri & Jhinkpahadi	Nafri	Nafri	Nafri U.U.D.P.F..	100	100
42	Kaptipada	-do-	Raikania	Raikania	Jodida	Nedam U.D.P.F.	30	30
43	Betnoti	Badampur	Purikhunta	Purikhunta	Purikhunta	P.C.Pur U.D.P.F..	100	100
44	Deuli	-do-	Patharnesa	Patharnesa	Chuhat	Patharnesa U.D.P.F.	96.6	96.6
45	Udala	Kuamara	Angargadia	Angargadia	Puruna Baripada	Plantation	20	20
46	Dukura	Digdiga	Dalkisole	Dalkisole	Khasadihi	Prativadeipur U.D.P.F.	75	75
47	Deuli	Kuliana	Purunapani	Purunapani	Purunapani	Purunapani U.D.P.F.	55.5	105.5
48	Deuli	Deuli	Purnapani	Purnapani	Chuat		50	
49	Bangriposi	Badgaon	Purusattampur	Purusattampur	Bhuasuni	Purusatampur U.D.P.F.	63	63
50	Deuli	-do-	Rainda	Rainda	Kanimahuli	Rainda U.D.P.F.	58.4	58.4
51	kaptipada	Sarat	Rajat Nagar	Rajat Nagar	Ranipokhari	Rajat Nagar U.D.P.F.	54	54
52	Deuli	-do-	Rakhnisole	Rakhnisole	Phania	Rakhnisole U.D.P.F.	18.89	18.89
53	Pithabata	Haldibani	Ramharipur	Bhuasuni	Bhuasuni	Ramharipur U.D.P.F.	50	50
54	Deuli	Kuliana	Sauri	Sauri	Sauri	Revenue Forest	50	50
55	Rasgovindpur	-do-	Ghasmari-Kaptipada	Ghasmari	Jhatioda	Revenue Forest	150	150
56	Rasgovindpur	-do-	Mahalaxmi	Mahalaxmi	Nuagaon	Revenue Forest	20	20
57	Dukura	Tadki	Maa Mathamani (Tilasahi-Mankdapal)	Tilasahi	Purnachandrapur	Revenue Land	50	50
58	Udala	-do-	Salmundali	Salmundali	-do-	Salmundali U.D.P.F.	40	40

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Revenue Forest Block Total
59	Dukura	-do-	Sirish Ch. Pur	Sirish Ch. Pur	Sirish Ch. Pur	Sirish Ch. Pur U.D.P.F.	50	50
60	Kaptipada	Sarisua	Sarisua	Sarisua	Kalamgodia	Sukhuapata U.D.P.F..	150	150
61	Kaptipada	-do-	Padam pokhari	Padam pokhari	Padam pokhari	Sukhuapata U.D.P.F..	100	100
62	Deuli	Suliapada	Surki-Jalghati	Surki-Jalghati	Chuhat	Surki U.D.P.F.	180	180
63	Kaptipada	Kaptipada	Kuanrapur	Kuanrapur	Mankadapada	Tangiria U.D.P.F.	20	20
64	Bangriposi	-do-	Balikhani	Balikhani	Dhabanisole	Tulia U.D.P.F.	200	200
65	Bangriposi	Sirsa	Uparbeda	Uparbeda	Joka	Uparbeda U.D.P.F.	51.3	51.3
66	Bangriposi		Paktia VSS	Paktia VSS	Saroskona	Dahipahadi D.P.F.	50	50
67	Pithabata	Orachandabill	Dinabandhupur	Dinabandhupur	Sialighati	Dinabandhupur D.P.F	50	50
68	Bangriposi	Badgaon	Jhinkpahadi	Jhinkpahadi	Nafri	Jinkpahadi D.P.F	56.3	56.3
69	Bangriposi	Badgaon	Kankadajharan	Hill Block-II, Kankadajharan	Bhuasuni	Kankadajharan D.P.F	66.9	66.9
70	Bangriposi	Kusumbandh	Palasbani	Palasbani	Saraisapal	Palasbani D.P.F	90.2	90.2
71	Bangriposi	Kusumbandh	Sannedam	Sannedam	Sarispal	Sannedam D.P.F	60.2	60.2
72	Bangriposi	Kusumbandh	Sulisahi, Bhalubasa	Sulisahi, Bhalubasa	Budkhikhamari	Sulisahi, Bhalubasa D.P.F	85	85
73	Deuli	Deuli	Khalapada	Khalapada	Garia	Khalapada D.P.F	100	100
74	Udala	Udala	Bahubandha	Bahubandha	Bahubandha	Bahubandha U.D.P.F	57.9	57.9
75	Deuli	-	Chitakhala	Chitakhala	Kujidihi	Chitakhala U.D.P.F	50	50
76	Pithabata	Haldibani	Kantasola	Kantasola Mohantasahi	Badgaon	Kantasola U.D.P.F	52	52
77	Pithabata	Orachandabill	Budheirana	Budheirana	Sialighati	Budheirana U.D.P.F	50	50
78	Rasgovindpur	Rasgobindapur	Sunakania	Sunakania	Nalgaja	Sanchatia U.D.P.F	148.27	148.27

Sl No	Name of the Range	Name of the Section	Name of V.S.S.	Name of the Village	Name of the Gram Panchayat	Name and status of Forest Land	Area in Ha. Assigned to VSS	Revenue Forest Block Total
1	Pithabata	Orachandabilla	Part of VSS of Plan Area	Sindurgoura	Bhagabat Ch. Pur	Bhagabat Chandrapur UDPF	389.62	389.62
2	PITHABATA	Baldiha		Hijalgadia	Kalapathar	Asanabani UDPF	83.97	83.97
3	Dukura	Badsahi		Guabehera	Badasahi	Badsahi UDPF	81.3	81.3
4	Dukura	Badsahi		Maitrapur	Barasahi	Purunapani UDPF	42.27	42.27
5	Rasgovindpur	Morada		Palasabandha	Morada	Moroda UDPF	314.3	314.3
6	Udala	Khunta		Belakuti	Pasuda	Belakuti UDPF	50	50
7	Udala	-		Kusumia	Kuamara	Dhaundia UDPF	50	50
8	Udala	Kuamara		Karda	Kuamara	Kuamara UDPF	85	85
9	Betnoti	Badampur		Bodhi	Badampur	Badampur UDPF	100	100
10	Betnoti	Baisinga		Daldali	Baisingha	Daldali UDPF	29.78	29.78
11	Betnoti	-		Gaddeulia	Baisinga	Gad-deulia UDPF	41.27	41.27
12	Betnoti	-		Dembudahar	Anla	Haripur UDPF	39.06	39.06
13	Betnoti	Baisinga		Sankhirpada	Patalipura	Khiripada UDPF	80.04	80.04
14	Betnoti	-		Godgadia	Jugal	Phuljhari UDPF	49.58	49.58
15	Betnoti	-		Aguad	Durgapur	Patpur UDPF	50.6	50.6
16	Deuli	Deuli		Manda	Manda	Deuli UDPF	374.29	374.29
17	Deuli	Deuli		Badsole	Deoli	Badsole UDPF	83.67	83.67
18	Deuli	Chandua		Tangasole	Chandua	Tangasole UDPF	98.32	98.32
19	Kaptipada	Podadiha		Asanbani	Pingu	Asanabani UDPF	38.44	38.44
20	Kaptipada	Sarisua		Raipal	Padmapokhari	Sukhuapata Hill UDPF	107.68	107.68
21	Pithabata	Pithabata		Baldiha	Baldiha	Baldiha U.D.P.F	44.18	44.18
Revenue Forest Total							**7656.44**	**7656.44**

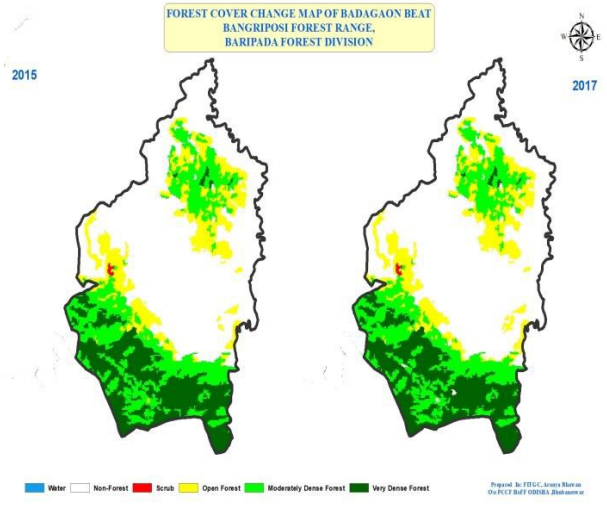
Appendix – XXXVII

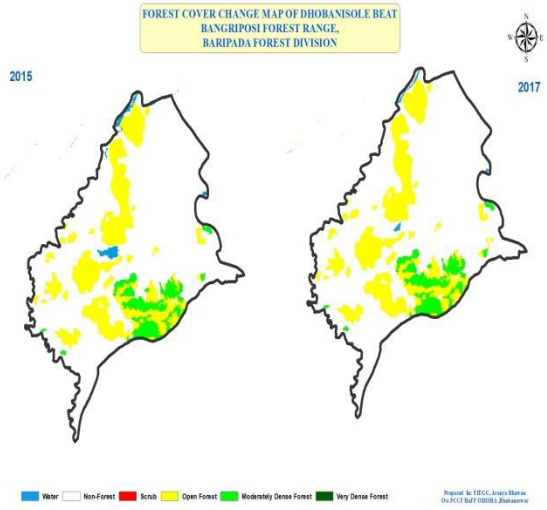
BLOCK-WISE LAND USE MAPS OF BARIPADA FOREST DIVISION

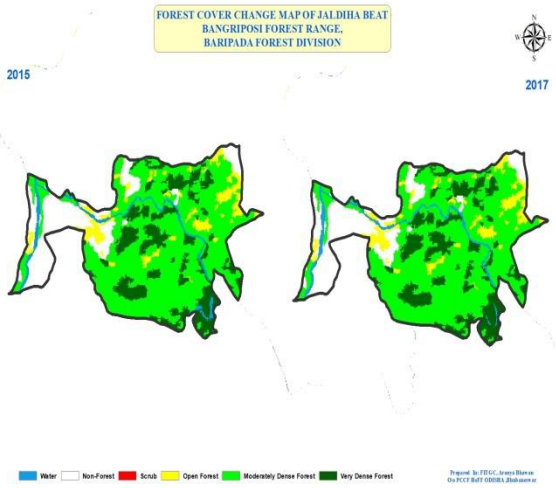


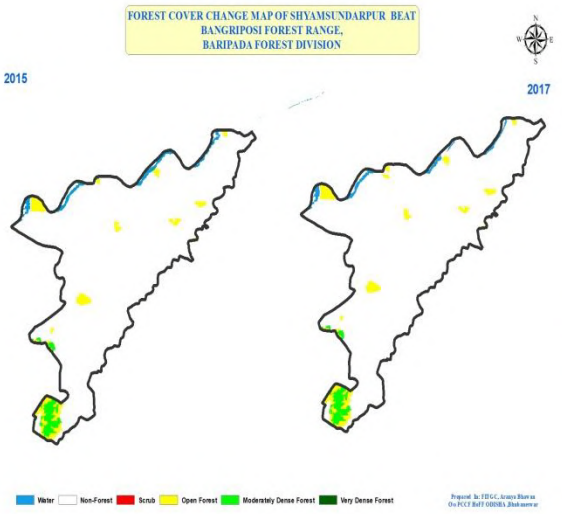
Appendix – XXXVIII

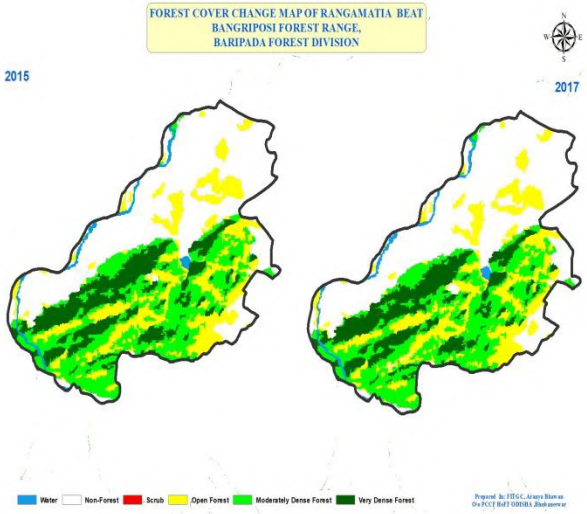
BEAT-WISE VEGETATION CHANGE MAP (2015 – 2017)

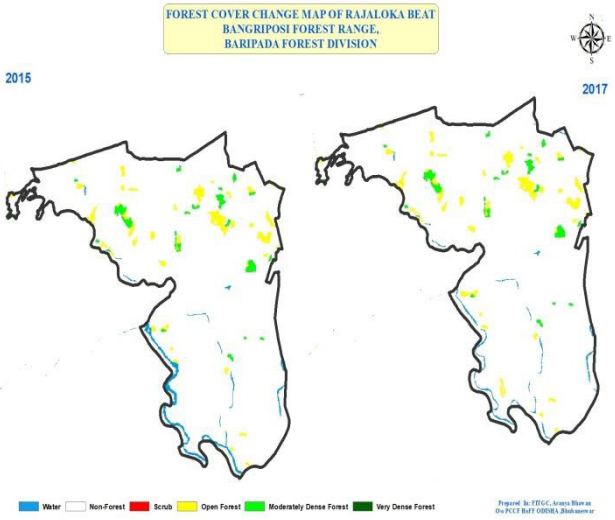


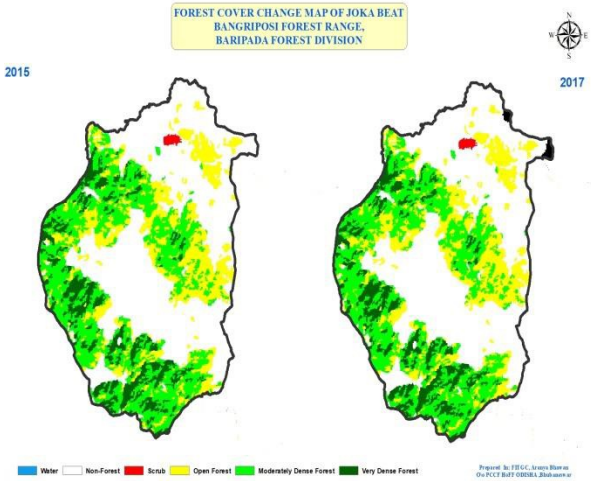





FOREST COVER CHANGE MAP OF SHYAMSUNDARPUR BEAT
BANGRIPOSI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF RANGAMATIA BEAT
BANGRIPOSI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF RAJALOKA BEAT
BANGRIPOSI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF JOKA BEAT
BANGRIPOSI FOREST RANGE,
BARIPADA FOREST DIVISION
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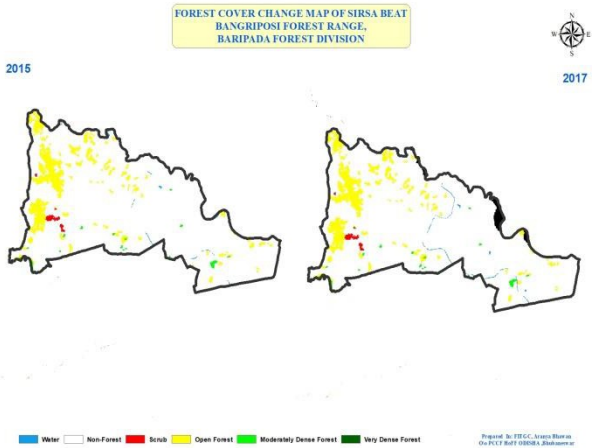
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SIRSA BEAT
BANGRIPOSI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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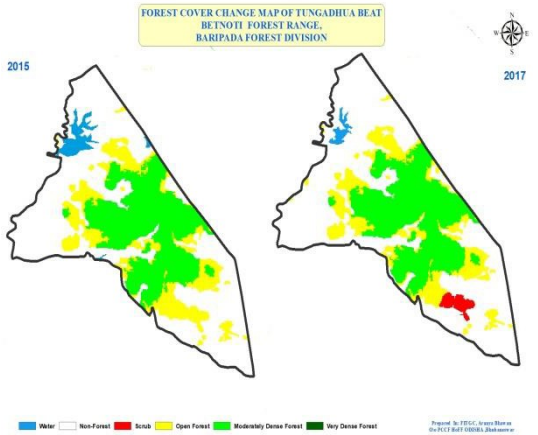
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF TUNGADHUA BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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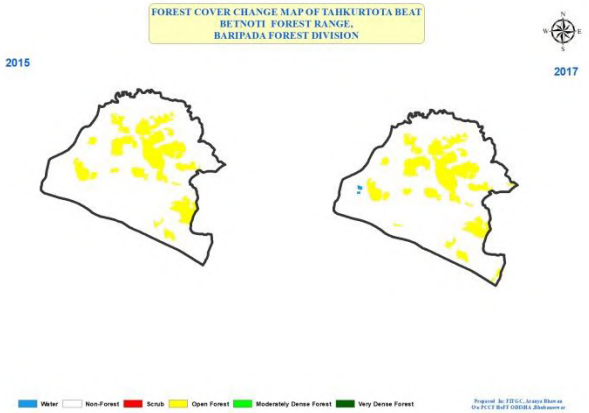
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF TAHKURTOTA BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
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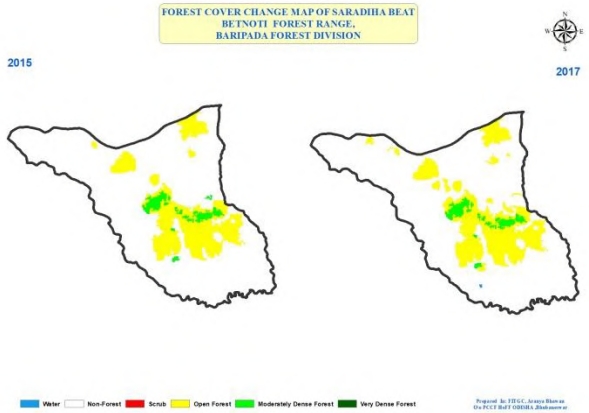
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SARADIHA BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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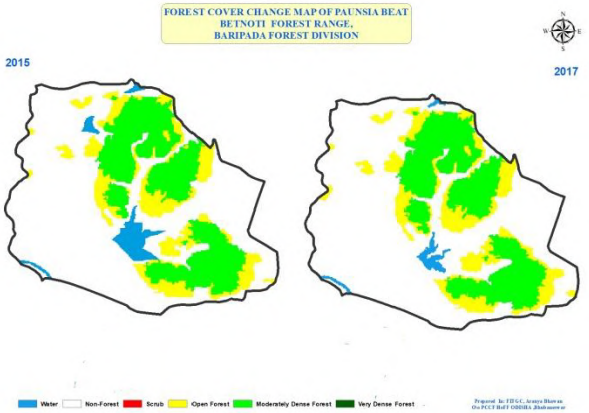
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF PAUNSIA BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
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Water
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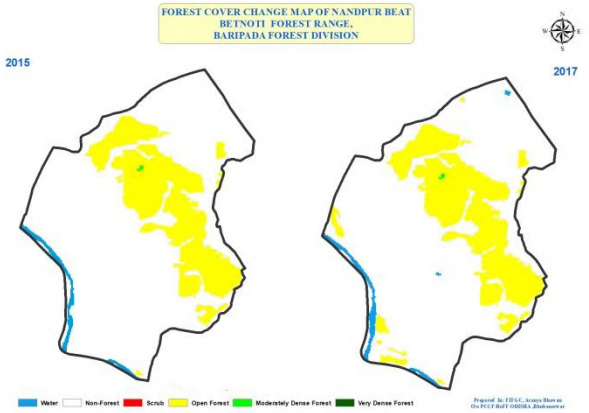
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF NANDPUR BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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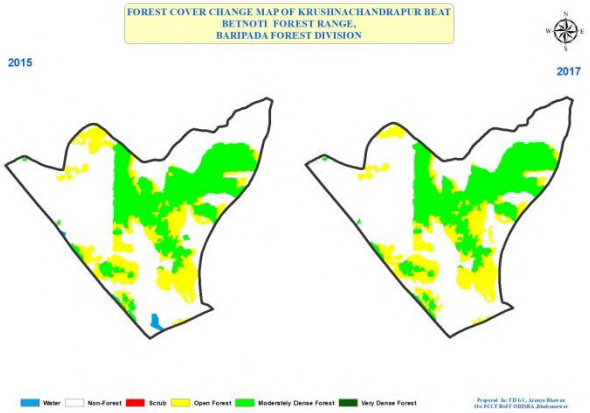
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KRUSHNACHANDRAPUR BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
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Water
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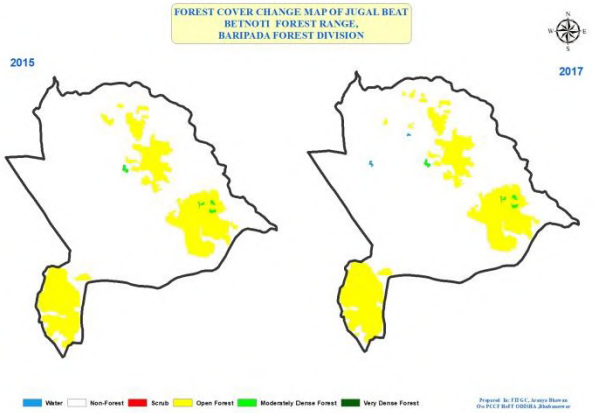
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF JUGAL BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
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Water
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Scrub
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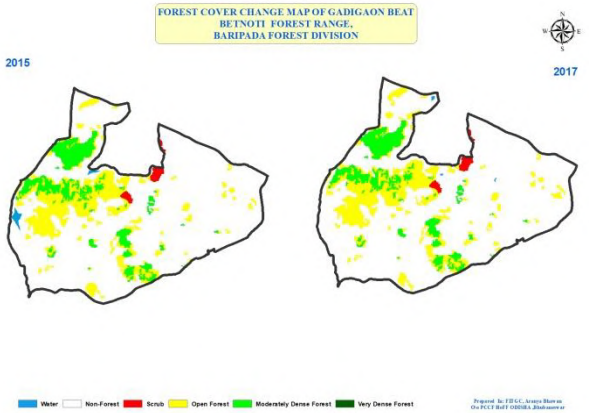
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF GADIGAON BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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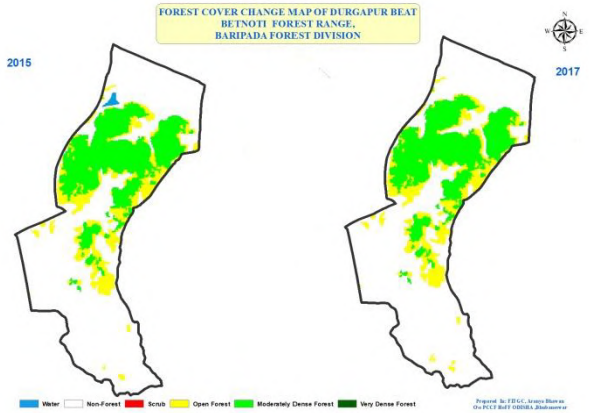
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF DURGAPUR BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
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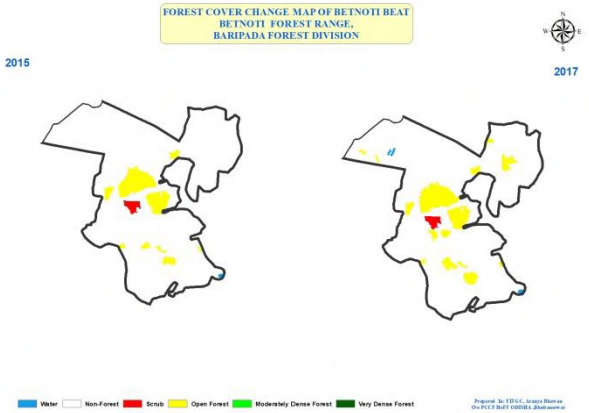
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BETNOTI BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
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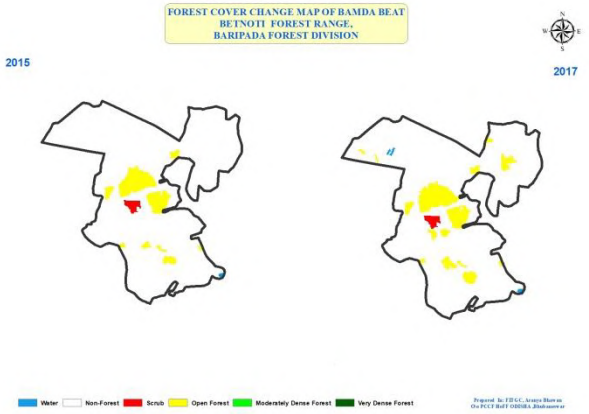
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BAMDA BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
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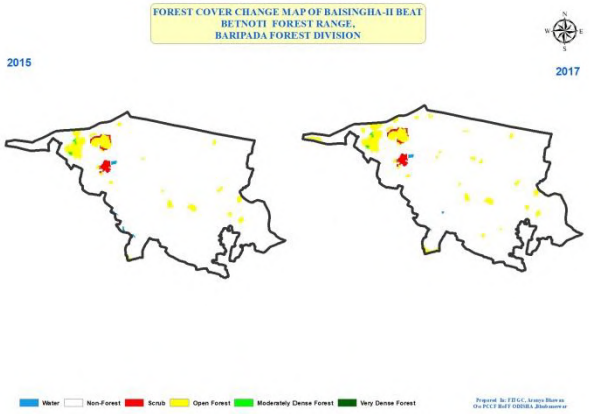
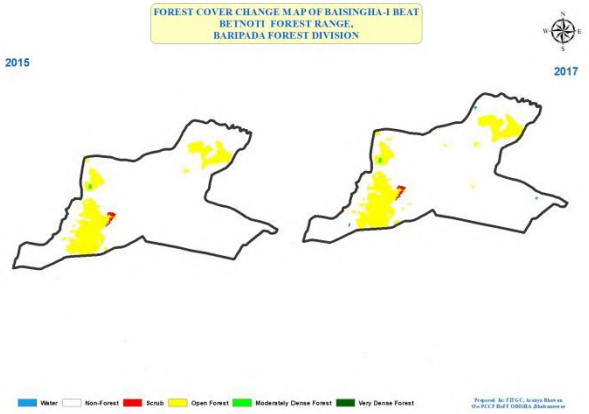
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BAISINGHA-II BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BAISINGHA-I BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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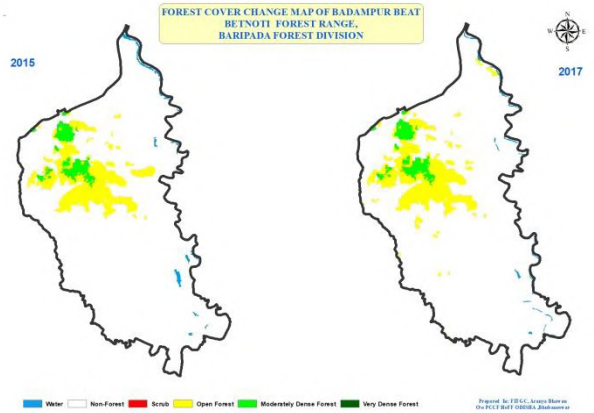
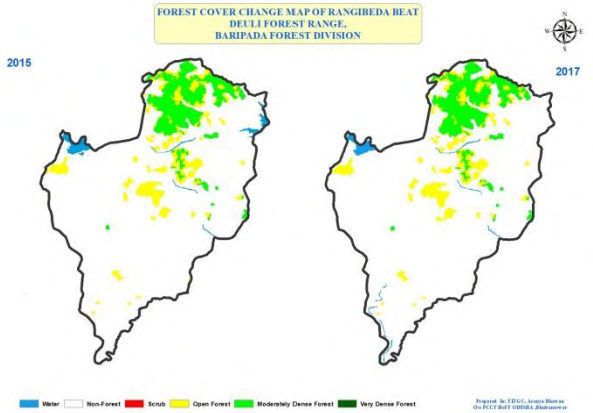
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BADAMPUR BEAT
BETNOTI FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF RANGIBEDA BEAT
DEULI FOREST RANGE,
BARIPADA FOREST DIVISION
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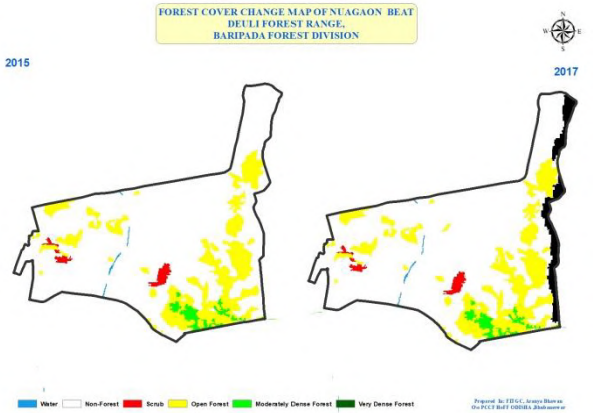
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF NUAGAON BEAT
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BARIPADA FOREST DIVISION
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Water
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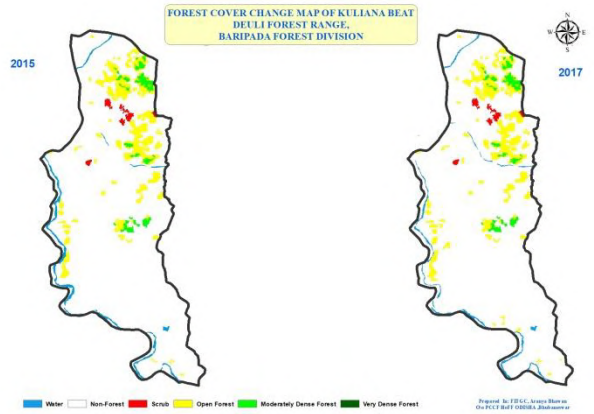
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KULIANA BEAT
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BARIPADA FOREST DIVISION
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Water
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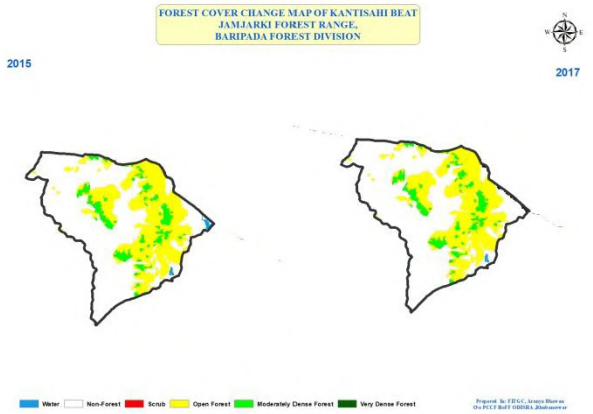
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KANTISAHI BEAT
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BARIPADA FOREST DIVISION
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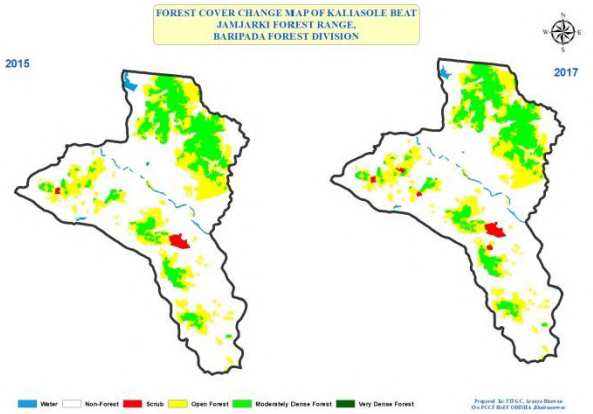
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KALIASOLE BEAT
JAMJARKI FOREST RANGE,
BARIPADA FOREST DIVISION
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Scrub
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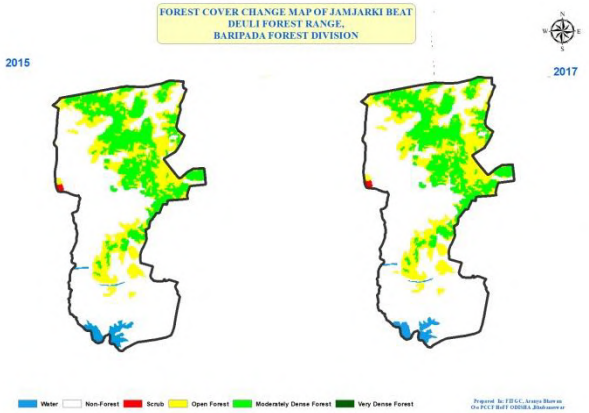
Very Dense Forest


FOREST COVER CHANGE MAP OF JAMJARKI BEAT
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BARIPADA FOREST DIVISION
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Scrub
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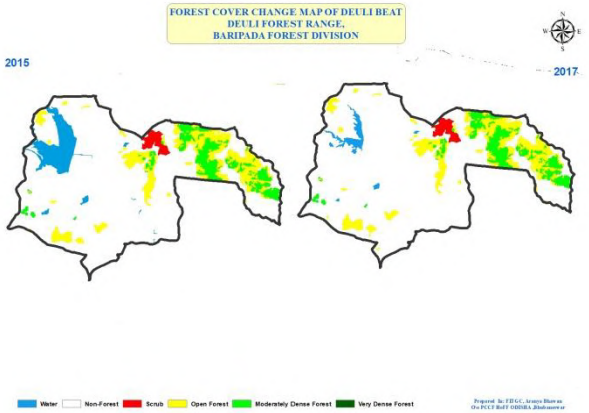
Very Dense Forest


FOREST COVER CHANGE MAP OF DEULI BEAT
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BARIPADA FOREST DIVISION
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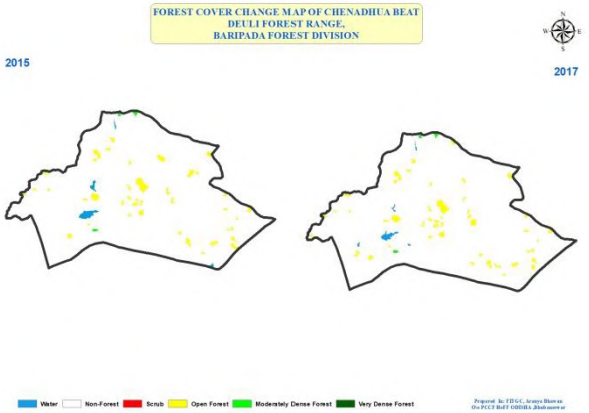
Very Dense Forest


FOREST COVER CHANGE MAP OF CHENADHUA BEAT
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BARIPADA FOREST DIVISION
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Scrub
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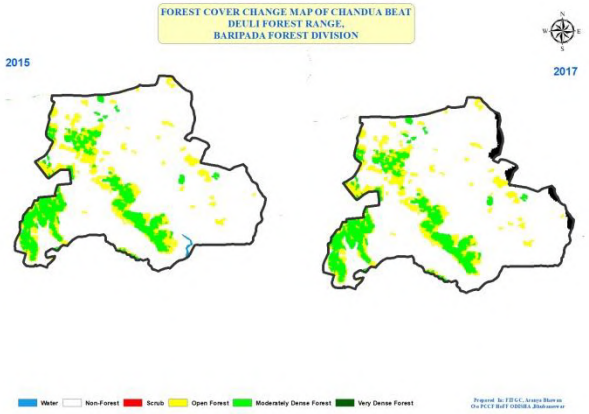
Very Dense Forest


FOREST COVER CHANGE MAP OF CHANDUA BEAT
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BARIPADA FOREST DIVISION
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Scrub
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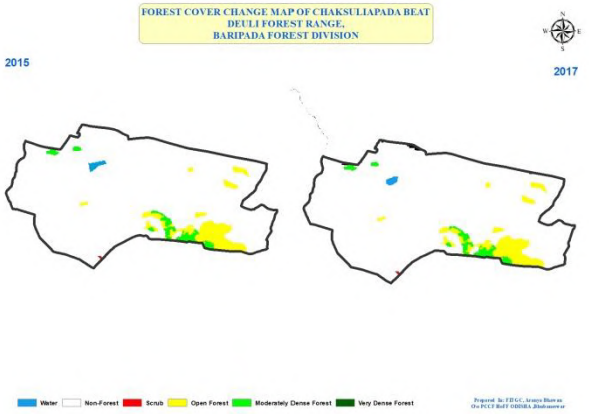
Very Dense Forest


FOREST COVER CHANGE MAP OF CHAKSULIAPADA BEAT
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BARIPADA FOREST DIVISION
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Scrub
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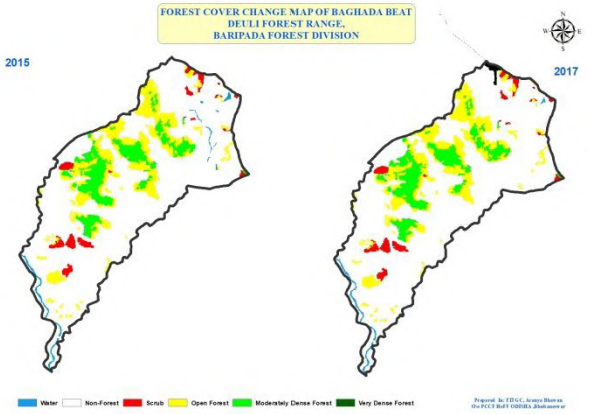
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BAGHADA BEAT
DEULI FOREST RANGE,
BARIPADA FOREST DIVISION
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Water
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Scrub
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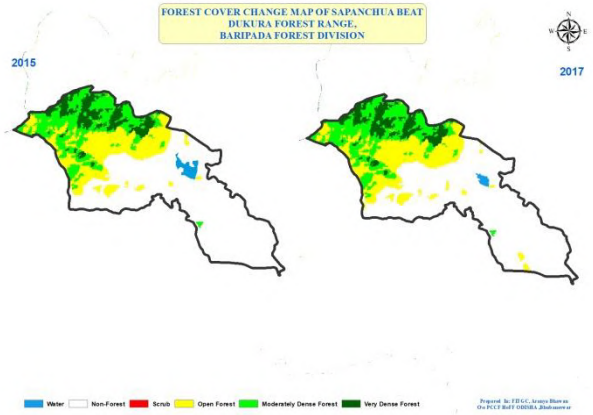
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SAPANCHUA BEAT
DUKURA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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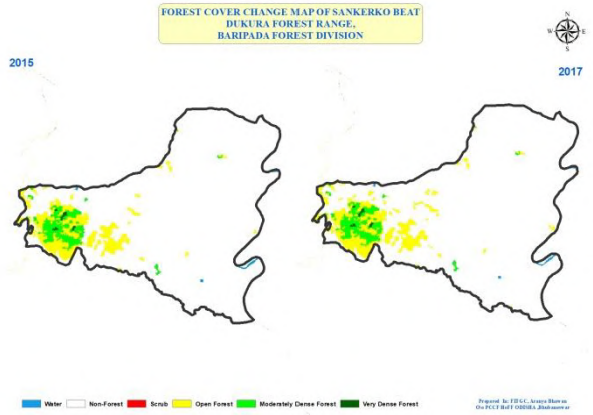
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SANKERKO BEAT
DUKURA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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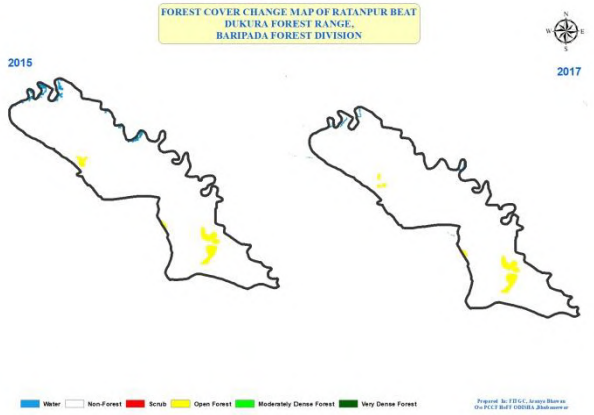
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF RATANPUR BEAT
DUKURA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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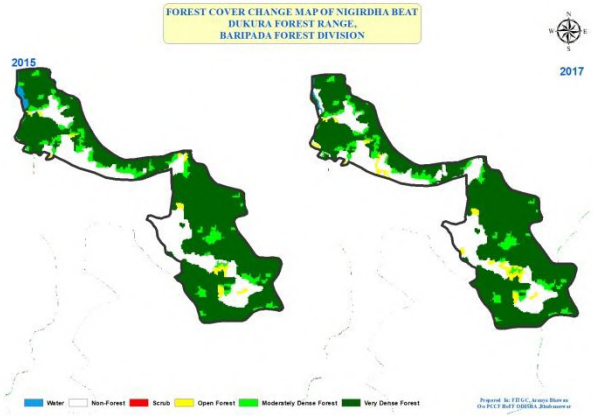
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF NIGIRDHA BEAT
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BARIPADA FOREST DIVISION
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Water
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Scrub
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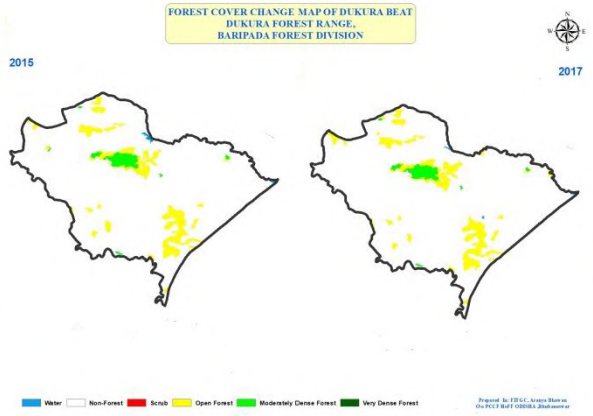
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF DUKURA BEAT
DUKURA FOREST RANGE,
BARIPADA FOREST DIVISION
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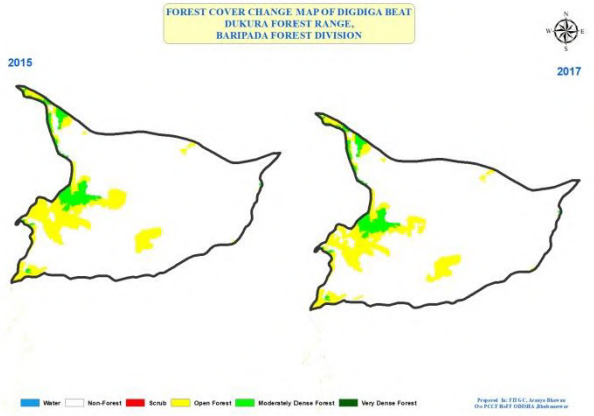
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF DIGDIGA BEAT
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BARIPADA FOREST DIVISION
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Water
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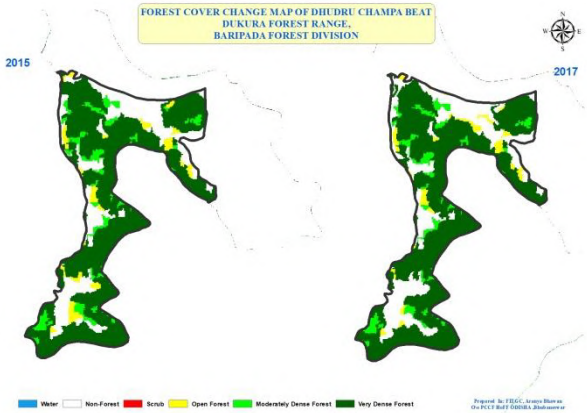
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF DHUDRU CHAMPA BEAT
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BARIPADA FOREST DIVISION
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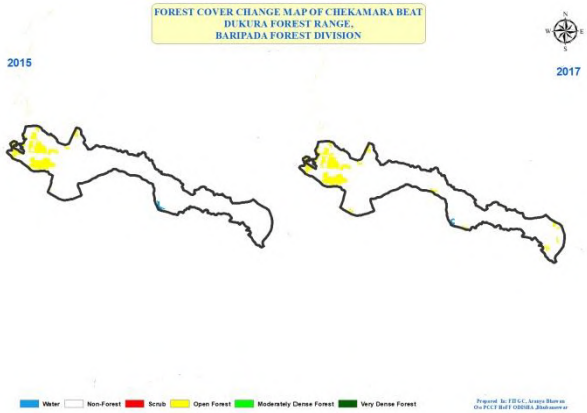
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF CHEKAMARA BEAT
DUKURA FOREST RANGE,
BARIPADA FOREST DIVISION
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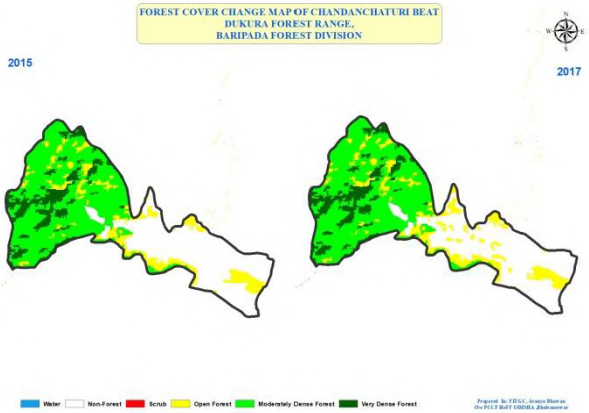
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF CHANDANCHATURI BEAT
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BARIPADA FOREST DIVISION
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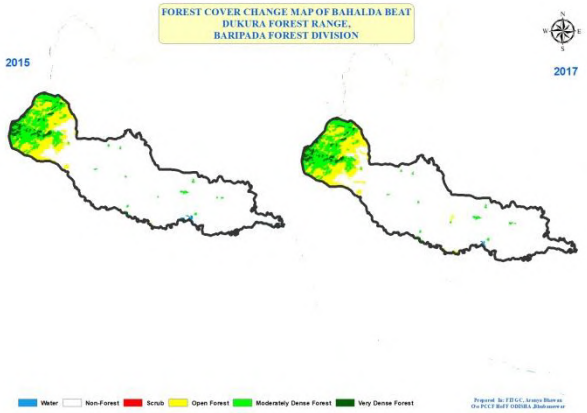
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BAHALDA BEAT
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BARIPADA FOREST DIVISION
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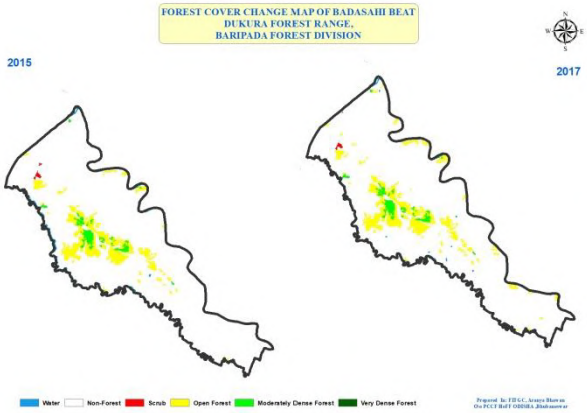
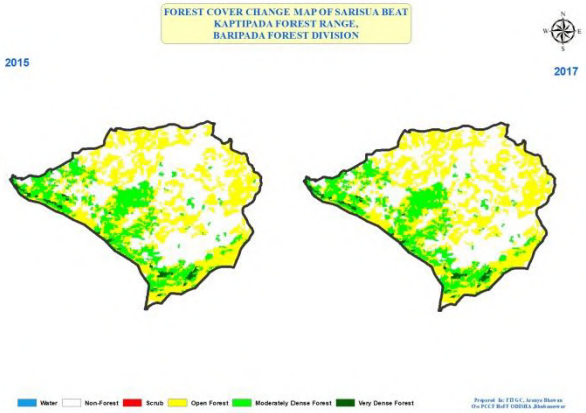
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BADASAHI BEAT
DUKURA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SARISUA BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
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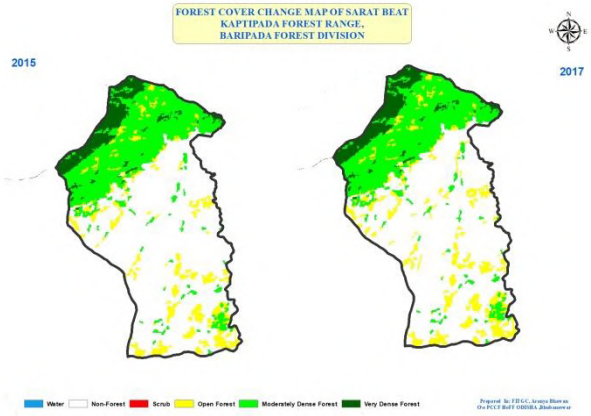
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SARAT BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
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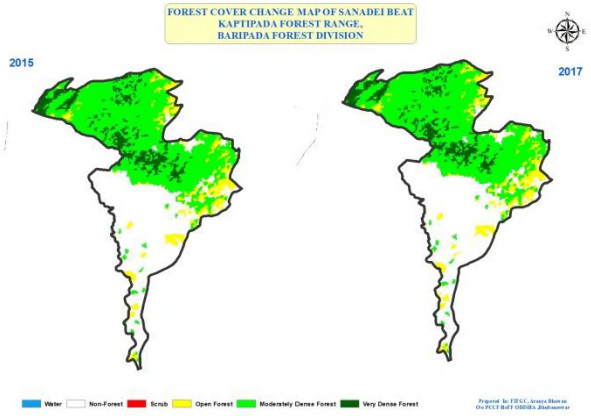
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SANADEI BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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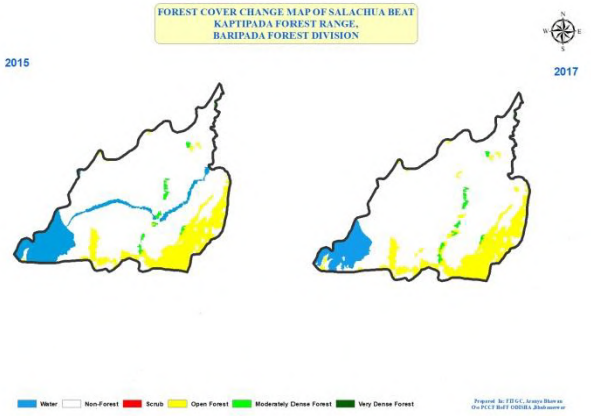
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SALACHUA BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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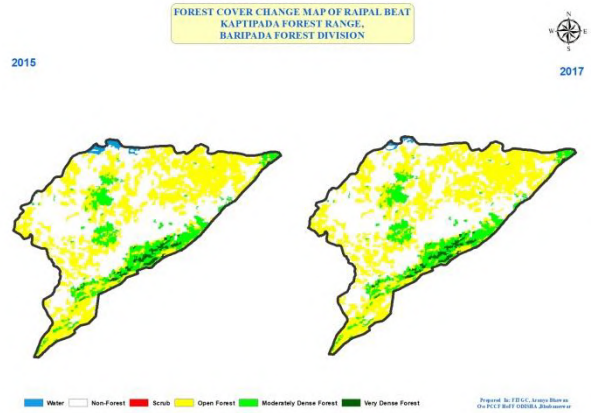
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF RAIPAL BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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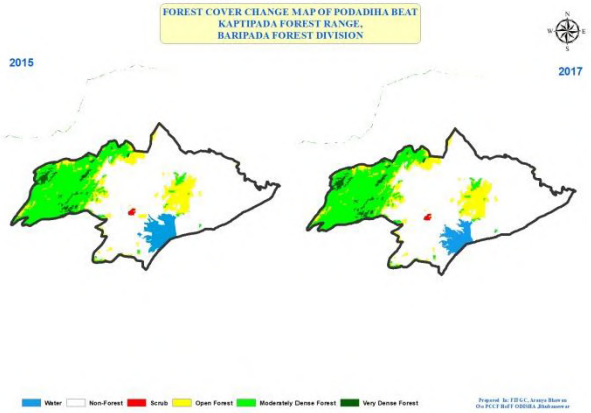
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF PODADIHA BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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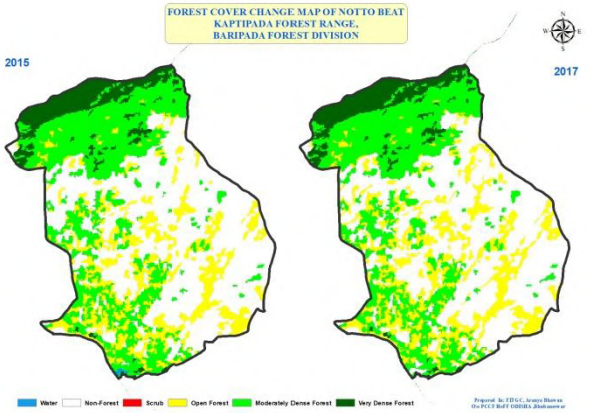
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF NOTTO BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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Water
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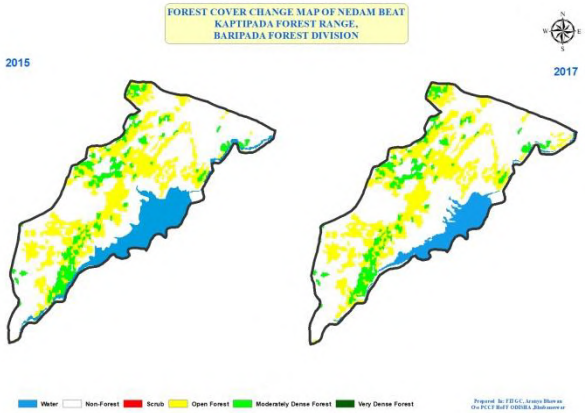
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF NEDAM BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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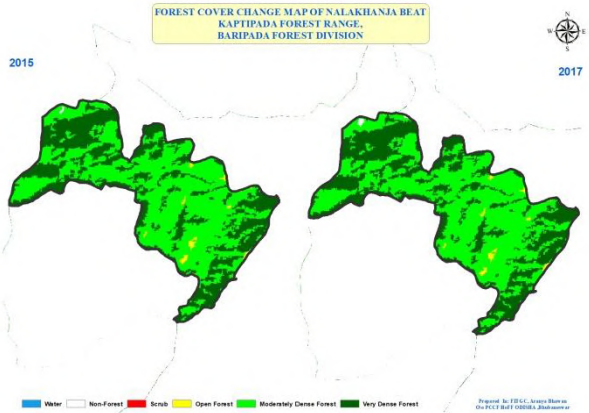
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF NALAKHANJA BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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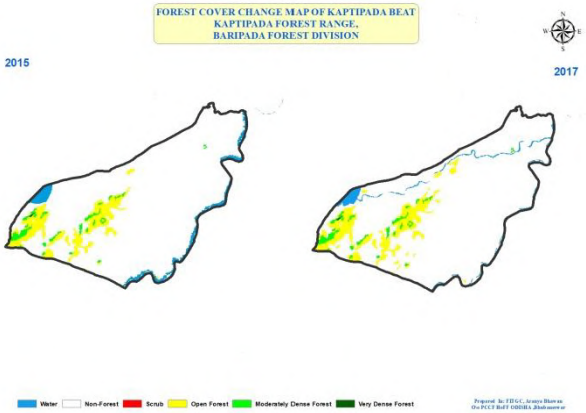
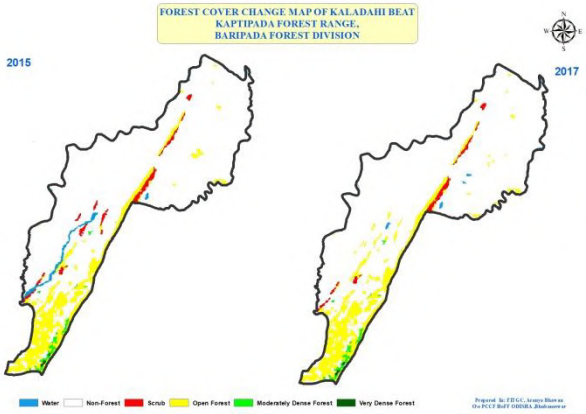
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KAPTIPADA BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KALADAHI BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
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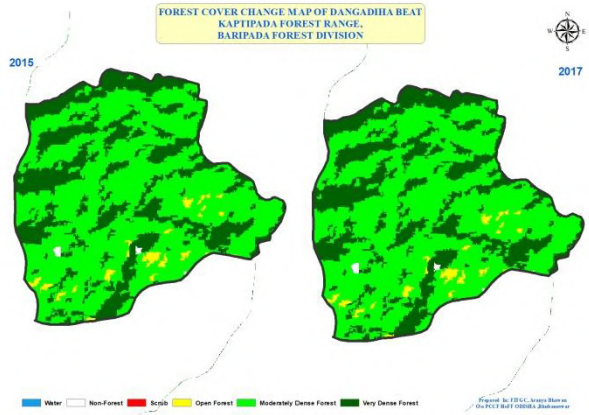
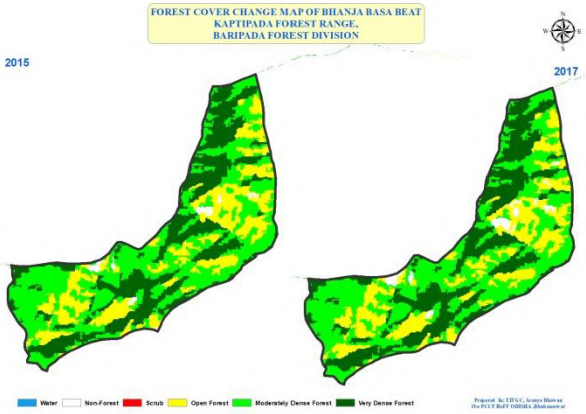
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF DANGADIHA BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BHANJA BASA BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
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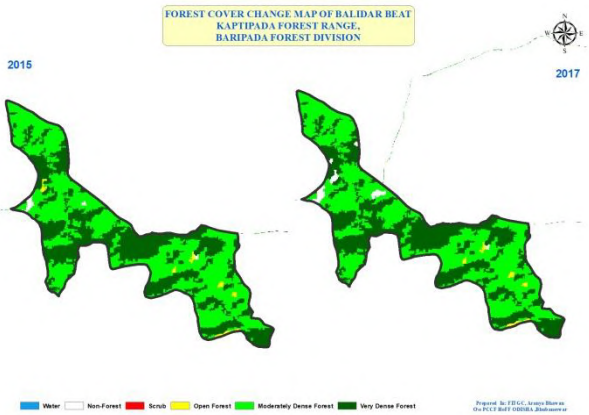
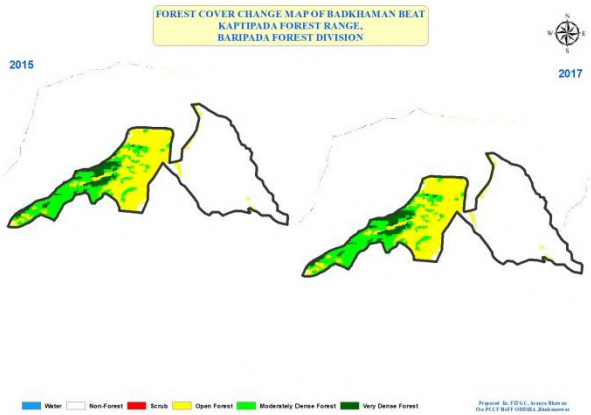
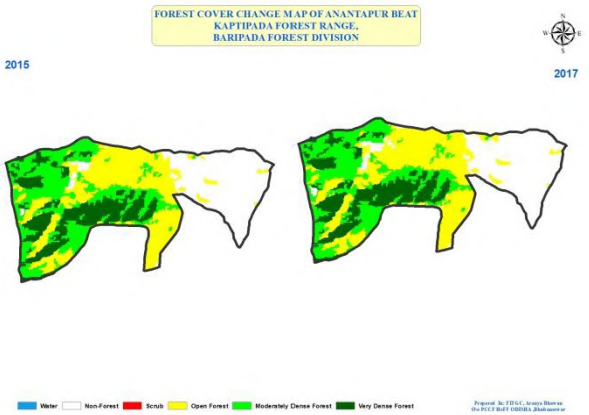
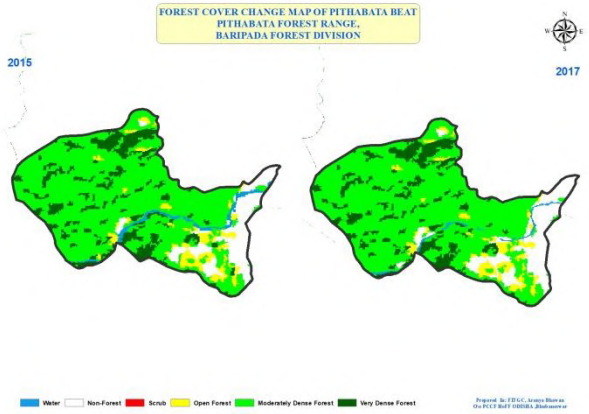
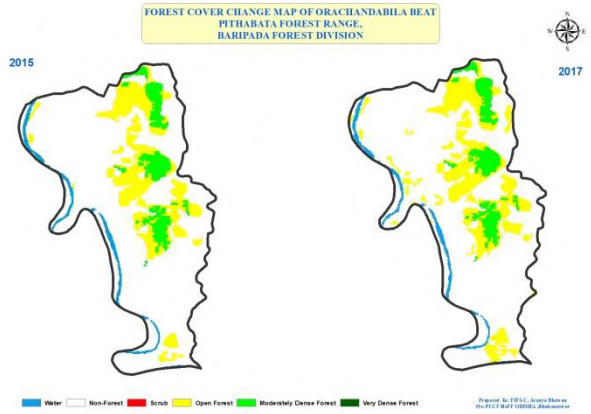
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

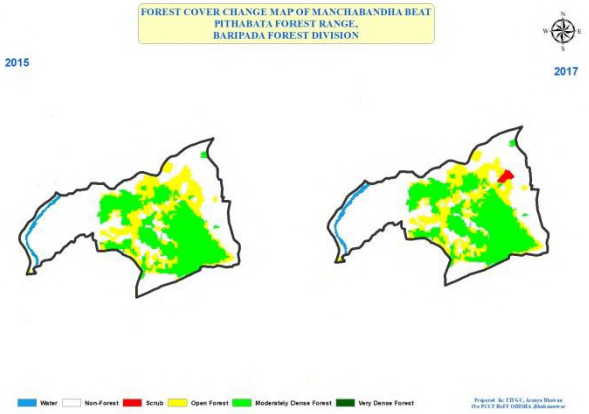

FOREST COVER CHANGE MAP OF BALIDAR BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

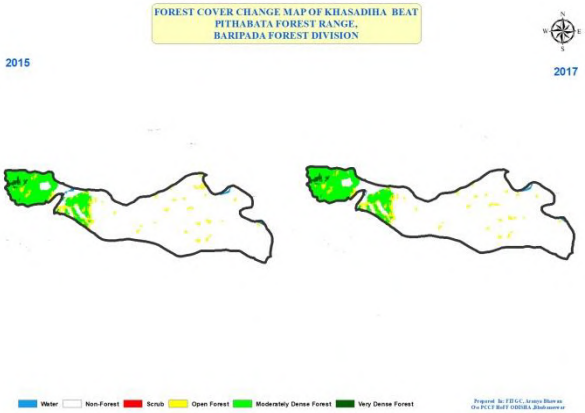

FOREST COVER CHANGE MAP OF BADKHAMAN BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF ANANTAPUR BEAT
KAPTIPADA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF PITHABATA BEAT
PITHABATA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF ORACHANDABILA BEAT
PITHABATA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF MANCHABANDHA BEAT
PITHABATA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KHASADIHA BEAT
PITHABATA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
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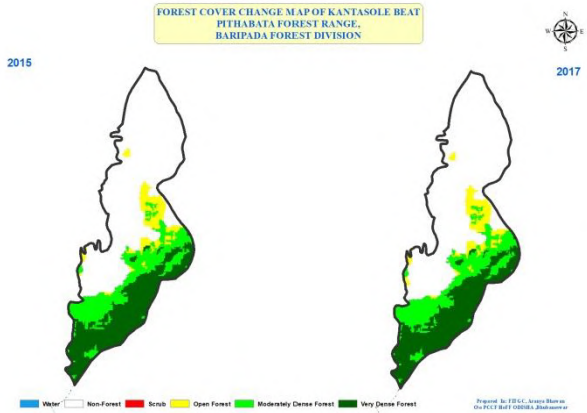
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KANTASOLE BEAT
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BARIPADA FOREST DIVISION
2015
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Water
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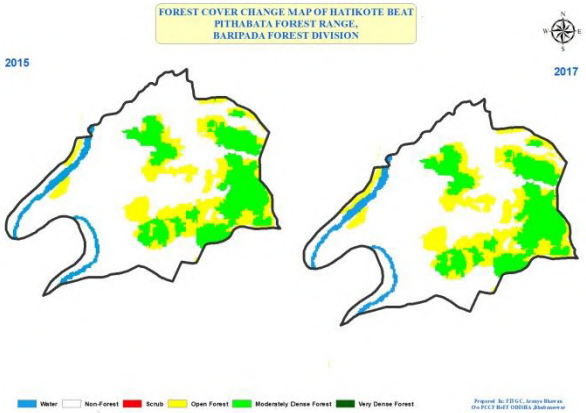
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF HATIKOTE BEAT
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BARIPADA FOREST DIVISION
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Water
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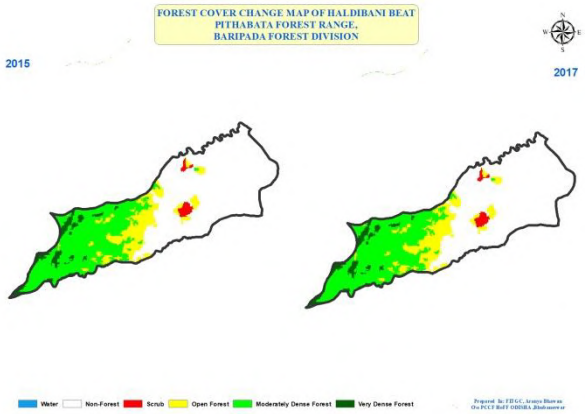
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF HALDIBANI BEAT
PITHABATA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
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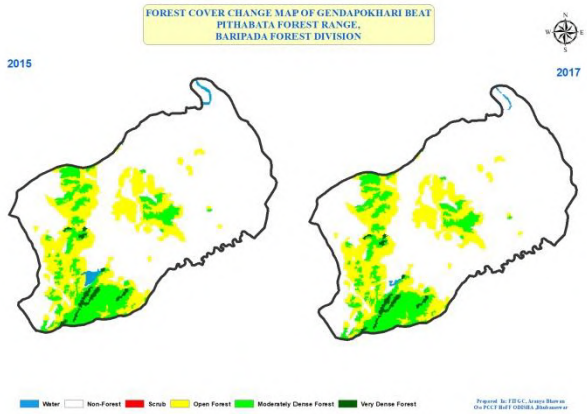
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF GENDAPOKHARI BEAT
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BARIPADA FOREST DIVISION
2015
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Non-Forest
Scrub
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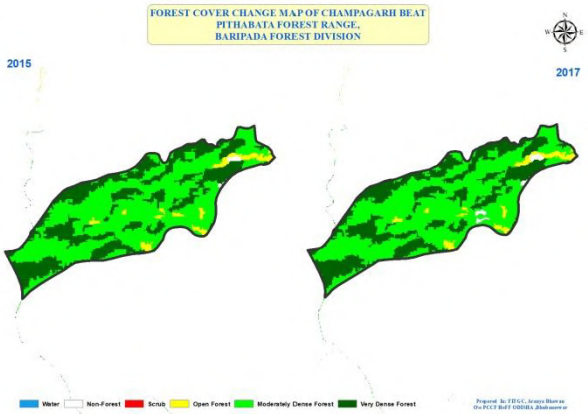
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF CHAMPAGARH BEAT
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BARIPADA FOREST DIVISION
2015
2017
Water
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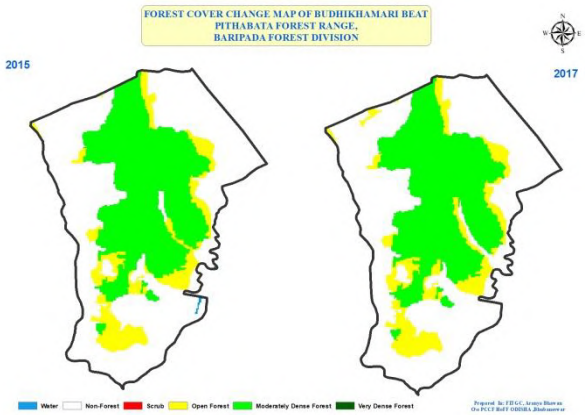
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BUDHIKHAMARI BEAT
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BARIPADA FOREST DIVISION
2015
2017
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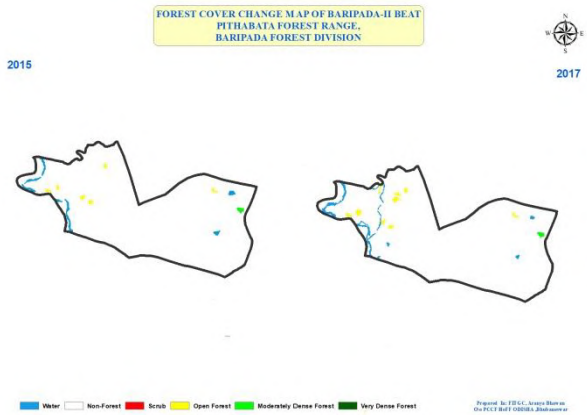
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BARIPADA-II BEAT
PITHABATA FOREST RANGE,
BARIPADA FOREST DIVISION
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2017
Water
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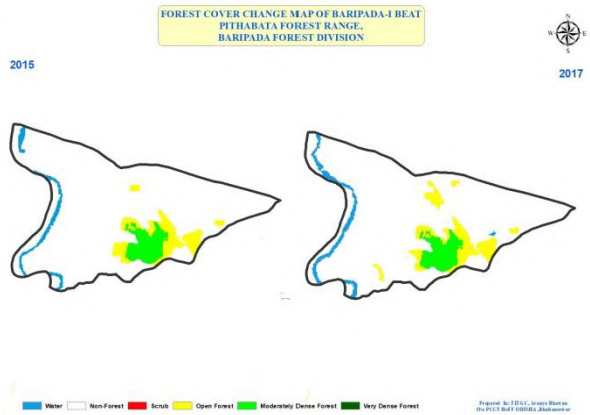
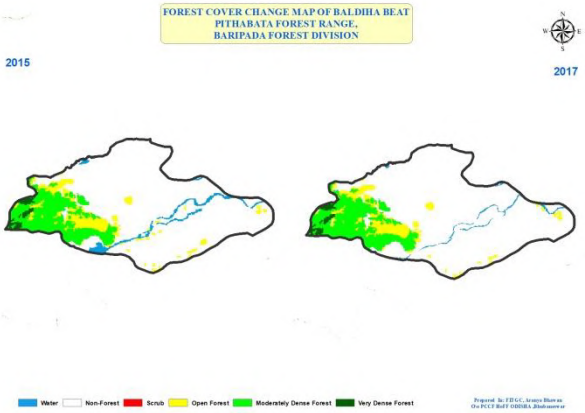
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BARIPADA-I BEAT
PITHABATA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF BALDIHA BEAT
PITHABATA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
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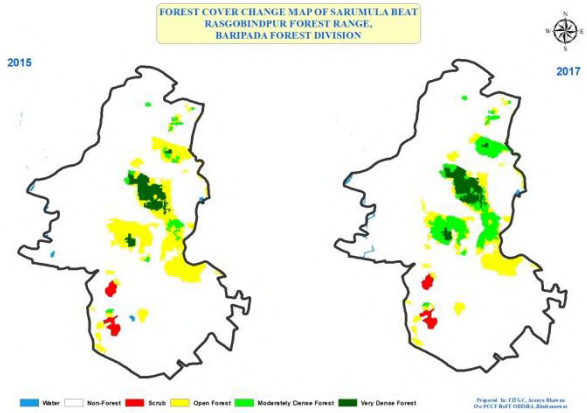
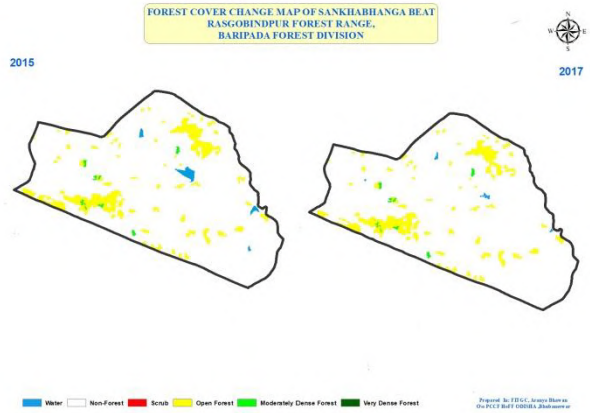
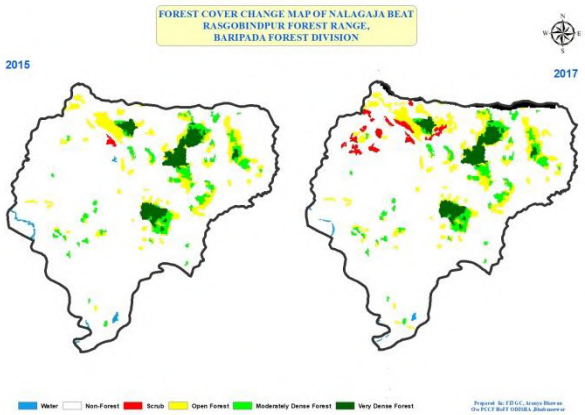
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SARUMULA BEAT
RASGOBINDPUR FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF SANKHABHANGA BEAT
RASGOBINDPUR FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF NALAGAJA BEAT
RASGOBINDPUR FOREST RANGE,
BARIPADA FOREST DIVISION
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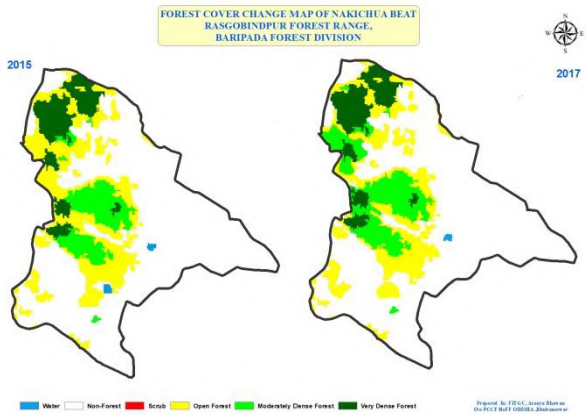
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF NAKICHUA BEAT
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BARIPADA FOREST DIVISION
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Water
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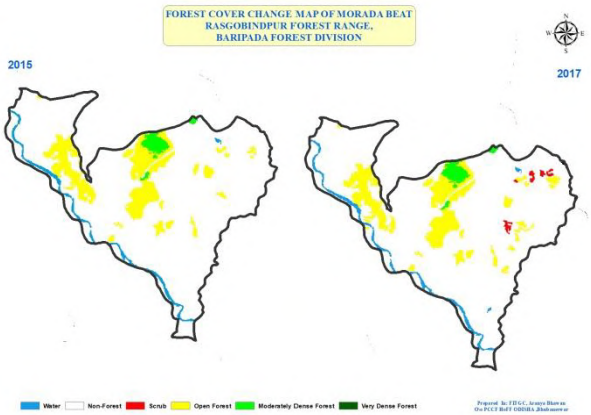
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF MORADA BEAT
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BARIPADA FOREST DIVISION
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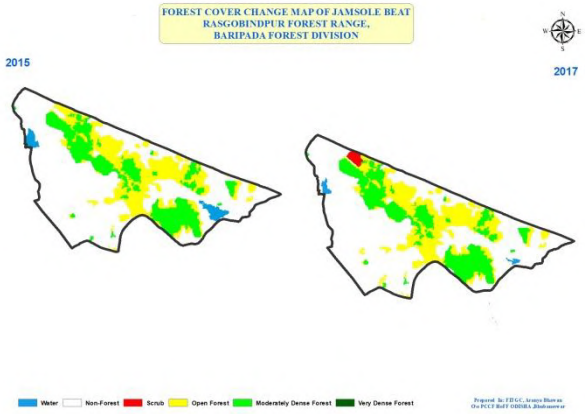
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF JAMSOLE BEAT
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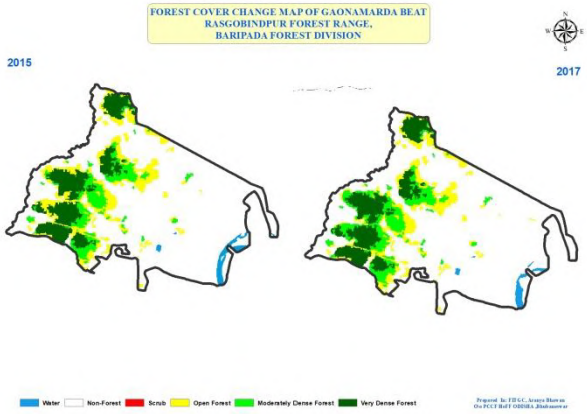
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF GAONAMARDA BEAT
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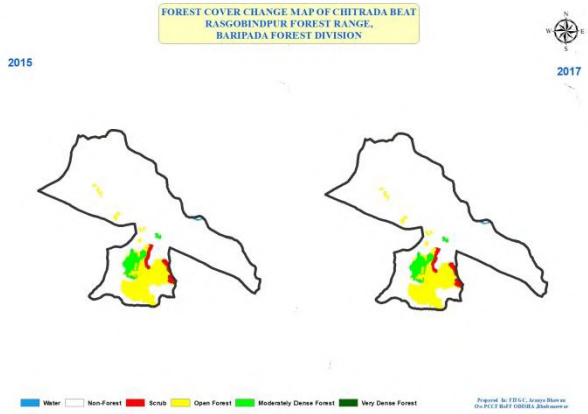
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF CHITRADA BEAT
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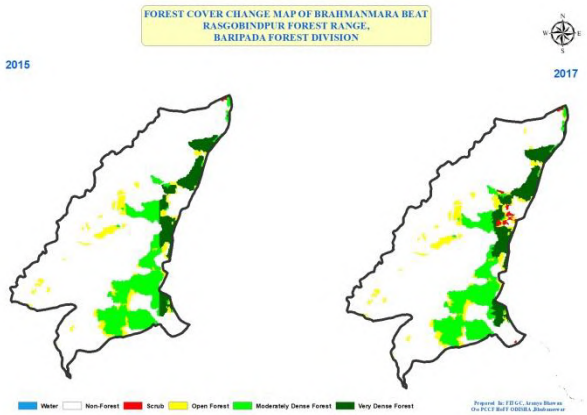
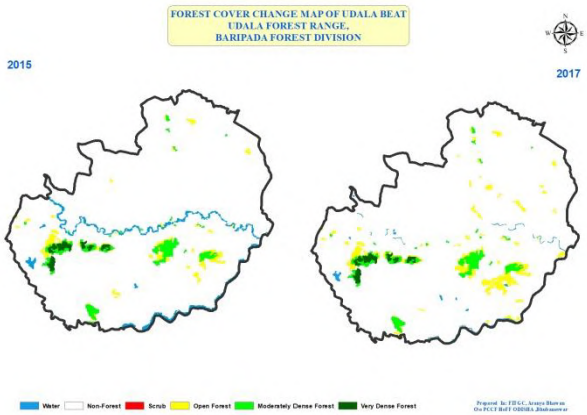
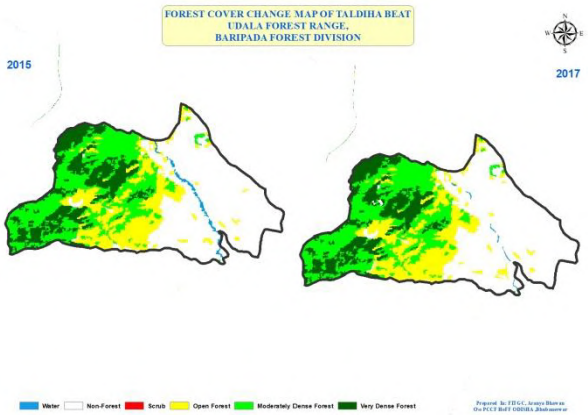
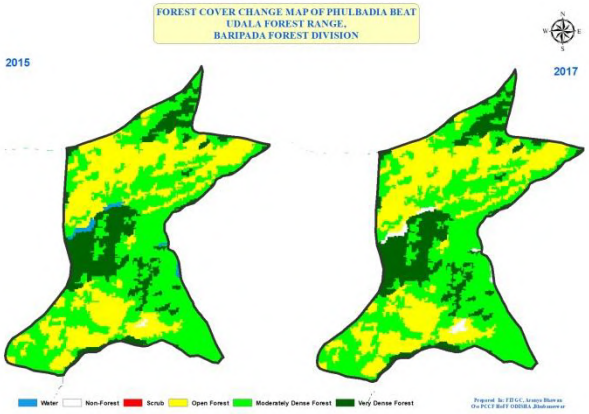
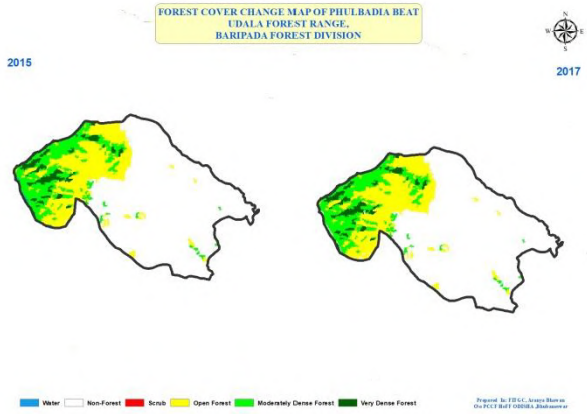
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

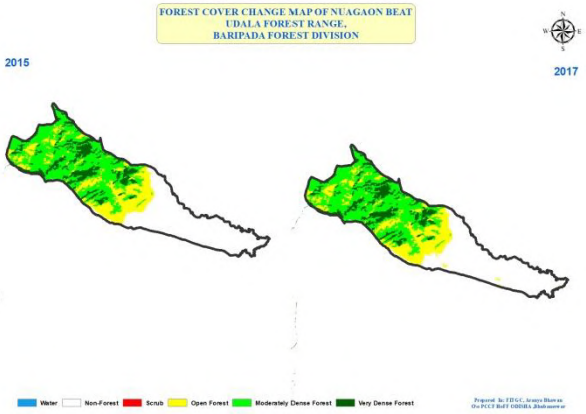

FOREST COVER CHANGE MAP OF BRAHMANMARA BEAT
RASGOBINDPUR FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

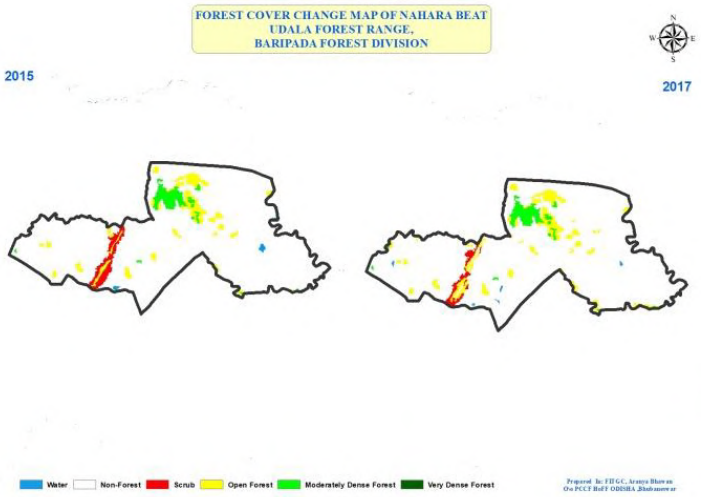

FOREST COVER CHANGE MAP OF UDALA BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

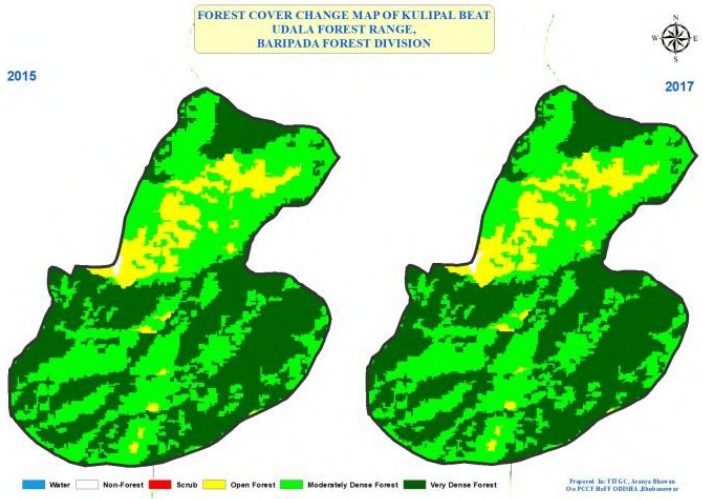

FOREST COVER CHANGE MAP OF TALDIHA BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

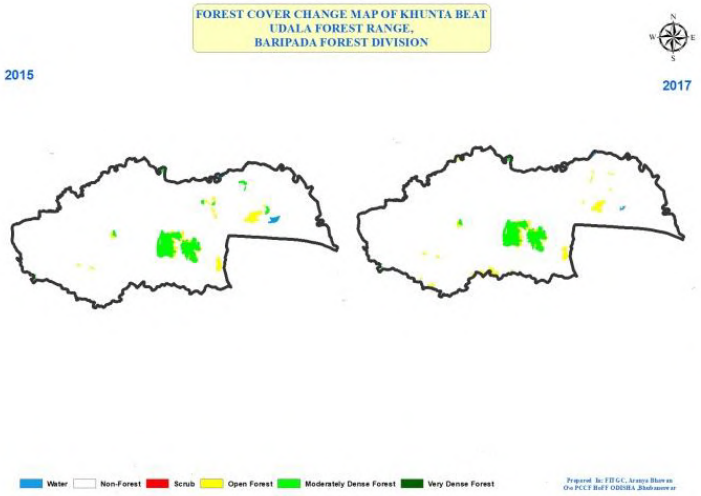

FOREST COVER CHANGE MAP OF PHULBADIA BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

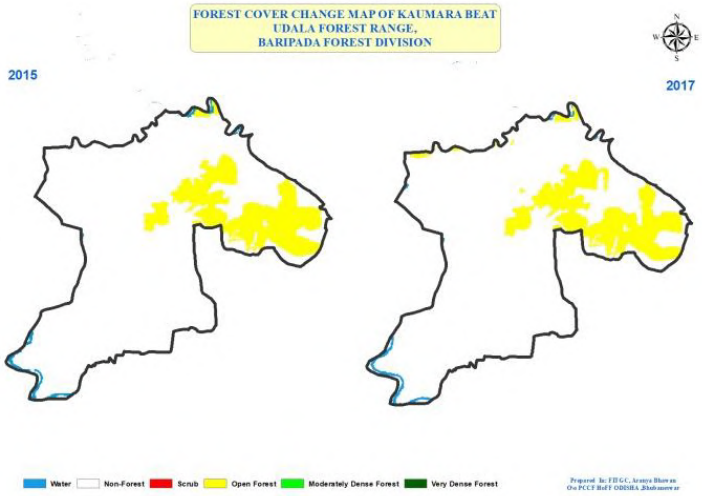

FOREST COVER CHANGE MAP OF PHULBADIA BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

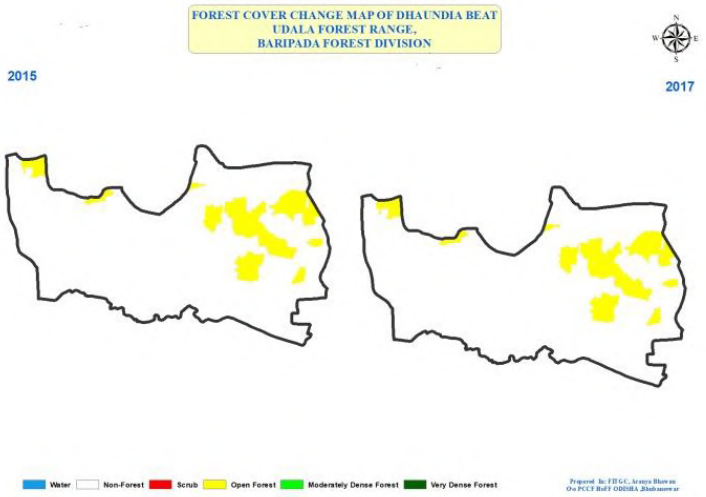

FOREST COVER CHANGE MAP OF NUAGAON BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

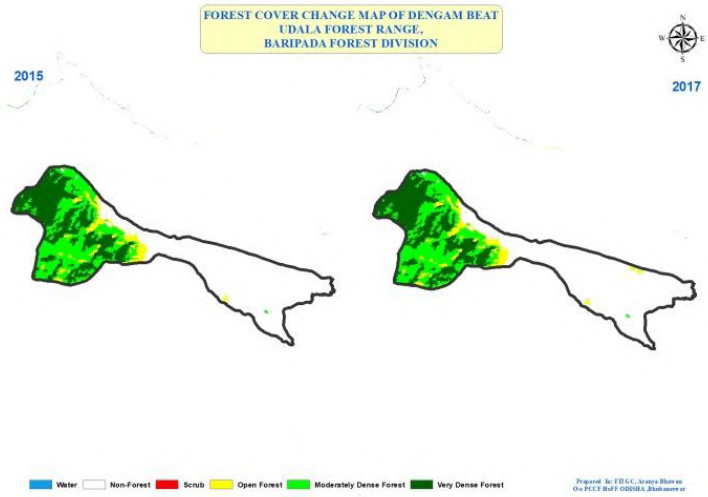

FOREST COVER CHANGE MAP OF NAHARA BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

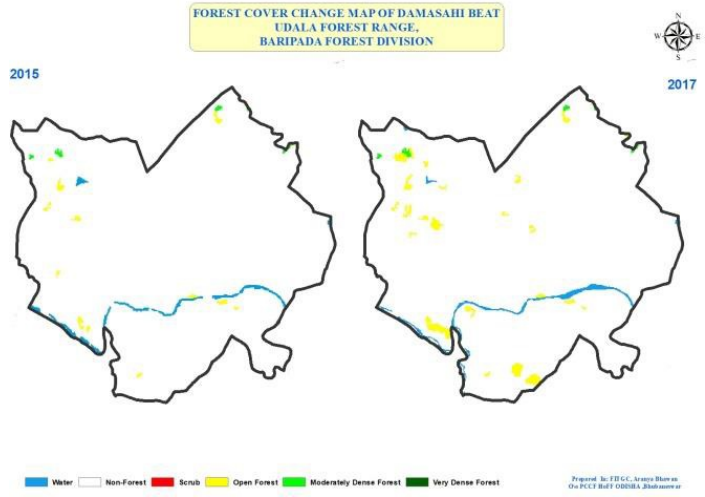

FOREST COVER CHANGE MAP OF KULIPAL BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KHUNTA BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF KAUMARA BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF DHAUNDIA BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF DENGAM BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest


FOREST COVER CHANGE MAP OF DAMASAHI BEAT
UDALA FOREST RANGE,
BARIPADA FOREST DIVISION
2015
2017
Water
Non-Forest
Scrub
Open Forest
Moderately Dense Forest
Very Dense Forest

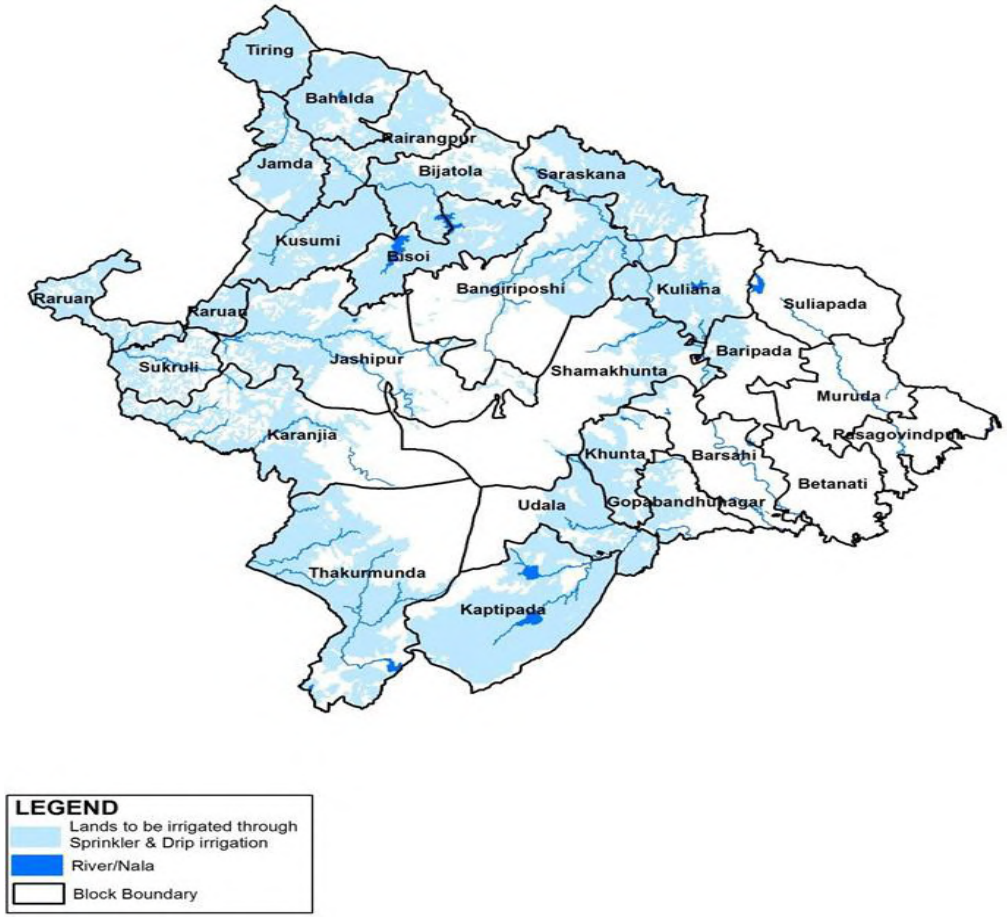
Appendix – XXXIX

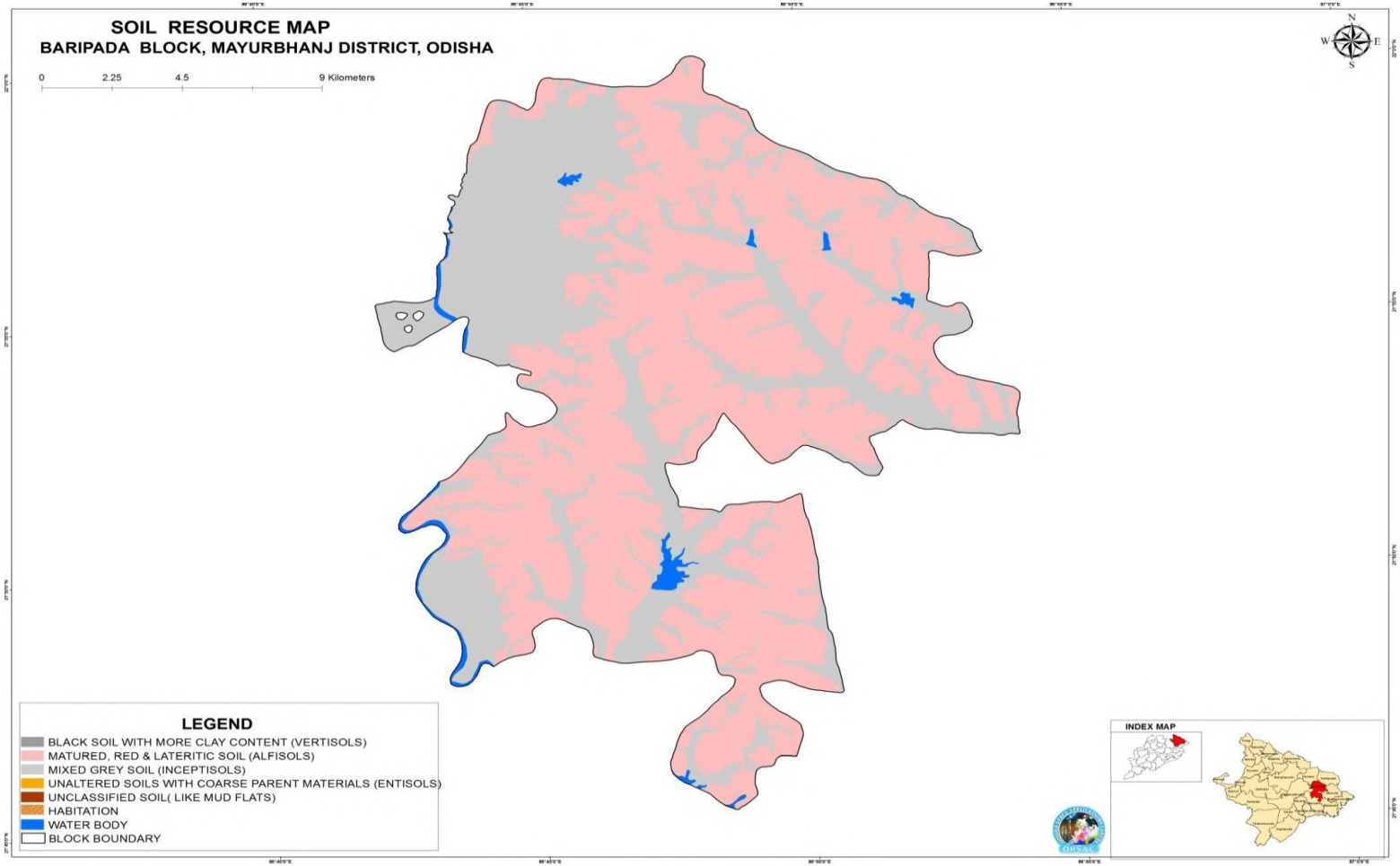
LIST OF WATER BODIES IN FOREST BLOCKS

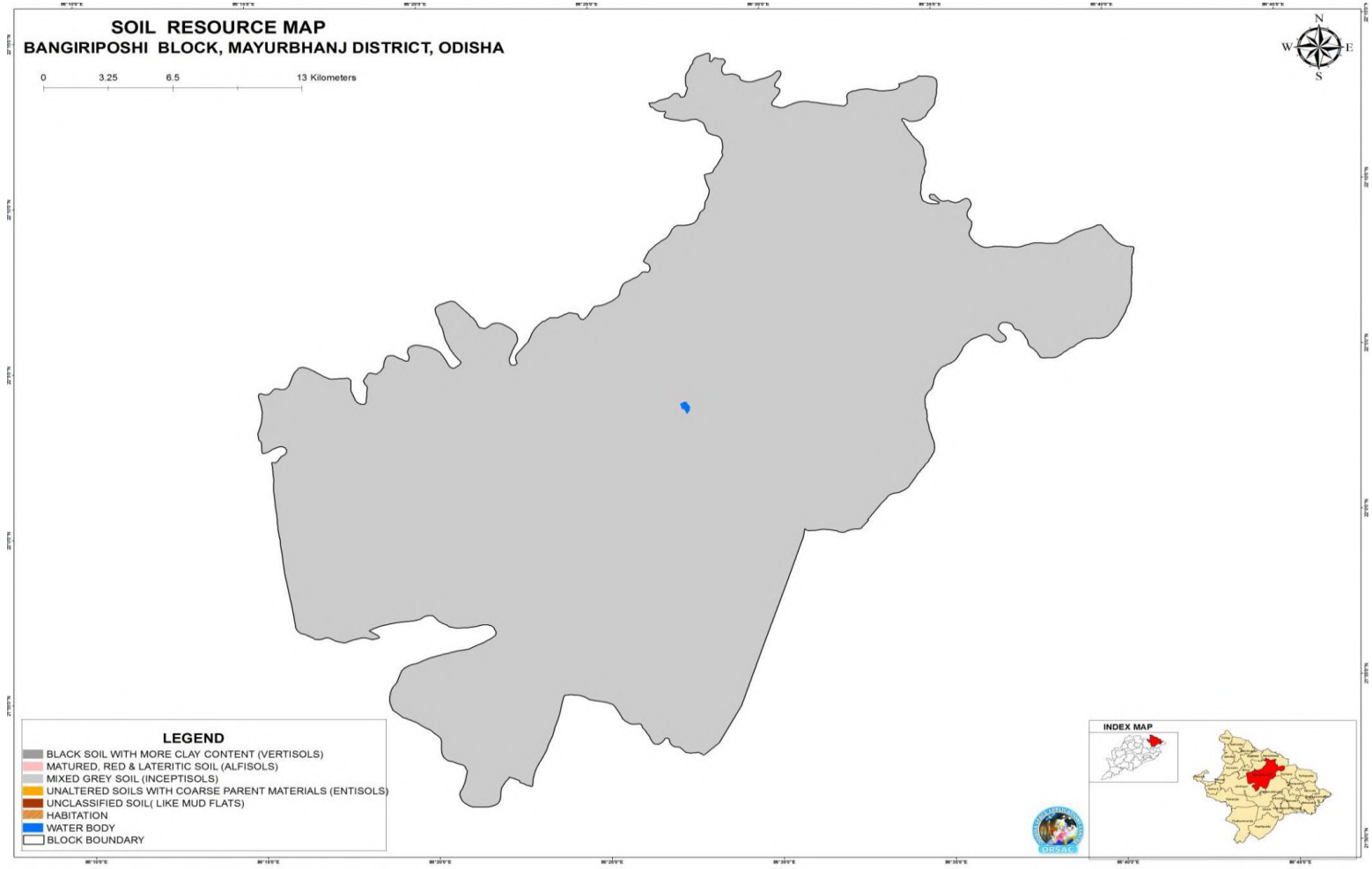
SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted Under FRA (in ha.)	Area Diverted Under FC Act. (in ha)	Plan Area after Forest Diversion (in ha.)	Area of Water body in Forest Block(in ha.)
1	PITHABATA	Hatikote R.F.	556.84	0	3.12	553.72	1.563
2	PITHABATA	Lulung-Purunapani R.F.	223.31	0	0	223.31	34.002
3	PITHABATA	Manchabandha R.F.	1020.92	0	6.96	1013.96	6.233
4	DUKURA	Kanpura R.F.	533.85	0.89	0	532.96	0.405
5	DUKURA	Nigirdha (A) P.R.F.	15.75	0	0	15.75	2.476
6	DUKURA	Kukurbhuka (2)P.R.F.	124.58	0	0	124.58	0.142
7	DUKURA	Budhabalang (A) P.R.F.	46.56	0	0	46.56	2.557
8	UDALA	Dhaundia R.F.	524.79	0.8	0	523.99	1.150
9	UDALA	Khunta R.F.	427.99	0	4.59	423.4	2.618
10	UDALA	Nahara R.F.	161.87	0	0	161.87	2.264
11	UDALA	Udala R.F.	533.93	0	0	533.93	4.961
12	BETNOTI	Balka R.F.	23.96	0	0	23.96	2.175
13	BETNOTI	Durgapur R.F.	961.84	0	4.3	957.54	0.129
14	BETNOTI	Khiripada R.F.	420.54	0.58	0	419.96	0.360
15	BETNOTI	Kochilakhunta P.R.F.	99	0	0	99	0.395
16	BETNOTI	Bhalia P.R.F.	340.16	0	0	340.16	1.150
17	DEULI	Chandua R.F.	3073.12	0	8.84	3064.28	24.010
18	DEULI	Kuliana R.F.	1203.68	0	4.8	1198.88	2.576
19	DEULI	Kaliasole P.R.F.	320.16	0	0	320.16	0.153
20	KAPTIPADA	Nachhipur R.F.	229	0	0	229	0.175
Total			**10841.850**	**2.270**	**32.610**	**10806.970**	**89.495**

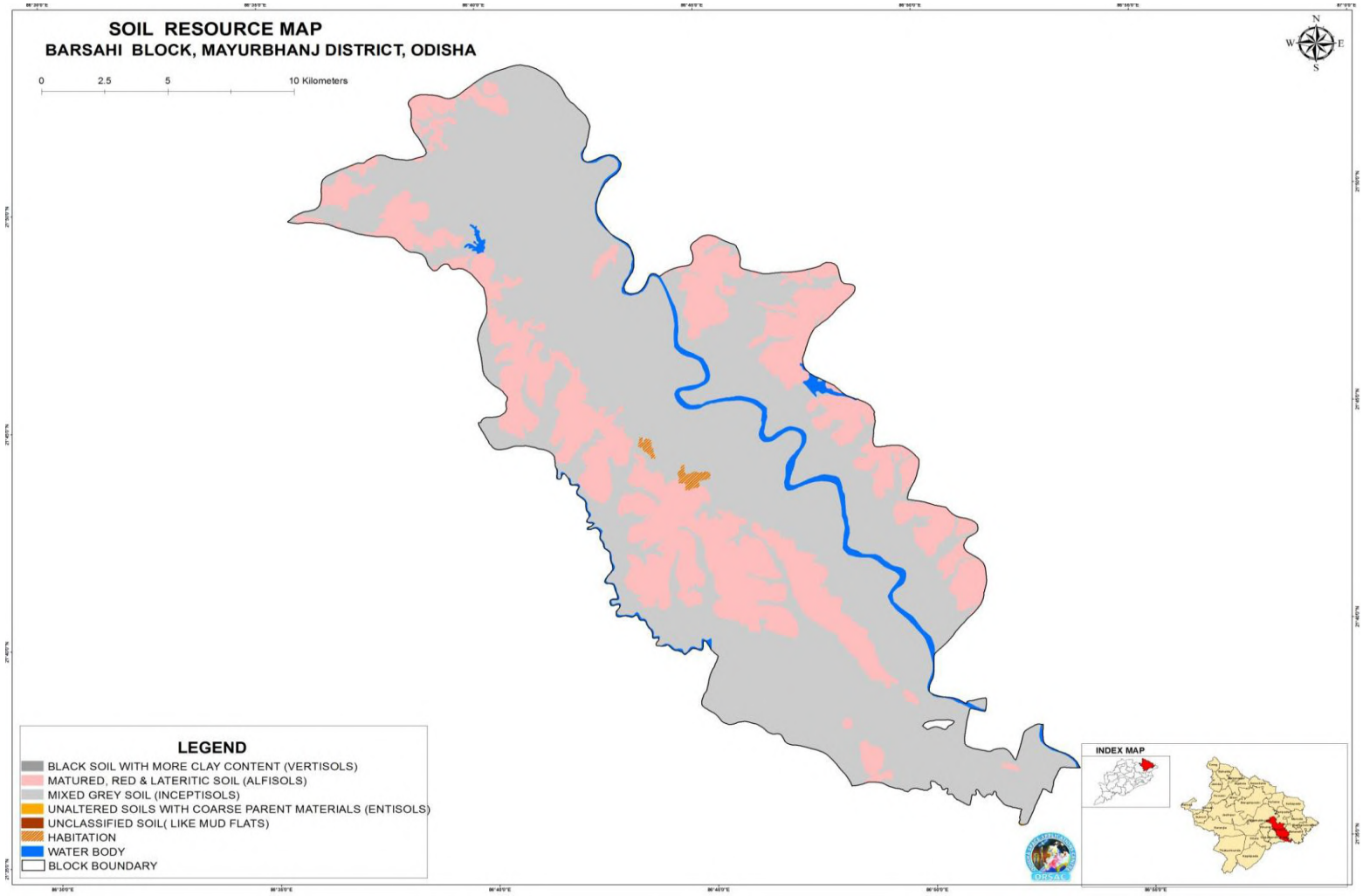
Appendix – XL

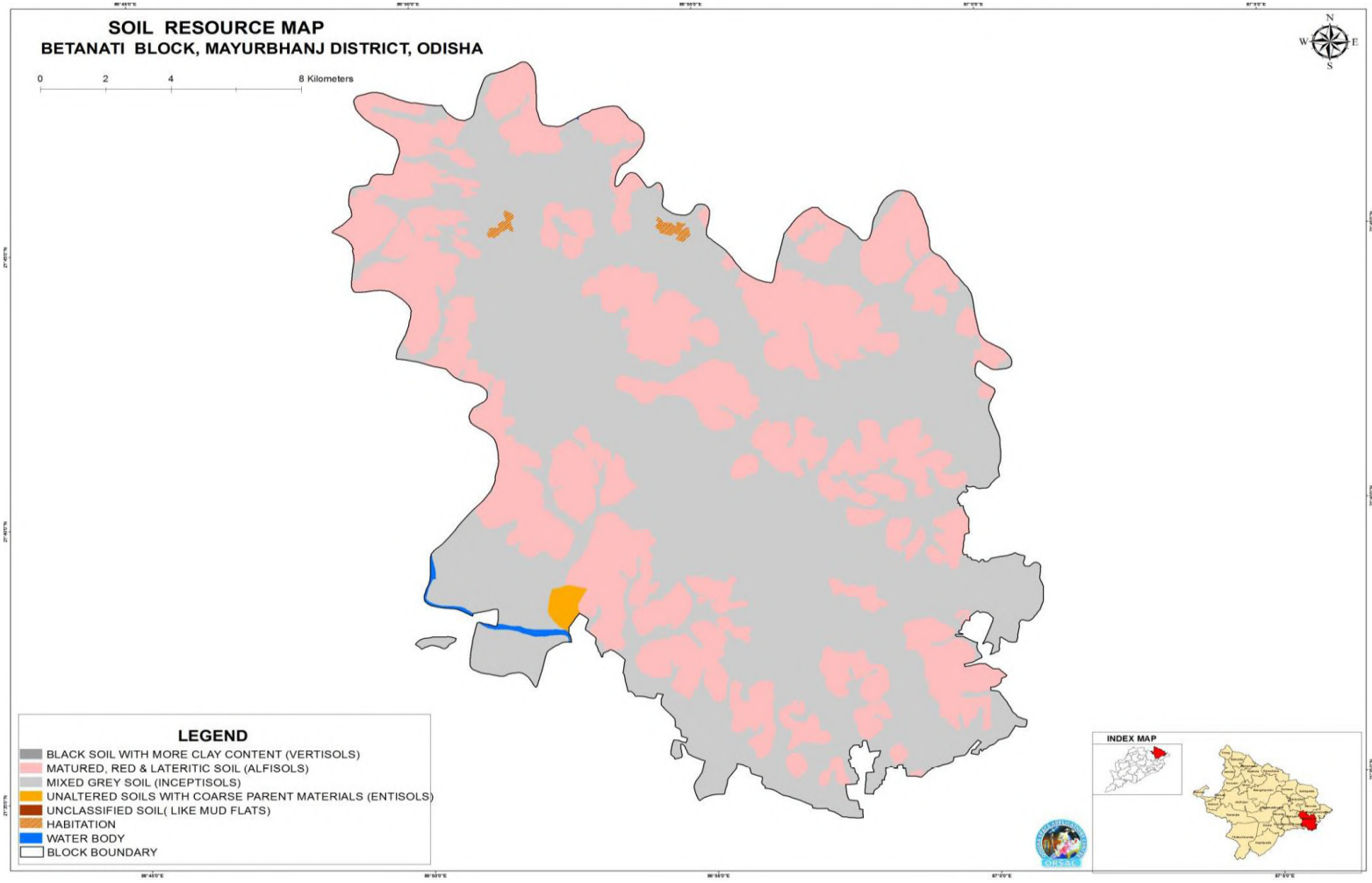
BLOCKWISE MAPS SHOWING SOIL, RIVER AND WATER BODIES IN BARIPADA FOREST DIVISION

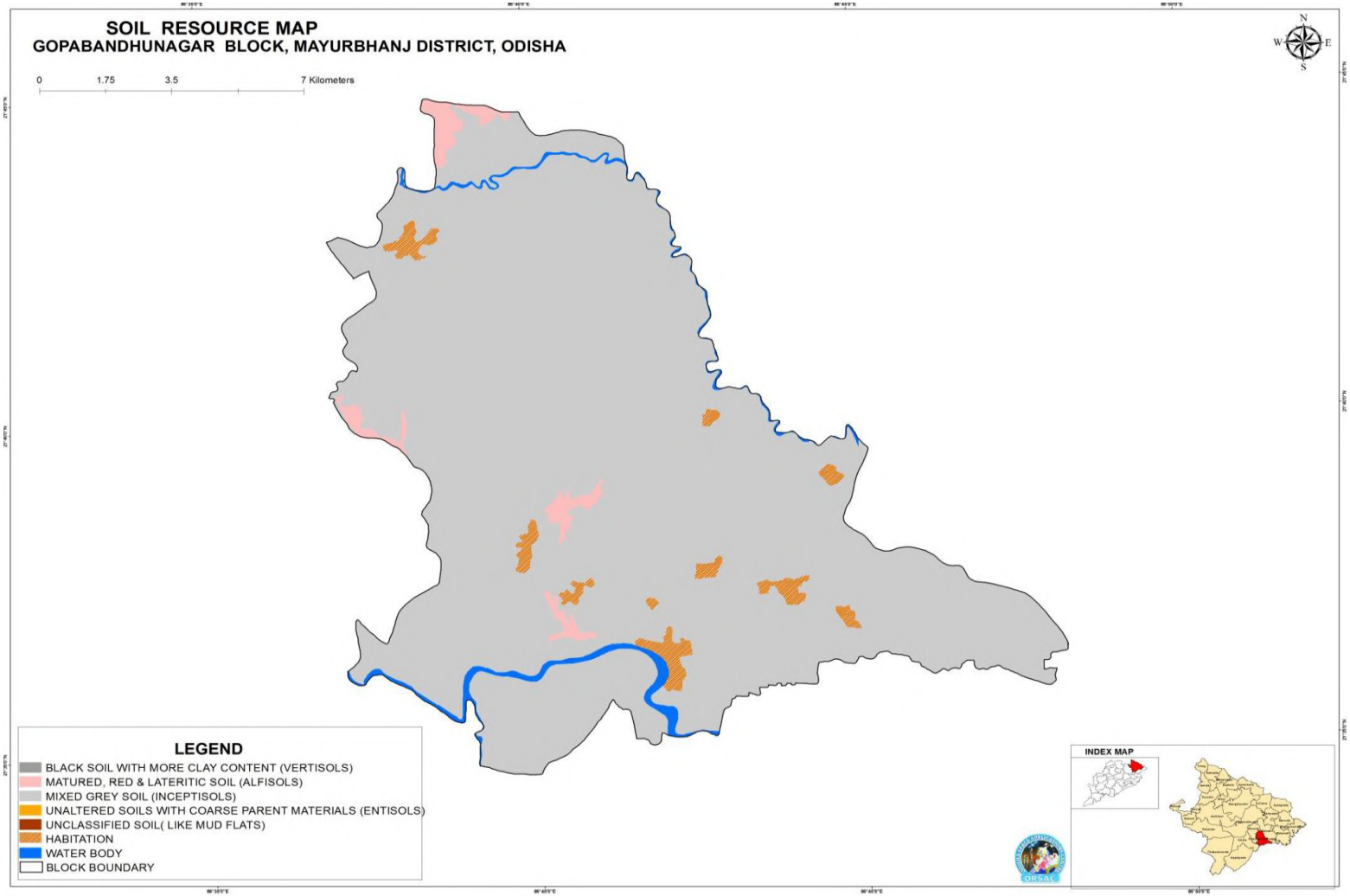


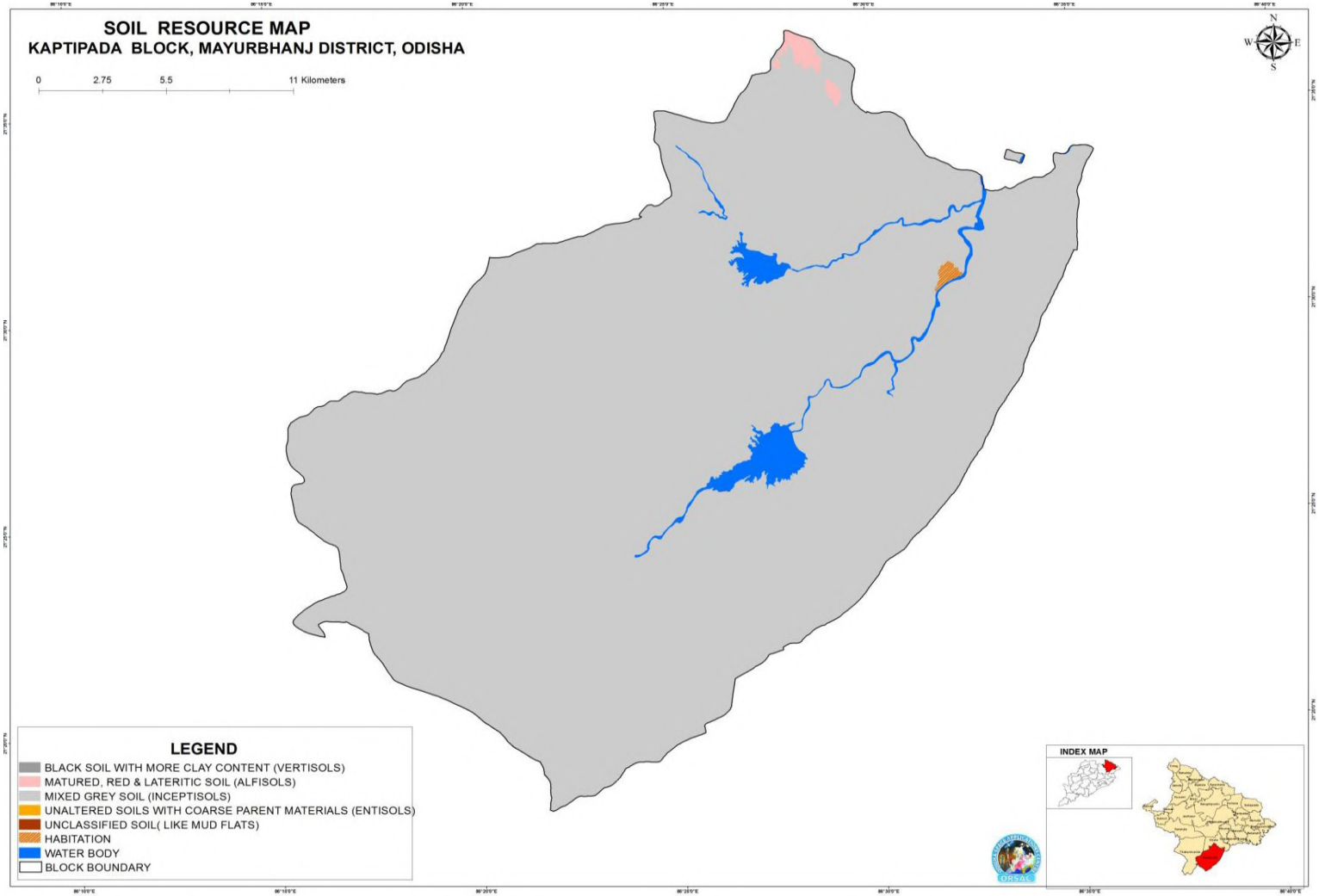

SOIL RESOURCE MAP
BARIPADA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
2.25
4.5
9 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP

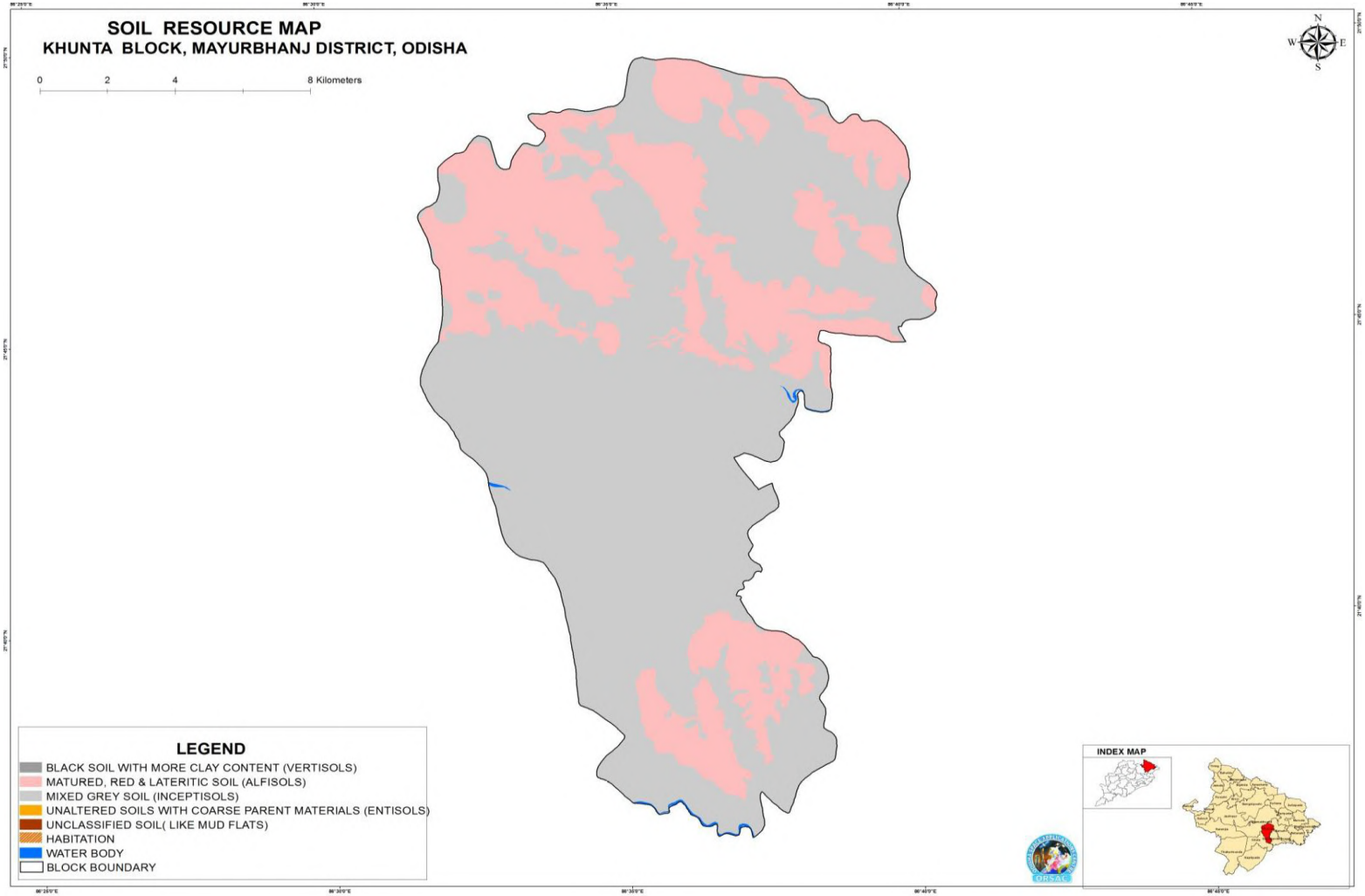

SOIL RESOURCE MAP
BANGIRIPOSHI BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
3.25
6.5
13 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP

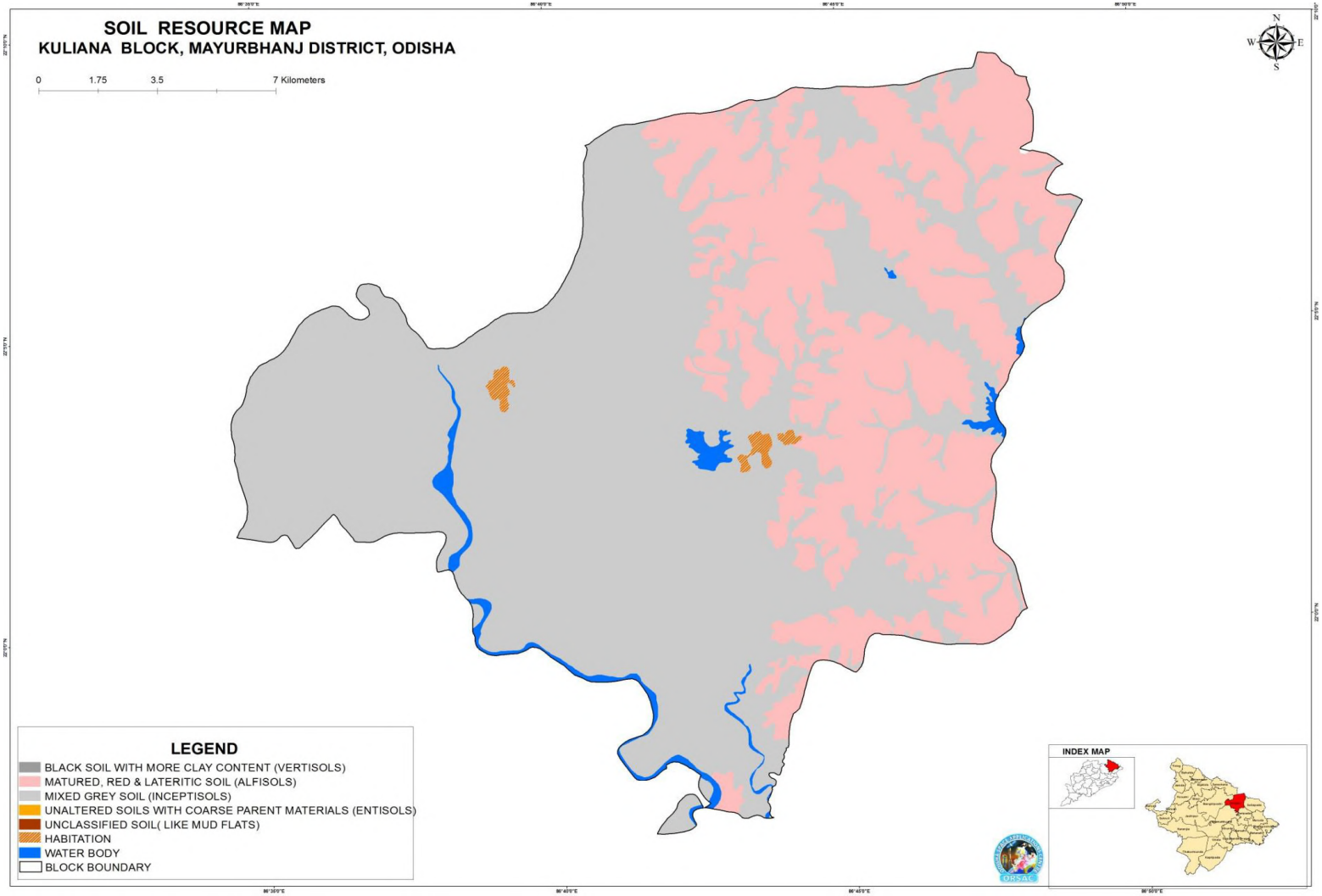

SOIL RESOURCE MAP
BARSAHI BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
2.5
5
10 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP

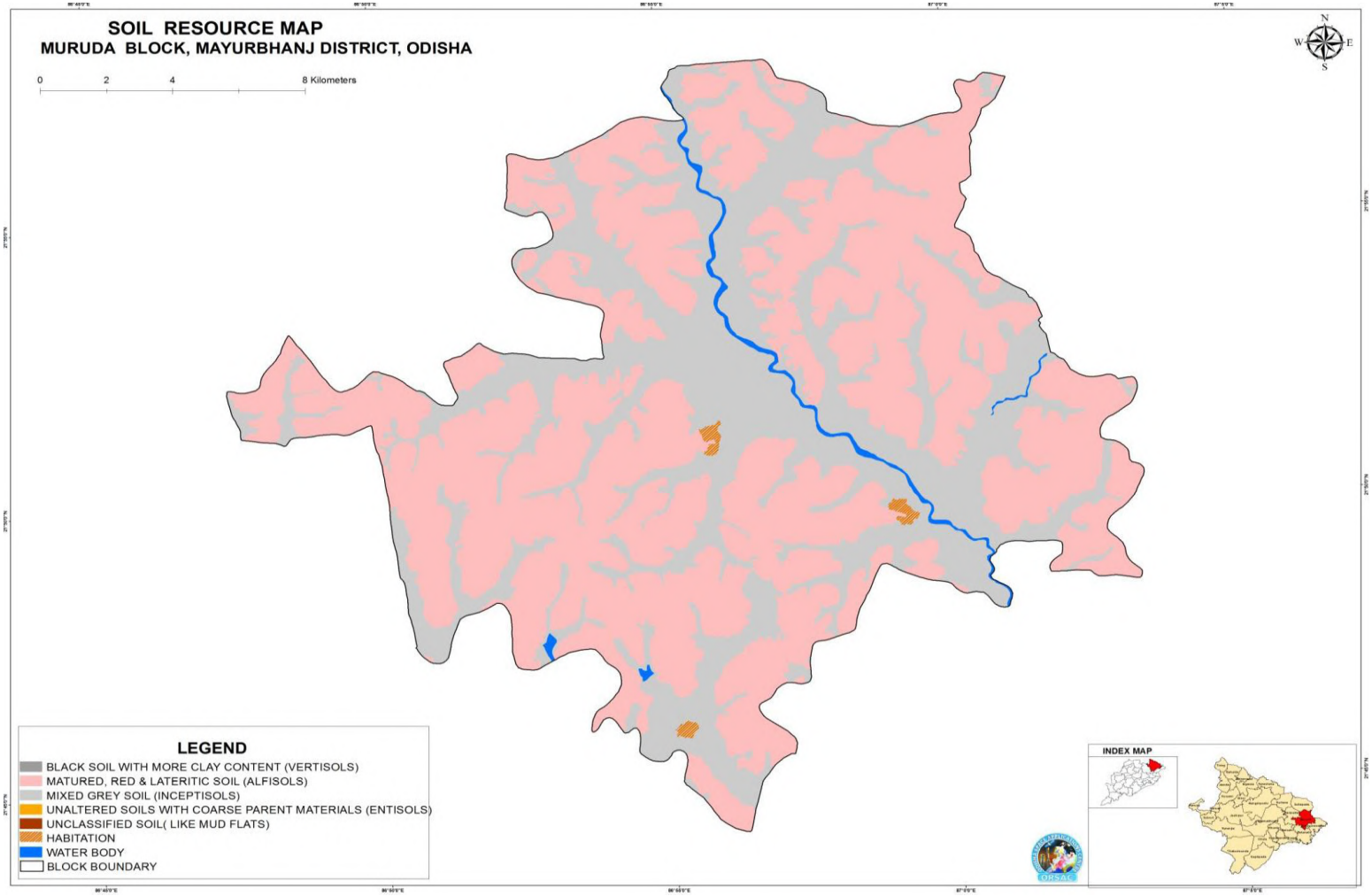

SOIL RESOURCE MAP
BETANATI BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
2
4
8 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP
ORSAC

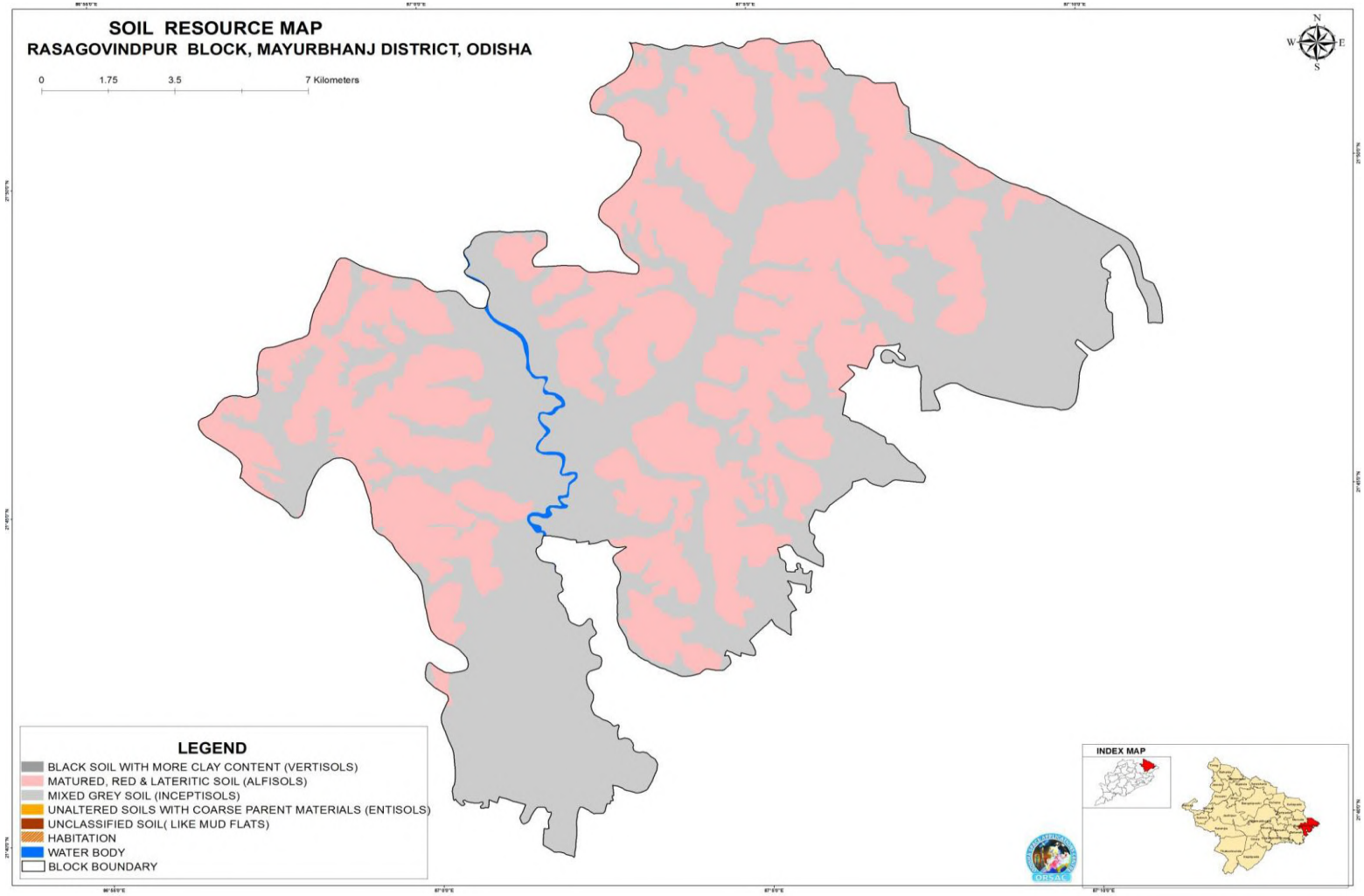

SOIL RESOURCE MAP
GOPABANDHUNAGAR BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
1.75
3.5
7 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP

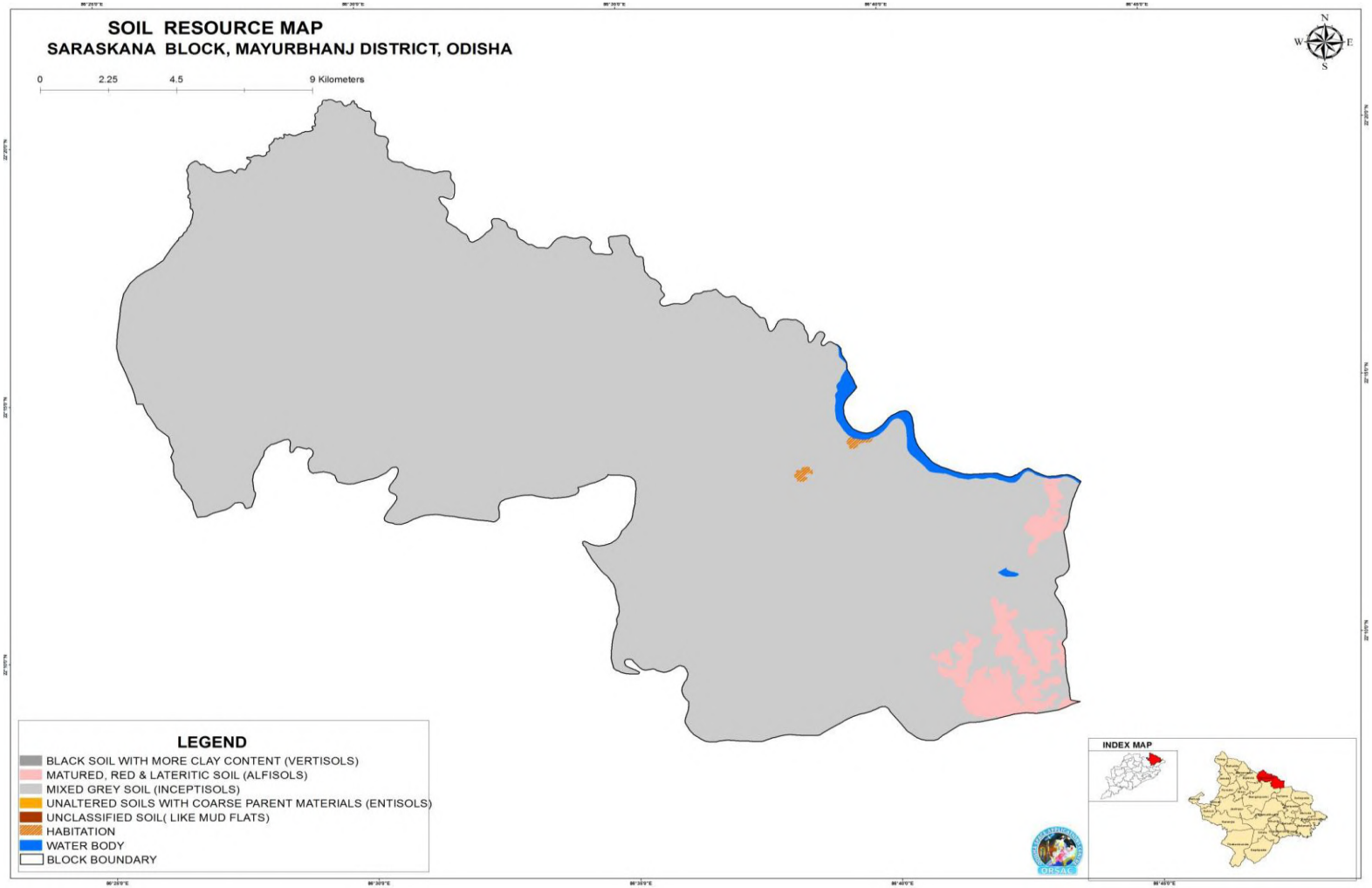

SOIL RESOURCE MAP
KAPTIPADA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
2.75
5.5
11 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP

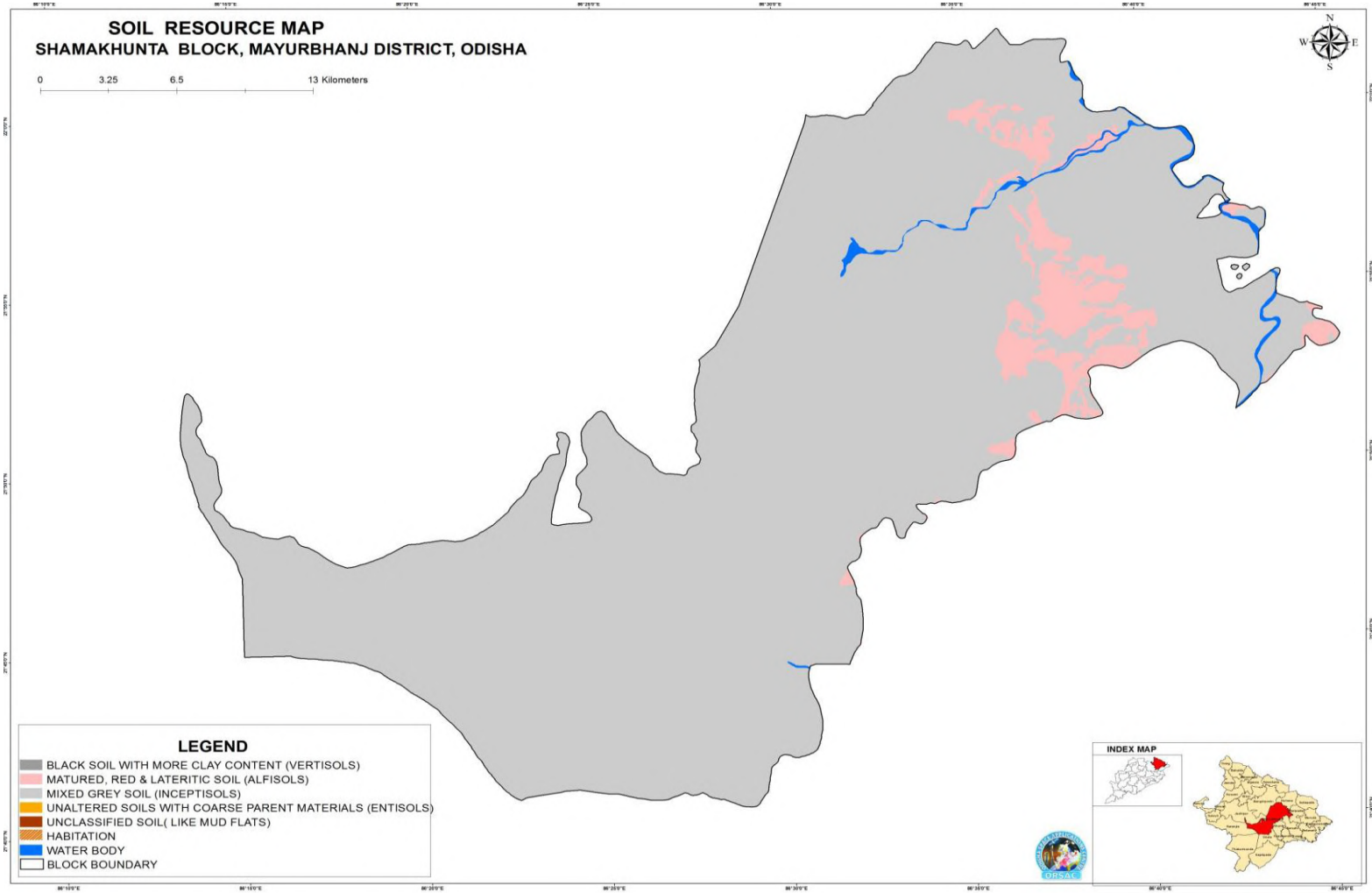

SOIL RESOURCE MAP
KHUNTA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
2
4
8 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP

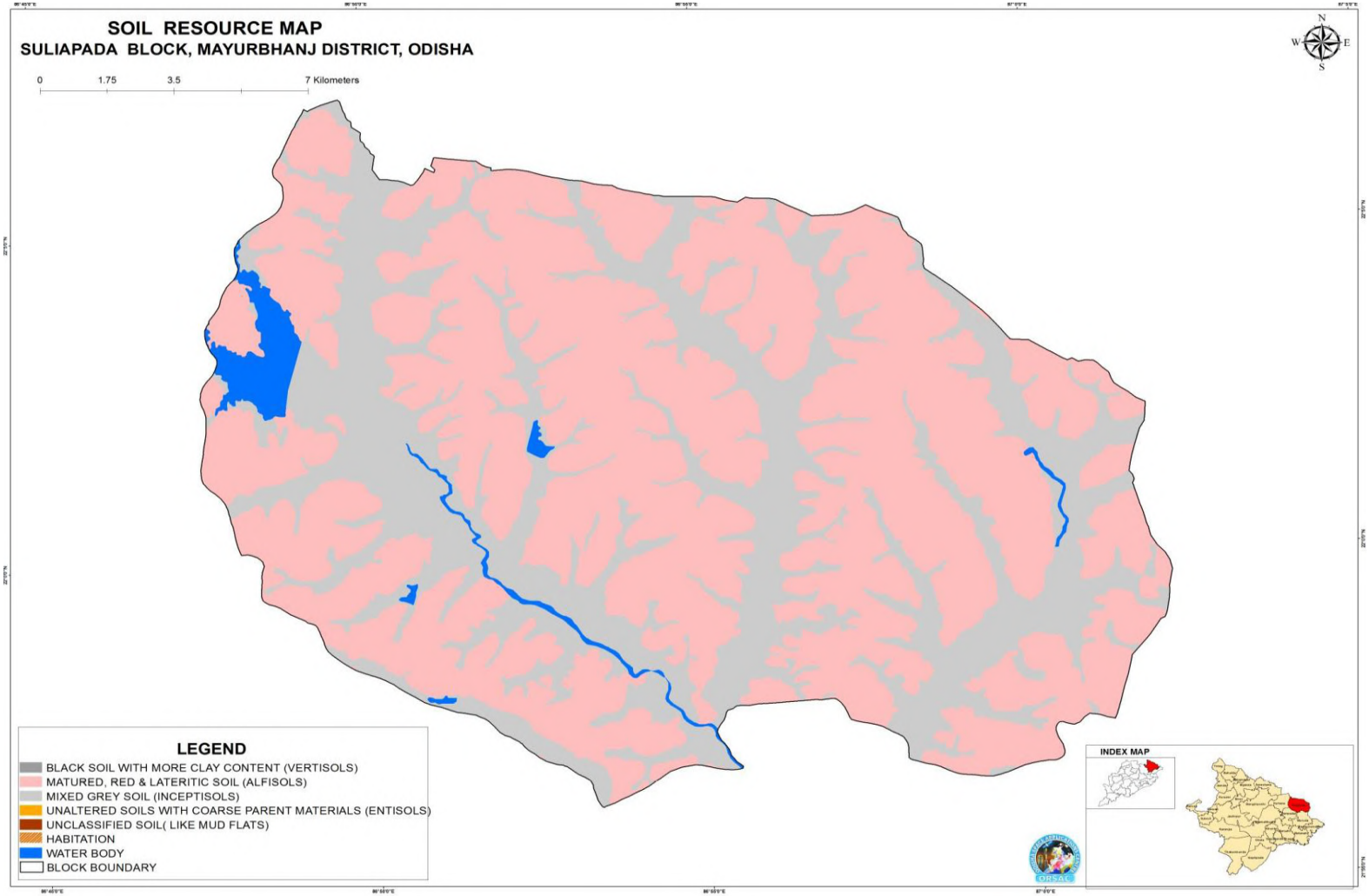

SOIL RESOURCE MAP
KULIANA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0 1.75 3.5 7 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP
ORSAC

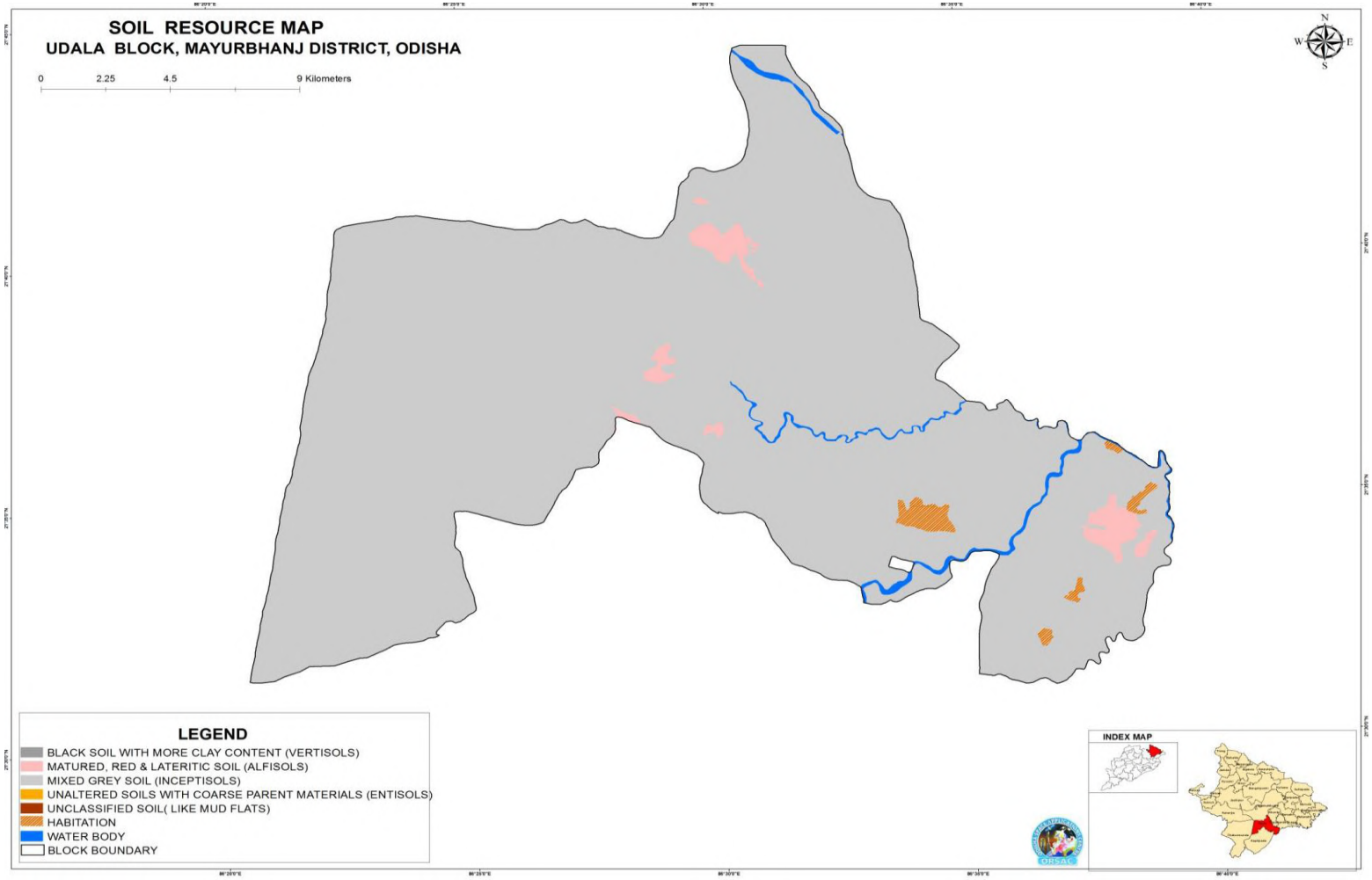

SOIL RESOURCE MAP
MURUDA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0 2 4 8 Kilometers
N
W E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP


SOIL RESOURCE MAP
RASAGOVINDPUR BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
1.75
3.5
7 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP


SOIL RESOURCE MAP
SARASKANA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
2.25
4.5
9 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP
ORSAC


SOIL RESOURCE MAP
SHAMAKHUNTA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
3.25
6.5
13 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP
ORSAC


SOIL RESOURCE MAP
SULIAPADA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
1.75
3.5
7 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP
OPSAC


SOIL RESOURCE MAP
UDALA BLOCK, MAYURBHANJ DISTRICT, ODISHA
0
2.25
4.5
9 Kilometers
N
W
E
S
LEGEND
BLACK SOIL WITH MORE CLAY CONTENT (VERTISOLS)
MATURED, RED & LATERITIC SOIL (ALFISOLS)
MIXED GREY SOIL (INCEPTISOLS)
UNALTERED SOILS WITH COARSE PARENT MATERIALS (ENTISOLS)
UNCLASSIFIED SOIL(LIKE MUD FLATS)
HABITATION
WATER BODY
BLOCK BOUNDARY
INDEX MAP

Appendix – XLI

Compenssatory Afforestation (C.A) in Baripada Forest Division

Name of the Range	Name of the Site	CA under taken under diverted land (in ha)	Protected Forest notification no.	Name of the project with the area diverted in ha	Remarks
1	2	3	4	5	6
Bangriposi	Pimpudijharan - 60.97 ha Hill Block No-1-713.38 ha Kapadiha- 10.73 ha Amdiha- 14.04 Mahespur- 98.11 ha	897.7	Orissa Gazette vide F&E Department No. 10846 F&E dated 21.06.2006	Subaranarekha Major Irrigation project 1166 ha	-
Kaptipada	Sukuapat Hill	92.32	F&E Department Notification No. 8269/F&E dated 05.06.2004	Sarubali Cromite Mines of Athagarh Division, Cuttack 224.63 ha in Athagarh Division	-
Udala	Bad Dangua	4.59	-	Construction of Khunta Collage 4.59 ha	1- Mutation has been done and RoR received on dated 22.08.95 2 - Proposal for declaring non- forest land as PF submitted to PCCF , Orissa vide this office memo. No . 7751 dated 13.12.2001

Name of the Range	Name of the Site	CA under taken under diverted land (in ha)	Protected Forest notification no.	Name of the project with the area diverted in ha	Remarks
Kaptipada	Sukuapat Hill	29.017	-	Kamarda Chromite Mines , M/s B.C. Mohanty & Sons(P) LTD.	1- Mutation has been done and RoR received on dated 02.09.97
				29.17 ha	2 - Proposal for declaring non- forest land as PF submitted to PCCF , Orissa vide this office memo. No . 2592 dated 21.04.01
Pithabata	Baradasole	10.41	-	Sankarma M.I.P.	1- Mutation has been done and RoR received on dated 29.04.2002
				10.41 ha	2 - Proposal for declaring non- forest land as PF submitted to PCCF , Orissa vide this office memo. No . 6711 dated 18.12.02
Deuli	Basantapur	6.15	-	Improvement of N.H. - 6 of Bangriposi ghat ,	1- Mutation has been done and RoR received on dated 09.10.2000
				6.15 ha in Rairangpur Division	2 - Proposal for declaring non- forest land as PF submitted to PCCF , Orissa vide this office memo. No . 6912 dated 28.11.2000
Rasgovindapur	Madhuria to Rasgovindapur CD Block	0.648	-	Construction pf Road from Madhurai to Nuasahi in Rashgovindapur CD Block	There is no such stipulation. But avenue plantation of shade bearing trees shall be raised along the entire stretch of the road in all available space.
				0.648 ha	
Deuli	Chandua RF near village Nuhamalia	6.76	R.F.	RF (400KV transmission line from Jamshedpur to Baripada	Compensatory afforestation works completed
				3.38 ha	

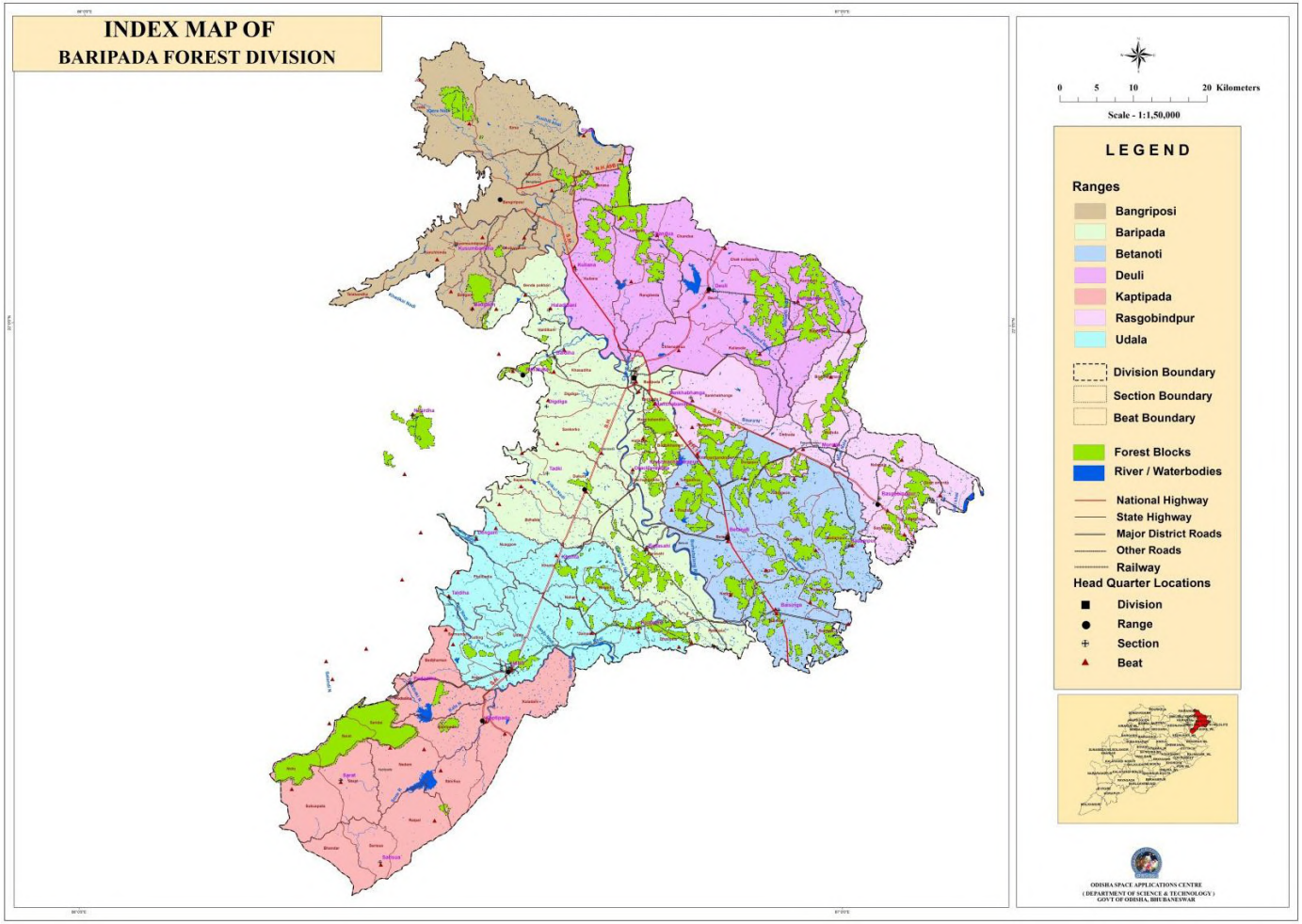
Appendix – XLII

General Sale Price of Round Timbers in Baripada Forest Division (rate in rupees per cum)

Girth Class (In cms)	Length Class (In Metre)	Sal	Kasi & Panas	Teak, Mehagany, Rose Wood & Sissoo	Bija, Kurum, Kendu (heart wood)	Asan, Arjun, Jamu, Moi& Sidha	Eucalyptus, Simili, Rai & Salai
45 to 59	<2	Poles	Poles	13889	Poles	Poles	Poles
	2 - 3.75	Poles	Poles	18503	Poles	Poles	Poles
	3.75-5	Poles	Poles	35445	Poles	Poles	Poles
	>5	Poles	Poles	32344	Poles	Poles	Poles
60 to 74	<2	13828	12571	26399	16342	8800	3592
	2 - 3.75	17988	16353	34341	21259	11447	4672
	3.75-5	22475	20432	42907	26562	14302	5838
	>5	26961	24510	51471	31863	17157	7003
75 to 89	<2	17988	16353	34341	21259	11447	4672
	2 - 3.75	22475	20432	42907	26562	14302	5838
	3.75-5	26961	24510	51471	31863	17157	7003
	>5	30999	28181	59180	36635	19727	8052
90 to 119	<2	26321	23928	45681	28279	15227	6071
	2 - 3.75	33656	30597	58412	36161	19471	7586
	3.75-5	40378	36707	70077	43381	23359	9101
	>5	45385	41259	78767	48760	26256	10467
120 to 149	<2	34218	31107	59386	36763	19795	7892

Girth Class (In cms)	Length Class (In Metre)	Sal	Kasi & Panas	Teak, Mehagany, Rose Wood & Sissoo	Bija, Kurum, Kendu (heart wood)	Asan, Arjun, Jamu, Moi& Sidha	Eucalyptus, Simili, Rai & Salai
	2 - 3.75	43761	39783	75949	47016	25316	9863
	3.75-5	52504	47731	91123	56410	30374	11834
	>5	59029	53662	102446	63419	34149	13614
150 to 179	<2	42766	38878	74222	45947	24741	9863
	2 - 3.75	50341	45764	87368	54085	29123	11347
	3.75-5	55371	50337	96098	59489	32033	12480
	>5	59533	54121	103322	63961	34441	13730
180 & above	<2	45945	41768	79739	49362	26580	10849
	2 - 3.75	51724	47022	89769	55571	29923	11930
	3.75-5	56915	51741	98778	61148	32926	13127
	>5	61155	55595	106136	65703	35379	14440

Appendix – XLIII



Appendix – XLIV

Forest Blockwise Vegetation layer as per Canopy Density and allotment to Working Circle

SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Layer 1 (>70%)	Layer 2 (41 - 70%)	Layer 3 (11 - 40%)	Layer 4 (<10%)	Layer 5 (No Vegetation)	Layer 6 (Water Body in ha.)	Encroachment (in ha.)	WC Allotted
				Under FRA	Under FC Act.									
1	PITHABATA	Baldiha R.F.	110.130	0.000	1.000	109.130	0.000	42.998	37.972	0.000	28.160	0.000	0.000	PLWC+RWC
2	PITHABATA	Bhagabat Chandrapur R.F.	806.280	0.000	10.800	795.480	89.946	115.485	190.208	7.584	92.561	0.000	299.696	PLWC+RWC
3	PITHABATA	Budhikhamari R.F.	863.100	0.480	6.000	856.620	427.666	98.915	76.975	25.291	133.123	0.000	94.650	PLWC+RWC
4	PITHABATA	Dungurusahi R.F.	10.950	0.000	0.000	10.950	0.000	0.000	0.000	10.950	0.000	0.000	0.000	PLWC
5	PITHABATA	Hatikote R.F.	556.840	0.000	3.120	553.720	139.992	156.096	174.183	43.528	38.358	1.563	0.000	PLWC+RWC
6	PITHABATA	Lulung-Purunapani R.F.	223.310	0.000	0.000	223.310	61.104	98.029	20.175	0.000	10.000	34.002	0.000	PLWC+RWC
7	PITHABATA	Manchabandha R.F.	1020.920	0.000	6.960	1013.960	554.777	45.147	241.266	114.547	51.989	6.233	0.000	PLWC+RWC
8	PITHABATA	Asanabani P.R..F	57.030	0.000	0.000	57.030	0.000	0.000	7.096	5.000	44.934	0.000	0.000	PLWC
9	PITHABATA	Goplapur V.F.	4.000	0.000	0.000	4.000	0.000	0.000	0.000	4.000	0.000	0.000	0.000	PLWC
10	PITHABATA	Srirampur V.F.	3.140	0.000	0.000	3.140	0.000	0.000	0.000	3.140	0.000	0.000	0.000	PLWC
11	PITHABATA	Gadadharapur V.F.	0.840	0.000	0.000	0.840	0.000	0.000	0.000	0.840	0.000	0.000	0.000	PLWC
12	PITHABATA	Baunsda V.F.	0.940	0.000	0.000	0.940	0.000	0.000	0.000	0.940	0.000	0.000	0.000	PLWC
13	PITHABATA	Dumuria V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
	PITHABATA	**Sub-total**	**3662.480**	**0.480**	**27.880**	**3634.120**	**1273.485**	**556.669**	**763.388**	**212.324**	**392.108**	**41.799**	394.346	
14	DUKURA	Aghasole R.F.	37.550	0.000	0.000	37.550	0.000	0.000	0.000	4.217	9.613	0.000	23.720	PLWC
15	DUKURA	Badsahi R.F.	340.740	0.040	0.000	340.700	59.844	112.776	111.631	54.275	2.173	0.000	0.000	PLWC+RWC
16	DUKURA	Bidhyadharpur R.F.	238.760	0.000	0.000	238.760	82.993	126.555	29.212	0.000	0.000	0.000	0.000	RWC
17	DUKURA	Chakradharpur R.F.	141.310	0.000	0.000	141.310	0.000	39.772	42.421	0.000	59.116	0.000	0.000	PLWC+RWC
18	DUKURA	Chengua-Mangalpur R.F.	79.640	0.000	0.000	79.640	0.000	2.377	35.597	0.000	17.950	0.000	23.716	PLWC

SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Layer 1 (>70%)	Layer 2 (41 - 70%)	Layer 3 (11 - 40%)	Layer 4 (<10%)	Layer 5 (No Vegetation)	Layer 6 (Water Body in ha.)	Encroachment (in ha.)	WC Allotted
				Under FRA	Under FC Act.									
19	DUKURA	Deulia R.F.	241.670	0.000	0.000	241.670	0.000	24.511	201.551	6.257	9.351	0.000	0.000	PLWC+RWC
20	DUKURA	Gojodi-Damodarpur R.F.	33.020	0.000	0.000	33.020	0.000	0.000	0.000	9.019	24.001	0.000	0.000	PLWC
21	DUKURA	Haldia R.F.	52.000	0.000	0.000	52.000	0.000	0.000	0.000	5.993	5.650	0.000	40.357	PLWC
22	DUKURA	Itamundia R.F.	111.370	0.000	0.000	111.370	0.000	58.647	18.543	8.483	25.696	0.000	0.000	PLWC+RWC
23	DUKURA	Jarkani R.F.	10.680	0.000	0.000	10.680	0.000	0.000	0.000	2.328	6.787	0.000	1.564	PLWC
24	DUKURA	Kanpura R.F.	533.850	0.890	0.000	532.960	0.000	47.972	207.584	30.090	225.302	0.405	21.606	PLWC+RWC
25	DUKURA	Kuldiha R.F.	25.250	0.000	0.000	25.250	0.000	0.000	5.000	0.000	20.250	0.000	0.000	PLWC
26	DUKURA	Pundala R.F.	17.970	0.000	0.000	17.970	0.000	0.000	3.655	0.000	13.933	0.000	0.383	PLWC
27	DUKURA	Purunapani R.F.	42.730	0.000	0.000	42.730	0.000	0.000	6.000	6.274	30.456	0.000	0.000	PLWC+RWC
28	DUKURA	Belpal R.F.	110.600	0.000	0.000	110.600	0.000	24.416	3.434	0.000	16.913	0.000	65.836	PLWC
29	DUKURA	Dukura R.F.	162.750	0.000	0.000	162.750	0.000	0.000	78.495	60.966	21.558	0.000	1.731	PLWC+RWC
30	DUKURA	Itamundia-Jamuna R.F.	111.250	0.000	0.000	111.250	0.000	17.179	0.000	0.000	32.801	0.000	61.269	PLWC
31	DUKURA	Khanua R.F.	113.680	0.000	0.000	113.680	0.000	0.000	43.487	0.000	47.418	0.000	22.775	PLWC
32	DUKURA	Kerko R.F.	110.070	0.000	0.000	110.070	0.000	0.000	15.000	0.000	94.565	0.000	0.505	PLWC
33	DUKURA	Nigirdha (A) P.R.F.	15.750	0.000	0.000	15.750	0.000	13.274	0.000	0.000	0.000	2.476	0.000	RWC
34	DUKURA	Nigirdha (B) P.R.F.	37.120	0.000	0.000	37.120	37.120	0.000	0.000	0.000	0.000	0.000	0.000	RWC
35	DUKURA	Kukurbhuka (1)P.R.F.	122.820	0.000	0.000	122.820	0.000	67.809	31.761	9.006	14.244	0.000	0.000	RWC
36	DUKURA	Kukurbhuka (2)P.R.F.	124.580	0.000	0.000	124.580	0.000	124.438	0.000	0.000	0.000	0.142	0.000	RWC
37	DUKURA	Sanamakabadi P.R.F.	129.000	0.000	0.000	129.000	0.000	59.142	69.858	0.000	0.000	0.000	0.000	RWC
38	DUKURA	Budhabalang (A) P.R.F.	46.560	0.000	0.000	46.560	6.318	37.685	0.000	0.000	0.000	2.557	0.000	RWC

SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Layer 1 (>70%)	Layer 2 (41 - 70%)	Layer 3 (11 - 40%)	Layer 4 (<10%)	Layer 5 (No Vegetation)	Layer 6 (Water Body in ha.)	Encroachment (in ha.)	WC Allotted
				Under FRA	Under FC Act.									
39	DUKURA	Budhabalang (B) P.R.F.	76.000	0.000	0.000	76.000	24.734	51.266	0.000	0.000	0.000	0.000	0.000	RWC
40	DUKURA	Gopinathpur P.R.F.	566.400	0.000	0.000	566.400	10.672	208.348	63.015	4.532	83.132	0.000	196.701	PLWC+RWC
41	DUKURA	Manatri V.F.	6.400	0.000	0.000	6.400	0.000	0.000	0.000	0.000	6.400	0.000	0.000	PLWC
42	DUKURA	Bhupad V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	4.375	0.625	0.000	0.000	PLWC
43	DUKURA	Manatri V.F.	3.480	0.000	0.000	3.480	0.000	0.000	0.000	3.480	0.000	0.000	0.000	PLWC
44	DUKURA	Rangahidi V.F.	4.588	0.000	0.000	4.588	0.000	0.000	0.000	4.588	0.000	0.000	0.000	PLWC
45	DUKURA	Ranibandha V.F.	3.440	0.000	0.000	3.440	0.000	0.000	0.000	3.440	0.000	0.000	0.000	PLWC
46	DUKURA	Khanua V.F.	6.000	0.000	0.000	6.000	0.000	0.000	0.000	6.000	0.000	0.000	0.000	PLWC
47	DUKURA	Basipitha V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
48	DUKURA	Basipitha V.F.	8.120	0.000	0.000	8.120	0.000	0.000	0.000	8.120	0.000	0.000	0.000	PLWC
	DUKURA	**Sub-total**	**3680.148**	**0.930**	**0.000**	**3679.218**	**221.681**	**1029.350**	**922.218**	**279.315**	**760.910**	**5.580**	460.165	
49	R.G.PUR	Amarda R.F.	1512.200	0.000	0.648	1511.552	370.734	447.939	271.572	48.013	343.155	0.000	30.138	PLWC+RWC
50	R.G.PUR	Betnasia R.F.	110.230	0.000	0.000	110.230	19.270	55.414	2.924	0.000	32.622	0.000	0.000	PLWC+RWC
51	R.G.PUR	Baghajharan R.F.	147.950	0.000	2.400	145.550	0.000	0.000	69.516	10.709	65.325	0.000	0.000	PLWC+RWC
52	R.G.PUR	Baladia R.F.	95.830	0.000	0.000	95.830	0.000	0.000	75.511	20.319	0.000	0.000	0.000	PLWC+RWC
53	R.G.PUR	Chitrada R.F.	422.640	0.000	12.800	409.840	0.000	0.000	141.332	106.836	135.072	0.000	26.600	PLWC+RWC
54	R.G.PUR	Jamsole R.F.	434.300	0.000	215.250	219.050	0.000	72.242	43.348	103.460	0.000	0.000	0.000	PLWC
55	R.G.PUR	Moroda R.F.	1479.140	0.000	14.850	1464.290	0.000	853.637	301.362	206.188	103.104	0.000	0.000	PLWC+RWC
56	R.G.PUR	Nalagaja R.F.	260.290	0.000	0.000	260.290	34.185	66.847	30.468	15.603	83.995	0.000	29.192	PLWC+RWC
57	R.G.PUR	Nichuapada R.F.	52.280	0.000	0.000	52.280	0.000	10.313	10.845	19.039	12.083	0.000	0.000	PLWC+RWC
58	R.G.PUR	Nuhajhalia R.F.	50.500	0.000	0.000	50.500	0.000	0.000	10.974	0.000	36.584	0.000	2.942	PLWC+RWC
59	R.G.PUR	Nunchatia R.F.	148.270	0.000	0.000	148.270	42.908	1.909	23.628	30.307	30.347	0.000	19.171	PLWC+RWC
60	R.G.PUR	Sarumula R.F.	330.220	0.380	0.000	329.840	54.038	137.537	21.158	21.826	86.513	0.000	8.768	PLWC+RWC
61	R.G.PUR	Sukhilakhali R.F.	231.310	0.000	0.750	230.560	83.582	52.937	20.854	31.522	41.666	0.000	0.000	PLWC+RWC

SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Layer 1 (>70%)	Layer 2 (41 - 70%)	Layer 3 (11 - 40%)	Layer 4 (<10%)	Layer 5 (No Vegetation)	Layer 6 (Water Body in ha.)	Encroachment (in ha.)	WC Allotted
				Under FRA	Under FC Act.									
62	R.G.PUR	Chikitamatia V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
63	R.G.PUR	Sarajharan V.F.	7.344	0.000	0.000	7.344	0.000	0.000	0.000	7.344	0.000	0.000	0.000	PLWC
64	R.G.PUR	Pharajpur V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
65	R.G.PUR	Duarsuni V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
66	R.G.PUR	Nahiasoli V.F.	2.940	0.000	0.000	2.940	0.000	0.000	0.000	2.940	0.000	0.000	0.000	PLWC
67	R.G.PUR	Jhatiada V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
68	R.G.PUR	Nalagaja V.F.	2.000	0.000	0.000	2.000	0.000	0.000	0.000	2.000	0.000	0.000	0.000	PLWC
69	R.G.PUR	Chandanpur V.F.	3.500	0.000	0.000	3.500	0.000	0.000	0.000	3.500	0.000	0.000	0.000	PLWC
	R.G.PUR	**Sub-total**	**5315.944**	**0.380**	**246.698**	**5068.866**	**604.716**	**1698.775**	**1126.953**	**551.145**	**970.466**	**0.000**	116.811	
70	UDALA	Anantasahi R.F.	7.120	0.000	0.000	7.120	0.000	0.000	0.000	2.006	4.168	0.000	0.946	PLWC
71	UDALA	Belakuti R.F.	223.380	0.000	0.000	223.380	0.000	8.636	61.363	5.094	87.121	0.000	61.166	PLWC
72	UDALA	Bhandagaon R.F.	122.210	0.000	0.000	122.210	0.000	0.000	39.869	11.727	29.743	0.000	40.871	PLWC
73	UDALA	Charada R.F.	7.120	0.000	0.000	7.120	0.000	0.000	0.000	1.295	2.094	0.000	3.731	PLWC
74	UDALA	Dhaundia R.F.	524.790	0.800	0.000	523.990	80.115	145.535	106.485	49.667	101.869	1.150	39.169	PLWC+RWC
75	UDALA	Dimgadia R.F.	6.960	0.000	0.000	6.960	0.000	0.000	2.000	4.960	0.000	0.000	0.000	PLWC
76	UDALA	Dugdha R.F.	35.290	0.000	0.000	35.290	0.000	17.026	0.000	0.000	15.770	0.000	2.494	PLWC+RWC
77	UDALA	Ghantasila R.F.	5.340	0.000	0.000	5.340	0.000	0.000	0.000	2.254	3.086	0.000	0.000	PLWC
78	UDALA	Jaypur R.F.	27.800	0.000	0.000	27.800	0.000	0.000	0.000	4.950	15.020	0.000	7.830	PLWC
79	UDALA	Khunta R.F.	427.990	0.000	4.590	423.400	87.261	68.283	27.457	50.828	86.848	2.618	100.106	PLWC+RWC
80	UDALA	Kuamara R.F.	229.530	0.000	0.000	229.530	0.000	23.007	52.377	0.000	74.169	0.000	79.977	PLWC
81	UDALA	Kuriakhunta R.F.	7.450	0.000	0.000	7.450	0.000	0.000	0.000	6.882	0.568	0.000	0.000	PLWC
82	UDALA	Marsigaon R.F.	263.320	0.000	0.000	263.320	0.000	0.000	20.000	0.000	73.560	0.000	169.760	PLWC
83	UDALA	Nahara R.F.	161.870	0.000	0.000	161.870	0.000	0.000	42.129	60.261	31.504	2.264	25.712	PLWC+RWC
84	UDALA	Nuapada R.F.	324.380	0.000	0.000	324.380	35.472	67.388	65.701	29.126	84.230	0.000	42.463	PLWC+RWC

SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Layer 1 (>70%)	Layer 2 (41 - 70%)	Layer 3 (11 - 40%)	Layer 4 (<10%)	Layer 5 (No Vegetation)	Layer 6 (Water Body in ha.)	Encroachment (in ha.)	WC Allotted
				Under FRA	Under FC Act.									
85	UDALA	Mundhakata R.F.	20.400	0.060	0.000	20.340	0.000	0.000	5.000	0.000	15.340	0.000	0.000	PLWC
86	UDALA	Phuljhari R.F.	315.650	0.000	0.000	315.650	192.497	97.269	25.885	0.000	0.000	0.000	0.000	RWC
87	UDALA	Purunabaripada R.F.	25.850	0.000	0.000	25.850	0.000	0.000	5.000	1.285	7.722	0.000	11.843	PLWC
88	UDALA	Sialia R.F.	34.320	0.000	0.000	34.320	0.000	0.000	0.000	0.000	18.976	0.000	15.344	PLWC
89	UDALA	Sunduria R.F.	2.430	0.000	0.000	2.430	0.000	0.000	0.000	0.000	2.430	0.000	0.000	PLWC
90	UDALA	Sirathali R.F.	74.140	0.000	0.000	74.140	0.000	0.000	5.000	0.000	41.459	0.000	27.681	PLWC
91	UDALA	Udala R.F.	533.930	0.000	0.000	533.930	54.517	247.579	11.656	12.629	185.382	4.961	17.206	PLWC+RWC
92	UDALA	Purunabaripada mankadakenda V.F.	0.648	0.000	0.000	0.648	0.000	0.000	0.000	0.648	0.000	0.000	0.000	PLWC
93	UDALA	Kusunia Patpur V.F.	0.320	0.000	0.000	0.320	0.000	0.000	0.000	0.320	0.000	0.000	0.000	PLWC
94	UDALA	Bhalimunduli V.F.	3.900	0.000	0.000	3.900	0.000	0.000	0.000	3.900	0.000	0.000	0.000	PLWC
95	UDALA	Salabani V.F.	2.960	0.000	0.000	2.960	0.000	0.000	0.000	2.960	0.000	0.000	0.000	PLWC
96	UDALA	Sialia V.F.	2.880	0.000	0.000	2.880	0.000	0.000	0.000	0.000	2.880	0.000	0.000	PLWC
97	UDALA	Raghunathpur V.F.	4.660	0.000	0.000	4.660	0.000	0.000	0.000	4.660	0.000	0.000	0.000	PLWC
98	UDALA	Jamudiha V.F.	2.000	0.000	0.000	2.000	0.000	0.000	0.000	2.000	0.000	0.000	0.000	PLWC
99	UDALA	Nuagaon V.F.	13.324	0.000	0.000	13.324	0.000	0.000	0.000	13.324	0.000	0.000	0.000	PLWC
100	UDALA	Bahanada V.F.	1.300	0.000	0.000	1.300	0.000	0.000	0.000	1.300	0.000	0.000	0.000	PLWC
101	UDALA	Jalda V.F.	1.124	0.000	0.000	1.124	0.000	0.000	0.000	1.124	0.000	0.000	0.000	PLWC
102	UDALA	Murari V.F.	0.992	0.000	0.000	0.992	0.000	0.000	0.000	0.992	0.000	0.000	0.000	PLWC
103	UDALA	Gohira V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
104	UDALA	Jogibandha V.F.	2.000	0.000	0.000	2.000	0.000	0.000	0.000	2.000	0.000	0.000	0.000	PLWC
105	UDALA	Jajpur`V.F.	14.884	0.000	0.000	14.884	0.000	0.000	0.000	14.884	0.000	0.000	0.000	PLWC
106	UDALA	Kochiladiha V.F.	15.000	0.000	0.000	15.000	0.000	0.000	0.000	1.640	13.360	0.000	0.000	PLWC
107	UDALA	Khunta V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
108	UDALA	Khunta V.F.	3.756	0.000	0.000	3.756	0.000	0.000	0.000	3.756	0.000	0.000	0.000	PLWC

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				Under FRA	Under FC Act.									
109	UDALA	Khunta V.F.	0.096	0.000	0.000	0.096	0.000	0.000	0.000	0.096	0.000	0.000	0.000	PLWC
110	UDALA	Khunta V.F.	6.148	0.000	0.000	6.148	0.000	0.000	0.000	6.148	0.000	0.000	0.000	PLWC
111	UDALA	Khunta V.F.	0.400	0.000	0.000	0.400	0.000	0.000	0.000	0.400	0.000	0.000	0.000	PLWC
112	UDALA	Khunta V.F.	12.600	0.000	0.000	12.600	0.000	0.000	0.000	12.600	0.000	0.000	0.000	PLWC
113	UDALA	Sridamchandrapur V.F.	1.376	0.000	0.000	1.376	0.000	0.000	0.000	1.376	0.000	0.000	0.000	PLWC
	UDALA	**Sub-total**	**3486.638**	**0.860**	**4.590**	**3481.188**	**449.862**	**674.724**	**434.544**	**383.709**	**881.057**	**10.993**	646.298	
114	BETNOTI	Asanbani R.F.	810.170	0.400	5.100	804.670	46.539	302.076	240.501	107.927	107.626	0.000	0.000	PLWC+RWC
115	BETNOTI	Asankhali R.F.	12.950	0.120	0.000	12.830	0.000	0.000	0.000	0.000	3.907	0.000	8.923	PLWC
116	BETNOTI	Badampur R.F.	952.290	0.039	0.000	952.251	0.000	180.258	462.796	193.872	115.325	0.000	0.000	PLWC+RWC
117	BETNOTI	Badguma R.F.	28.970	0.000	0.000	28.970	0.000	0.000	0.000	5.021	11.791	0.000	12.159	PLWC
118	BETNOTI	Baisinga R.F.	108.440	0.128	0.000	108.312	0.000	0.642	44.297	0.000	63.373	0.000	0.000	PLWC
119	BETNOTI	Balka R.F.	23.960	0.000	0.000	23.960	0.000	0.000	17.825	3.960	0.000	2.175	0.000	PLWC
120	BETNOTI	Bartana R.F.	194.890	0.000	0.000	194.890	0.000	91.547	31.036	0.792	36.986	0.000	34.529	PLWC+RWC
121	BETNOTI	Basantapur R.F.	113.800	0.000	0.000	113.800	0.000	0.000	15.107	8.698	50.611	0.000	39.384	PLWC+RWC
122	BETNOTI	Beldiha R.F.	41.600	0.000	0.000	41.600	0.000	0.000	20.564	1.608	7.253	0.000	12.174	PLWC+RWC
123	BETNOTI	Bhimpur R.F.	18.290	0.000	0.000	18.290	0.000	0.000	7.880	0.000	10.410	0.000	0.000	PLWC
124	BETNOTI	Bishrampur R.F.	42.250	0.000	0.000	42.250	0.000	10.000	0.000	9.551	17.632	0.000	5.067	PLWC
125	BETNOTI	Chhatnna R.F.	393.510	0.000	2.050	391.460	0.000	0.000	141.332	106.836	135.072	0.000	8.220	PLWC+RWC
126	BETNOTI	Daldali R.F.	71.220	0.000	6.000	65.220	0.000	24.309	20.703	0.000	20.208	0.000	0.000	PLWC
127	BETNOTI	Dalki R.F.	827.970	0.000	0.000	827.970	190.561	236.102	56.404	20.967	146.902	0.000	177.034	PLWC+RWC
128	BETNOTI	Dumapada R.F.	224.350	0.000	4.800	219.550	83.071	37.493	41.987	22.717	34.282	0.000	0.000	PLWC+RWC
129	BETNOTI	Durgapur R.F.	961.840	0.000	4.300	957.540	312.975	537.732	106.704	0.000	0.000	0.129	0.000	PLWC+RWC
130	BETNOTI	Gad-deulia R.F.	58.730	0.000	0.000	58.730	0.000	0.000	10.000	5.000	43.730	0.000	0.000	PLWC
131	BETNOTI	Gandigadha R.F.	1085.180	0.999	17.800	1066.381	630.071	132.584	303.479	0.247	0.000	0.000	0.000	PLWC+RWC

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132	BETNOTI	Garudabasa R.F.	71.870	0.000	0.000	71.870	0.000	48.770	0.000	0.000	12.894	0.000	10.207	PLWC+RWC
133	BETNOTI	Gopalpur R.F.	10.880	0.000	0.000	10.880	0.000	0.000	0.000	4.377	6.503	0.000	0.000	PLWC
134	BETNOTI	Gobindapur R.F.	11.820	0.000	0.000	11.820	0.000	0.000	0.000	0.000	11.820	0.000	0.000	PLWC
135	BETNOTI	Haripur R.F.	41.280	0.040	0.300	40.940	0.000	0.000	3.000	0.000	23.012	0.000	14.928	PLWC
136	BETNOTI	Hatijhuri R.F.	109.110	0.000	0.000	109.110	0.000	30.486	0.000	0.000	49.974	0.000	28.649	PLWC+RWC
137	BETNOTI	Hempur R.F.	290.790	0.000	0.000	290.790	0.000	0.000	16.477	0.000	215.241	0.000	59.072	PLWC
138	BETNOTI	Ajadiha R.F.	2.100	0.000	0.000	2.100	0.000	0.000	0.000	0.000	2.100	0.000	0.000	PLWC
139	BETNOTI	Jagannathpur R.F.	452.590	0.000	1.350	451.240	0.000	374.165	8.148	3.185	65.743	0.000	0.000	PLWC+RWC
140	BETNOTI	Jarka R.F.	6.630	0.000	0.000	6.630	0.000	0.000	0.000	0.000	2.048	0.000	4.582	PLWC
141	BETNOTI	Jugal R.F.	305.290	0.500	0.000	304.790	37.035	146.271	26.015	19.483	28.002	0.000	47.984	PLWC+RWC
142	BETNOTI	Kalma R.F.	24.360	0.120	0.000	24.240	0.000	0.000	5.000	2.000	12.010	0.000	5.230	PLWC
143	BETNOTI	Kapoi R.F.	109.260	0.000	0.000	109.260	0.000	44.413	12.247	11.480	35.005	0.000	6.115	PLWC+RWC
144	BETNOTI	Ketakisole R.F.	39.330	0.000	0.000	39.330	0.000	0.000	13.495	0.000	17.091	0.000	8.743	PLWC+RWC
145	BETNOTI	Khadikapada R.F.	75.110	0.000	0.000	75.110	0.000	0.000	7.464	11.561	39.891	0.000	16.194	PLWC+RWC
146	BETNOTI	Khetrapatana R.F.	4.210	0.000	0.000	4.210	0.000	0.000	0.000	0.000	4.210	0.000	0.000	PLWC
147	BETNOTI	Khiripada R.F.	420.540	0.580	0.000	419.960	139.744	52.523	86.117	8.841	132.375	0.360	0.000	PLWC+RWC
148	BETNOTI	Krushnachandrapur R.F.	1272.070	1.160	18.000	1252.910	294.621	471.403	120.452	25.196	263.448	0.000	77.791	PLWC+RWC
149	BETNOTI	Kochilakhunta R.F.	259.320	0.000	0.000	259.320	124.070	73.998	40.021	15.229	6.002	0.000	0.000	PLWC+RWC
150	BETNOTI	Machhapada R.F.	62.810	0.000	0.000	62.810	0.000	0.000	15.792	5.000	23.858	0.000	18.160	PLWC
151	BETNOTI	Mamtapal R.F.	222.730	0.000	0.000	222.730	0.000	72.643	17.357	15.784	44.848	0.000	72.098	PLWC
152	BETNOTI	Merda R.F.	495.820	0.000	0.000	495.820	0.000	0.000	433.668	23.770	38.381	0.000	0.000	PLWC+RWC
153	BETNOTI	Mohanpur R.F.	35.130	0.000	0.000	35.130	0.000	0.000	0.000	8.775	14.313	0.000	12.042	PLWC
154	BETNOTI	Nuagaon R.F.`	39.330	0.000	0.000	39.330	0.000	0.000	19.962	13.696	5.672	0.000	0.000	PLWC+RWC
155	BETNOTI	Phuljhari R.F.	217.420	0.000	0.000	217.420	42.267	48.634	36.030	18.897	71.591	0.000	0.000	PLWC+RWC

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156	BETNOTI	Purunia R.F.	442.300	1.350	0.000	440.950	0.000	1.650	133.350	22.131	214.186	0.000	69.633	PLWC
157	BETNOTI	Raikama R.F.	191.340	0.000	10.000	181.340	0.000	0.000	106.750	0.000	74.590	0.000	0.000	PLWC+RWC
158	BETNOTI	Rautra R.F.	119.460	0.000	0.300	119.160	0.000	0.000	66.592	0.000	45.521	0.000	7.047	PLWC+RWC
159	BETNOTI	Sarbana R.F.	41.120	0.000	0.000	41.120	0.000	0.000	10.000	6.489	9.283	0.000	15.347	PLWC
160	BETNOTI	Thakurtota R.F.	73.330	0.000	0.000	73.330	0.000	0.000	18.149	0.000	53.790	0.000	1.391	PLWC
161	BETNOTI	Bharadasole R.F.	50.670	0.000	0.000	50.670	29.626	0.000	0.000	0.000	8.148	0.000	12.896	PLWC+RWC
162	BETNOTI	Bhalukchua R.F.	199.430	0.000	0.000	199.430	164.224	0.000	0.000	16.903	18.303	0.000	0.000	PLWC+RWC
163	BETNOTI	Totapada R.F.	65.070	0.000	0.000	65.070	0.000	0.000	4.372	0.000	44.575	0.000	16.123	PLWC
164	BETNOTI	Tikayatpur R.F.	160.960	0.000	0.870	160.090	0.000	0.000	10.000	0.000	83.377	0.000	66.713	PLWC
165	BETNOTI	Patpur RF	141.480	0.000	0.600	140.880	0.000	48.158	46.751	2.764	23.505	0.000	19.702	PLWC+RWC
166	BETNOTI	Kochilakhunta P.R.F.	99.000	0.000	0.000	99.000	1.465	32.416	32.356	6.496	25.861	0.395	0.011	PLWC+RWC
167	BETNOTI	Bhalia P.R.F.	340.160	0.000	0.000	340.160	0.000	0.000	59.124	0.000	198.054	1.150	81.832	PLWC+RWC
168	BETNOTI	Kathapal V.F.	0.240	0.000	0.000	0.240	0.000	0.000	0.000	0.240	0.000	0.000	0.000	PLWC
169	BETNOTI	Chakulia V.F.	3.000	0.000	0.000	3.000	0.000	0.000	0.000	3.000	0.000	0.000	0.000	PLWC
170	BETNOTI	Karatpata V.F.	0.780	0.000	0.000	0.780	0.000	0.000	0.000	0.780	0.000	0.000	0.000	PLWC
171	BETNOTI	Chakulia V.F.	4.000	0.000	0.000	4.000	0.000	0.000	0.000	4.000	0.000	0.000	0.000	PLWC
172	BETNOTI	Analagadia (Matidahi) V.F.	3.060	0.000	0.000	3.060	0.000	0.000	0.000	3.060	0.000	0.000	0.000	PLWC
173	BETNOTI	Jhinkiria V.F.	1.600	0.000	0.000	1.600	0.000	0.000	0.000	1.600	0.000	0.000	0.000	PLWC
174	BETNOTI	Singida Munduli V.F.	3.320	0.000	0.000	3.320	0.000	0.000	0.000	3.320	0.000	0.000	0.000	PLWC
175	BETNOTI	Athabahia V.F.	1.700	0.000	0.000	1.700	0.000	0.000	0.000	1.700	0.000	0.000	0.000	PLWC
176	BETNOTI	Mendhamundia V.F.	2.100	0.000	0.000	2.100	0.000	0.000	0.000	2.100	0.000	0.000	0.000	PLWC
177	BETNOTI	Anbagadia V.F.	12.664	0.000	0.000	12.664	0.000	0.000	0.000	12.664	0.000	0.000	0.000	PLWC

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				Under FRA	Under FC Act.									
178	BETNOTI	Kalana V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
179	BETNOTI	Rautrapur V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
180	BETNOTI	Kalana V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
181	BETNOTI	Tulajhuri V.F.	8.000	0.000	0.000	8.000	0.000	0.000	0.000	8.000	0.000	0.000	0.000	PLWC
182	BETNOTI	Asukanda V.F.	3.300	0.000	0.000	3.300	0.000	0.000	0.000	3.300	0.000	0.000	0.000	PLWC
183	BETNOTI	Angaria V.F.	0.560	0.000	0.000	0.560	0.000	0.000	0.000	0.560	0.000	0.000	0.000	PLWC
184	BETNOTI	Tikayatpur V.F.	0.800	0.000	0.000	0.800	0.000	0.000	0.000	0.800	0.000	0.000	0.000	PLWC
185	BETNOTI	Purunia V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
186	BETNOTI	Purunia V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
187	BETNOTI	Purunia V.F.	3.880	0.000	0.000	3.880	0.000	0.000	0.000	3.880	0.000	0.000	0.000	PLWC
188	BETNOTI	Purunia V.F.	6.560	0.000	0.000	6.560	0.000	0.000	0.000	6.560	0.000	0.000	0.000	PLWC
189	BETNOTI	Balaka V.F.	2.000	0.000	0.000	2.000	0.000	0.000	0.000	2.000	0.000	0.000	0.000	PLWC
190	BETNOTI	Raghupur V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
191	BETNOTI	Raghupur V.F.	7.000	0.000	0.000	7.000	0.000	0.000	0.000	7.000	0.000	0.000	0.000	PLWC
192	BETNOTI	Raghupur V.F.	9.600	0.000	0.000	9.600	0.000	0.000	0.000	9.600	0.000	0.000	0.000	PLWC
193	BETNOTI	Raghupur V.F.	3.000	0.000	0.000	3.000	0.000	0.000	0.000	3.000	0.000	0.000	0.000	PLWC
194	BETNOTI	Raghupur V.F.	5.684	0.000	0.000	5.684	0.000	0.000	0.000	5.684	0.000	0.000	0.000	PLWC
195	BETNOTI	Raghupur V.F.	11.232	0.000	0.000	11.232	0.000	0.000	0.000	11.232	0.000	0.000	0.000	PLWC
196	BETNOTI	Raghupur V.F.	7.000	0.000	0.000	7.000	0.000	0.000	0.000	7.000	0.000	0.000	0.000	PLWC
197	BETNOTI	Gadigaon V.F.	9.644	0.000	0.000	9.644	0.000	0.000	0.000	9.644	0.000	0.000	0.000	PLWC
198	BETNOTI	Gadadeuli V.F.	0.840	0.000	0.000	0.840	0.000	0.000	0.000	0.840	0.000	0.000	0.000	PLWC
199	BETNOTI	Gadadeuli V.F.	7.296	0.000	0.000	7.296	0.000	0.000	0.000	7.296	0.000	0.000	0.000	PLWC
200	BETNOTI	Nuagaon V.F.	3.200	0.000	0.000	3.200	0.000	0.000	0.000	3.200	0.000	0.000	0.000	PLWC
201	BETNOTI	Buguhuda V.F.	2.000	0.000	0.000	2.000	0.000	0.000	0.000	2.000	0.000	0.000	0.000	PLWC

SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Layer 1 (>70%)	Layer 2 (41 - 70%)	Layer 3 (11 - 40%)	Layer 4 (<10%)	Layer 5 (No Vegetation)	Layer 6 (Water Body in ha.)	Encroachment (in ha.)	WC Allotted
				Under FRA	Under FC Act.									
	BETNOTI	**Sub-total**	**12648.590**	**5.436**	**71.470**	**12571.684**	**2096.270**	**3013.429**	**2699.675**	**1057.785**	**2730.335**	**4.210**	969.980	
202	DEULI	Andhari R.F.	731.630	0.000	0.000	731.630	0.000	0.000	88.223	70.741	242.215	0.000	330.451	PLWC+RWC
203	DEULI	Chandua R.F.	3073.120	0.000	8.840	3064.280	218.261	685.781	1160.144	545.147	430.938	24.010	0.000	PLWC+RWC
204	DEULI	Deuli R.F.	2379.260	0.000	1.200	2378.060	914.786	717.171	386.456	46.108	313.539	0.000	0.000	PLWC+RWC
205	DEULI	Kuliana R.F.	1203.680	0.000	4.800	1198.880	2.100	241.154	410.656	196.660	345.735	2.576	0.000	PLWC+RWC
206	DEULI	Suliapada R.F.	2889.560	0.000	8.000	2881.560	735.636	843.525	361.760	56.643	858.078	0.000	25.919	PLWC+RWC
207	DEULI	Badsole P.R.F.	227.030	0.000	10.000	217.030	87.094	63.952	49.705	16.279	0.000	0.000	0.000	PLWC+RWC
208	DEULI	Tangasole P.R.F.	236.800	0.000	5.120	231.680	0.000	160.771	55.105	6.708	9.095	0.000	0.000	PLWC+RWC
209	DEULI	Kaliasole P.R.F.	320.160	0.000	0.000	320.160	67.631	75.408	54.597	43.666	35.553	0.153	43.151	PLWC+RWC
210	DEULI	Dhalu Suliapada V.F.	1.060	0.000	0.000	1.060	0.000	0.000	0.000	1.060	0.000	0.000	0.000	PLWC
211	DEULI	Kasia V.F.	1.740	0.000	0.000	1.740	0.000	0.000	0.000	1.740	0.000	0.000	0.000	PLWC
212	DEULI	Handibhanga V.F.	2.468	0.000	0.000	2.468	0.000	0.000	0.000	2.468	0.000	0.000	0.000	PLWC
213	DEULI	Anlakuda V.F.	6.000	0.000	0.000	6.000	0.000	0.000	0.000	6.000	0.000	0.000	0.000	PLWC
214	DEULI	Sankhunta V.F.	2.000	0.000	0.000	2.000	0.000	0.000	0.000	2.000	0.000	0.000	0.000	PLWC
215	DEULI	Jalda V.F.	0.276	0.000	0.000	0.276	0.000	0.000	0.000	0.276	0.000	0.000	0.000	PLWC
	DEULI	**Sub-total**	**11074.784**	**0.000**	**37.960**	**11036.824**	**2025.508**	**2787.761**	**2566.646**	**995.498**	**2235.152**	**26.739**	399.521	
216	KAPTIPADA	Asanabani R.F.	262.560	0.000	0.000	262.560	0.000	0.000	121.371	24.106	117.083	0.000	0.000	PLWC+RWC
217	KAPTIPADA	Nachhipur R.F.	229.000	0.000	0.000	229.000	0.000	0.000	125.538	19.355	83.932	0.175	0.000	PLWC+RWC
218	KAPTIPADA	Notto R.F.	7707.080	0.000	0.000	7707.080	1267.713	3373.870	2297.437	280.039	421.229	0.000	66.792	IWC
219	KAPTIPADA	Sukhuapata Hill P.F.	92.320	0.000	0.330	91.990	0.000	16.990	30.000	45.000	0.000	0.000	0.000	PLWC+RWC
220	KAPTIPADA	Kaladahi V.F.	1.500	0.000	0.000	1.500	0.000	0.000	0.000	1.500	0.000	0.000	0.000	PLWC
221	KAPTIPADA	Pedagadia V.F.	0.220	0.000	0.000	0.220	0.000	0.000	0.000	0.220	0.000	0.000	0.000	PLWC
222	KAPTIPADA	Khaladi V.F.	2.112	0.000	0.000	2.112	0.000	0.000	0.000	2.112	0.000	0.000	0.000	PLWC
	KAPTIPADA	**Sub-total**	**8294.792**	**0.000**	**0.330**	**8294.462**	**1267.713**	**3390.860**	**2574.346**	**372.332**	**622.244**	**0.175**	66.792	

SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Layer 1 (>70%)	Layer 2 (41 - 70%)	Layer 3 (11 - 40%)	Layer 4 (<10%)	Layer 5 (No Vegetation)	Layer 6 (Water Body in ha.)	Encroachment (in ha.)	WC Allotted
				Under FRA	Under FC Act.									
223	BANGRIPOSI	Dighi R.F.	515.940	0.000	0.000	515.940	0.000	5.833	133.132	0.000	210.489	0.000	166.486	PLWC
224	BANGRIPOSI	Rangahudi R.F.	86.670	0.000	0.000	86.670	0.000	25.478	44.744	4.304	12.143	0.000	0.000	PLWC+RWC
225	BANGRIPOSI	Thakurani R.F.	497.020	0.000	0.000	497.020	72.912	329.593	94.515	0.000	0.000	0.000	0.000	RWC
226	BANGRIPOSI	Juha P.R.F.	86.040	0.000	0.000	86.040	0.000	23.747	54.202	2.062	6.030	0.000	0.000	PLWC+RWC
227	BANGRIPOSI	Pimpudijharan P.F.	60.970	0.000	0.000	60.970	0.000	0.000	0.000	50.970	10.000	0.000	0.000	PLWC
228	BANGRIPOSI	Kapadiha P.F.	10.730	0.000	0.000	10.730	0.000	0.000	0.000	8.000	2.730	0.000	0.000	PLWC
229	BANGRIPOSI	Ambadiha P.F.	14.030	0.000	0.000	14.030	0.000	0.000	0.000	11.000	3.030	0.000	0.000	PLWC
230	BANGRIPOSI	Hill Block-1 P.F.	712.750	0.000	0.000	712.750	35.750	160.000	175.000	200.000	142.000	0.000	0.000	PLWC+RWC
231	BANGRIPOSI	Maheshpur P.F.	98.430	0.000	0.000	98.430	0.000	18.000	27.000	35.000	18.430	0.000	0.000	PLWC+RWC
232	BANGRIPOSI	Manbhanj V.F.	3.940	0.000	0.000	3.940	0.000	0.000	0.000	3.940	0.000	0.000	0.000	PLWC
233	BANGRIPOSI	Baghajhampa V.F.	8.000	0.000	0.000	8.000	0.000	0.000	0.000	8.000	0.000	0.000	0.000	PLWC
234	BANGRIPOSI	Jarkani V.F.	7.000	0.000	0.000	7.000	0.000	0.000	0.000	0.000	7.000	0.000	0.000	PLWC
235	BANGRIPOSI	Nata V.F.	7.000	0.000	0.000	7.000	0.000	0.000	0.000	7.000	0.000	0.000	0.000	PLWC
236	BANGRIPOSI	Birsingh V.F.	0.600	0.000	0.000	0.600	0.000	0.000	0.000	0.600	0.000	0.000	0.000	PLWC
237	BANGRIPOSI	Nohanatia V.F.	4.000	0.000	0.000	4.000	0.000	0.000	0.000	4.000	0.000	0.000	0.000	PLWC
238	BANGRIPOSI	Pahadpur V.F.	9.000	0.000	0.000	9.000	0.000	0.000	0.000	9.000	0.000	0.000	0.000	PLWC
239	BANGRIPOSI	Heenachandrapur V.F.	9.000	0.000	0.000	9.000	0.000	0.000	0.000	9.000	0.000	0.000	0.000	PLWC
240	BANGRIPOSI	Heenachandrapur V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
241	BANGRIPOSI	Jaivilla V.F.	0.532	0.000	0.000	0.532	0.000	0.000	0.000	0.532	0.000	0.000	0.000	PLWC
242	BANGRIPOSI	Sindurgoura V.F.	0.260	0.000	0.000	0.260	0.000	0.000	0.000	0.260	0.000	0.000	0.000	PLWC
243	BANGRIPOSI	Handibhanga V.F.	2.468	0.000	0.000	2.468	0.000	0.000	0.000	2.468	0.000	0.000	0.000	PLWC
244	BANGRIPOSI	Bagbuda V.F.	4.000	0.000	0.000	4.000	0.000	0.000	0.000	4.000	0.000	0.000	0.000	PLWC
245	BANGRIPOSI	Pokhariadiha V.F.	8.000	0.000	0.000	8.000	0.000	0.000	0.000	8.000	0.000	0.000	0.000	PLWC

SL. No.	Name of Range	Name of RF/ PRF /PF/ VF	Area in ha.	Area Diverted (in Ha.)		Plan Area after Forest Diversion	Layer 1 (>70%)	Layer 2 (41 - 70%)	Layer 3 (11 - 40%)	Layer 4 (<10%)	Layer 5 (No Vegetation)	Layer 6 (Water Body in ha.)	Encroachment (in ha.)	WC Allotted
				Under FRA	Under FC Act.									
246	BANGRIPOSI	Govindpur V.F.	8.000	0.000	0.000	8.000	0.000	0.000	0.000	8.000	0.000	0.000	0.000	PLWC
247	BANGRIPOSI	Bedhakudar V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
248	BANGRIPOSI	Gopinathpur V.F.	1.424	0.000	0.000	1.424	0.000	0.000	0.000	1.424	0.000	0.000	0.000	PLWC
249	BANGRIPOSI	Pahadpur V.F.	1.500	0.000	0.000	1.500	0.000	0.000	0.000	1.500	0.000	0.000	0.000	PLWC
250	BANGRIPOSI	Brundabanchandrapur V.F.	1.846	0.000	0.000	1.846	0.000	0.000	0.000	1.846	0.000	0.000	0.000	PLWC
251	BANGRIPOSI	Brundabanchandrapur V.F.	4.500	0.000	0.000	4.500	0.000	0.000	0.000	4.500	0.000	0.000	0.000	PLWC
252	BANGRIPOSI	Brundabanchandrapur V.F.	0.720	0.000	0.000	0.720	0.000	0.000	0.000	0.720	0.000	0.000	0.000	PLWC
253	BANGRIPOSI	Kuabuda V.F.	12.000	0.000	0.000	12.000	0.000	0.000	0.000	12.000	0.000	0.000	0.000	PLWC
254	BANGRIPOSI	Kuabuda V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
255	BANGRIPOSI	Kuabuda V.F.	8.000	0.000	0.000	8.000	0.000	0.000	0.000	8.000	0.000	0.000	0.000	PLWC
256	BANGRIPOSI	Kuabuda V.F.	10.608	0.000	0.000	10.608	0.000	0.000	0.000	10.608	0.000	0.000	0.000	PLWC
257	BANGRIPOSI	Kuabuda V.F.	5.000	0.000	0.000	5.000	0.000	0.000	0.000	5.000	0.000	0.000	0.000	PLWC
258	BANGRIPOSI	Pokharia V.F.	6.208	0.000	0.000	6.208	0.000	0.000	0.000	6.208	0.000	0.000	0.000	PLWC
259	BANGRIPOSI	Pokharia V.F.	4.000	0.000	0.000	4.000	0.000	0.000	0.000	4.000	0.000	0.000	0.000	PLWC
260	BANGRIPOSI	Pokharia V.F.	10.000	0.000	0.000	10.000	0.000	0.000	0.000	10.000	0.000	0.000	0.000	PLWC
261	BANGRIPOSI	Pokharia V.F.	4.000	0.000	0.000	4.000	0.000	0.000	0.000	4.000	0.000	0.000	0.000	PLWC
262	BANGRIPOSI	Pokharia V.F.	1.608	0.000	0.000	1.608	0.000	0.000	0.000	1.608	0.000	0.000	0.000	PLWC
263	BANGRIPOSI	Pokharia V.F.	0.788	0.000	0.000	0.788	0.000	0.000	0.000	0.788	0.000	0.000	0.000	PLWC
264	BANGRIPOSI	Pokharia V.F.	6.000	0.000	0.000	6.000	0.000	0.000	0.000	6.000	0.000	0.000	0.000	PLWC
265	BANGRIPOSI	Pokharia V.F.	3.000	0.000	0.000	3.000	0.000	0.000	0.000	3.000	0.000	0.000	0.000	PLWC
266	BANGRIPOSI	Pokharia V.F.	2.108	0.000	0.000	2.108	0.000	0.000	0.000	2.108	0.000	0.000	0.000	PLWC
267	BANGRIPOSI	Joka V.F.	8.000	0.000	0.000	8.000	0.000	0.000	0.000	8.000	0.000	0.000	0.000	PLWC

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				Under FRA	Under FC Act.									
268	BANGRIPOSI	Jharpokharia V.F.	0.540	0.000	0.000	0.540	0.000	0.000	0.000	0.540	0.000	0.000	0.000	PLWC
269	BANGRIPOSI	Jharpokharia V.F.	2.000	0.000	0.000	2.000	0.000	0.000	0.000	2.000	0.000	0.000	0.000	PLWC
270	BANGRIPOSI	Bagbuda V.F.	0.400	0.000	0.000	0.400	0.000	0.000	0.000	0.400	0.000	0.000	0.000	PLWC
271	BANGRIPOSI	Bagbuda V.F.	0.640	0.000	0.000	0.640	0.000	0.000	0.000	0.640	0.000	0.000	0.000	PLWC
272	BANGRIPOSI	Banakati V.F.	3.088	0.000	0.000	3.088	0.000	0.000	0.000	3.088	0.000	0.000	0.000	PLWC
	BANGRIPOSI	**Sub-total**	**2272.358**	**0.000**	**0.000**	**2272.358**	**108.662**	**562.651**	**490.671**	**539.037**	**404.851**	**0.000**	166.485	
	G. Total	**272 Forest Blocks**	***50435.734***	***8.086***	***388.928***	***50038.720***	***8047.896***	***13714.220***	***11578.442***	***4391.145***	***8997.124***	***89.495***	3220.398	

PART - III

DLC FOREST LIST OF BARIPADA FOREST DIVISION

CERTIFICATE

****

District Level Committee (DLC) was constituted during the year1997 in each District under the Chairmanship of the District Collector as per orders passed by the Hon'ble Supreme Court of India in W.P. (C) 202/1995 to identify all non-forest areas but certified as dictionary meaning of forest under the administrative control of F&E Department/ Revenue Department. After necessary scrutiny of the DLC reports by the State Level Expert Committee, the details of such forest lands were submitted before the Hon'ble Apex Court in shape of an affidavit. All such forest lands which found place in the Final DLC Report are to be regulated under the provisions of the Forest (Conservation) Act, 1980.

Instruction has been issued by the Govt. of India, Revenue and Disaster Management Department vide Letter No. RDM/LRGEA.POLICY-0018-23784/ R&DM dt.30/06/2018 to enter this DLC Forest Land in the BHULEKH data base. However for ready reference of the forest staff, it is felt necessary to compile the DLC Forest List under Revenue Administration within Baripada Forest Division.

The DLC Forest Areas within Baripada Forest Division is 1741.01 Ha. These DLC Forest Areas, under Revenue Administration are areas deemed to be forest for implementation of the Forest (Conservation) Act, 1980.

Divisional Forest Officer,
Baripada Forest Division

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DLC FOREST LIST OF BARIPADA FOREST DIVISION

DLC FOREST AREA OF BADSAHI TAHASIL

DISTICT - MAYURBHANJA , TAHASIL - BADSAHI

MOUJA	KHATA NO	PLOT NO	AREA	OWNERSHIP	STATUS
Paikpada	235	1313	5.650	Govt.	DLC
		Total	**5.650**		
Kainphulia	238	645	2.300	Govt.	DLC
Kainphulia		708	0.340	Govt.	DLC
Kainphulia		719	2.350	Govt.	DLC
Kainphulia		559	3.230	Govt.	DLC
Kainphulia		366	3.820	Govt.	DLC
Kainphulia		1776	0.460	Govt.	DLC
		Total	**12.500**		
Panasia	280	86	2.970	Govt. Gochar	DLC
Panasia		119	7.500	Govt. Gochar	DLC
Panasia		120	6.500	Govt. Gochar	DLC
Panasia		118	0.460	Govt. Gochar	DLC
		Total	**17.430**		
Rajgarh	199	839	0.650	Govt. Gochar	DLC
Rajgarh		880	0.130	Govt. Gochar	DLC
Rajgarh		887	0.160	Govt. Gochar	DLC
Rajgarh		890	19.060	Govt. Gochar	DLC
Rajgarh		892	1.700	Govt. Gochar	DLC
Rajgarh		899	0.040	Govt. Gochar	DLC
		Total	**21.740**		
Bantalpada	175	300	14.090	Govt. Gochar	DLC
Bantalpada		119	0.750	Govt. Gochar	DLC
Bantalpada		120	0.380	Govt. Gochar	DLC
		Total	**15.220**		
Bhanjabati	105	281	11.960	Govt. Gochar	DLC
Bhanjabati		235	0.400	Govt. Gochar	DLC
		Total	**12.360**		
Barpada	185	280	0.040	Govt. Gochar	DLC
Barpada		192	3.420	Govt. Gochar	DLC
Barpada		467	5.430	Govt. Gochar	DLC
		Total	**8.890**		
Gajodidamodarpur	224	723	8.870	Govt.	DLC
Gajodidamodarpur		731	1.130	Govt.	DLC
		Total	**10.000**		
Guhaldihi	166	620	14.060	Govt.	DLC
Guhaldihi		624	4.200	Govt.	DLC
Guhaldihi	166	616	9.000	Govt.	DLC
		1863		Govt.	DLC
		Total	**27.260**		
Itamundia	4	296	3.750	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	68	348	1.000	Private (Cashewnut Plantation made by S.C)	DLC

Itamundia	62	308	2.350	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		307	0.360	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		783	0.500	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	223	300	0.070	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		301	1.430	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		302	0.030	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	76	238	1.060	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		326	0.830	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	52	322	0.340	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		324	1.310	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	215	323	1.550	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	186	329	0.150	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	225	544	1.040	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	123	387	0.240	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		439	0.310	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		548	0.100	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		620	0.420	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		623	0.220	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		629	0.330	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		633	0.320	Private (Cashewnut Plantation made by S.C)	DLC

Itamundia		637	0.010	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		339	0.750	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	133	341	1.920	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		482	0.300	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		342	0.370	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		565	0.020	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		531	0.290	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		632	0.340	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		638	0.100	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		549	0.090	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	112	21	0.510	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		22	0.230	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		23	0.020	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	67	56	0.310	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		64	0.340	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	212	246	3.170	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		136	1.500	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		218	0.290	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	131	130	0.100	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	136	12	1.030	Private (Cashewnut Plantation made by S.C)	DLC

Itamundia		8	0.880	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	88	32	0.320	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		26/1383	0.160	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	27	24	0.980	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	192	33	0.850	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	95	13	0.340	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		15	0.400	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	10	25	1.280	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	117	47	0.910	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	195	202	0.520	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		220	0.130	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	137	225	2.110	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		235	0.940	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	20	233	0.250	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		45	1.360	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		226	1.550	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		227	0.070	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	80	989	0.080	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		990	0.450	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia	157	1111	0.300	Private (Cashewnut Plantation made by S.C)	DLC

Itamundia	25	145	1.000	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		155	0.020	Private (Cashewnut Plantation made by S.C)	DLC
Itamundia		221	0.400	Private (Cashewnut Plantation made by S.C)	DLC
		Total	**44.700**		
Kamalasole	NA	NA	16.120	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole	459	2077	1.070	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		2081	1.960	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3213	1.360	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3214	0.570	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3197	0.640	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3198	1.500	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3196	0.850	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3216	1.230	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3215	1.050	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		2073	1.450	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		2075	1.200	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		2076	0.910	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		2082	0.490	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		1805	1.020	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		1806	0.470	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3274	0.870	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3278	0.210	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3279	0.550	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3286	0.700	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3281	0.480	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole		3289	0.670	Govt. (SFP Fire Wood Plantation)	DLC
Kamalasole	456	2074		Govt.	DLC
Kamalasole		1812		Govt.	DLC
Kamalasole		1811		Govt.	DLC
Kamalasole		1810		Govt.	DLC

Kamalasole		3283		Govt.	DLC
Kamalasole		3284		Govt.	DLC
Kamalasole		3285		Govt.	DLC
Kamalasole		3286		Govt.	DLC
Kamalasole		3287		Govt.	DLC
Kamalasole		3234		Govt.	DLC
Kamalasole		3235		Govt.	DLC
Kamalasole		3225	2.980	Govt.	DLC
Kamalasole		626		Govt.	DLC
Kamalasole		963		Govt.	DLC
Kamalasole		994		Govt.	DLC
Kamalasole		993		Govt.	DLC
Kamalasole		995		Govt.	DLC
Kamalasole		997		Govt.	DLC
Kamalasole		3275		Govt.	DLC
Kamalasole		3276		Govt.	DLC
Kamalasole		3277		Govt.	DLC
Kamalasole		3282		Govt.	DLC
Kamalasole	457	2086		Govt.	DLC
Kamalasole		2087		Govt.	DLC
Kamalasole		2085		Govt.	DLC
Kamalasole		2084		Govt.	DLC
Kamalasole		2083		Govt.	DLC
Kamalasole		1815	3.550	Govt.	DLC
Kamalasole		1816		Govt.	DLC
Kamalasole		1817		Govt.	DLC
Kamalasole		662		Govt.	DLC
Kamalasole		625		Govt.	DLC
Kamalasole		624		Govt.	DLC
Kamalasole	459	2079		Govt.	DLC
Kamalasole		2081		Govt.	DLC
Kamalasole		3213		Govt.	DLC
Kamalasole		3214		Govt.	DLC
Kamalasole		3197		Govt.	DLC
Kamalasole		3198		Govt.	DLC
Kamalasole		3196		Govt.	DLC
Kamalasole		3216		Govt.	DLC
Kamalasole		3215		Govt.	DLC
Kamalasole		2073		Govt.	DLC
Kamalasole		275	7.790	Govt.	DLC
Kamalasole		2076		Govt.	DLC
Kamalasole		2082		Govt.	DLC
Kamalasole		1805		Govt.	DLC
Kamalasole		1806		Govt.	DLC
Kamalasole		3294		Govt.	DLC
Kamalasole		3278		Govt.	DLC
Kamalasole		3279		Govt.	DLC
Kamalasole		3280		Govt.	DLC
Kamalasole		3281		Govt.	DLC
Kamalasole		3289		Govt.	DLC

Kamalasole		**Total**	**49.690**		
Patpur	129	463	3.700	Govt.	DLC
Patpur	127	340	2.500	Govt.	DLC
		Total	**6.200**		
Rangadiha	88	224	3.290	Govt.	DLC
Rangadiha	88	236	6.000	Govt.	DLC
		261		Govt.	DLC
		Total	**9.290**		
Khuntapal	197	1589	7.860	Govt.	DLC
		Total	**7.860**		
Chhelia (B)	295	1030	4.000	Govt.	DLC
Chhelia (B)		1034		Govt.	DLC
Chhelia (B)		1032		Govt.	DLC
		Total	**4.000**		
Belpal	289	694	3.500	Govt.	DLC
		Total	**3.500**		
Chhelia (A) Bidyadharpur	126	1	7.000	Govt.	DLC
Chhelia (A) Bidyadharpur		3		Govt.	DLC
Chhelia (A) Bidyadharpur		5		Govt.	DLC
		Total	**7.000**		
Dangira	188	862	4.800	Govt.	DLC
Dangira		863		Govt.	DLC
Dangira		865		Govt.	DLC
Dangira		868		Govt.	DLC
		Total	**4.800**		
Khanua	761 & 762	788	19.350	Govt.	DLC
Khanua		842		Govt.	DLC
Khanua		789		Govt.	DLC
Khanua		848		Govt.	DLC
Khanua		846		Govt.	DLC
Khanua		2587		Govt.	DLC
Khanua		1352		Govt.	DLC
Khanua		2047		Govt.	DLC
Khanua		2021		Govt.	DLC
		Total	**19.350**		
Ambadali	178	1884	10.450	Govt.	DLC
Ambadali		1866		Govt.	DLC
		Total	**10.450**		
Jalghera	191 & 192	846	9.620	Govt.	DLC
Jalghera		84		Govt.	DLC
Jalghera		862		Govt.	DLC
Jalghera		1041		Govt.	DLC
Jalghera		815		Govt.	DLC
		Total	**9.620**		
		TAHASIL TOTAL	**307.510**	**ACRE**	
			124.45	**HECTAR**	

DLC FOREST AREA OF BARIPADA TAHASIL

DISTICT - MAYURBHANJA , TAHASIL - BARIPADA

MOUJA	KHATA NO	PLOT NO	AREA	OWNERSHIP	STATUS
Kuladahoni	209	NA	25.000	Govt.	DLC
		Total	**25.000**		
Kantisahi	177	NA	20.000	Govt.	DLC
		Total	**20.000**		
Nedasole	67	NA	12.000	Govt.	DLC
		Total	**12.000**		
Rathasole	53	NA	13.990	Govt.	DLC
		Total	**13.990**		
Tungasole	16	NA	5.620	Govt.	DLC
		Total	**5.620**		
San Nuagaon	102	NA	6.240	Govt.	DLC
		Total	**6.240**		
Srichandanpur	34	NA	0.340	Private (Cashewnut Plantation made by S.C)	DLC
Srichandanpur	13	NA	5.960	Private (Cashewnut Plantation made by S.C)	DLC
		Total	**6.300**		
Kothabilla	66	NA	29.280	Govt.	DLC
Kothabilla	30	NA		Govt.	DLC
Kothabilla	148	NA		Govt.	DLC
Kothabilla	89	NA		Govt.	DLC
		Total	**29.280**		
Sankhabhanga	62	505	11.690	Govt.	DLC
		Total	**11.690**		
		TAHASIL TOTAL	**130.120**	**ACRE**	
			52.66	**HECTAR**	

DLC FOREST AREA OF RASGOBINDPUR TAHASIL

DISTICT - MAYURBHANJA , TAHASIL - RASGOBINDPUR

MOUJA	KHATA NO	PLOT NO	AREA	OWNERSHIP	STATUS
Ambadiha	29	273	0.33	Private	DLC
Ambadiha	48	274	0.22	Private	DLC
Ambadiha	29	275	0.24	Private	DLC
Ambadiha	29	276	0.14	Private	DLC
Ambadiha	63	267	0.21	Private	DLC
Ambadiha	12	271	0.54	Private	DLC
Ambadiha	44	272	0.47	Private	DLC
Ambadiha	8	238	0.34	Private	DLC
Ambadiha	40	237	0.56	Private	DLC
Ambadiha	55	239	0.39	Private	DLC
Ambadiha	48	236	0.14	Private	DLC
Ambadiha	45	235	0.17	Private	DLC
Ambadiha	7	234	0.40	Private	DLC
Ambadiha	34	240	0.23	Private	DLC
Ambadiha	37	241	0.30	Private	DLC
Ambadiha	59	242	0.47	Private	DLC
Ambadiha	60	243	0.52	Private	DLC

Ambadiha	10	244	0.66	Private	DLC
Ambadiha	34	247	0.24	Private	DLC
Ambadiha	37	246	0.15	Private	DLC
Ambadiha	63	268	0.05	Private	DLC
Ambadiha	42	269	0.02	Private	DLC
Ambadiha	12	270	0.02	Private	DLC
Ambadiha	30	563	0.04	Private	DLC
Ambadiha	12	228	0.20	Private	DLC
Ambadiha	30	229	0.12	Private	DLC
Ambadiha	8	230	0.31	Private	DLC
Ambadiha	42	227	0.08	Private	DLC
Ambadiha	63	226	0.09	Private	DLC
Ambadiha	44	225	0.23	Private	DLC
Ambadiha	59	224	0.09	Private	DLC
Ambadiha	34	231	0.19	Private	DLC
Ambadiha	37	232	0.21	Private	DLC
Ambadiha	49	233	0.30	Private	DLC
Ambadiha	75	467	0.19	Govt.	DLC
Ambadiha	27	466	0.07	Private	DLC
Ambadiha	75	455	0.23	Govt.	DLC
Ambadiha	67	456	0.18	Private	DLC
Ambadiha	75	457	0.06	Govt.	DLC
Ambadiha	67	458	0.30	Private	DLC
Ambadiha	75	459	0.21	Govt.	DLC
Ambadiha	27	449	0.47	Private	DLC
Ambadiha	17	450	0.48	Private	DLC
Ambadiha	15	445	1.16	Private	DLC
Ambadiha	67	95	0.88	Private	DLC
Ambadiha	49	96	1.13	Private	DLC
Ambadiha	27	118	0.23	Private	DLC
Ambadiha	14	119	0.21	Private	DLC
Ambadiha	62	120	0.17	Private	DLC
Ambadiha	66	444	0.65	Private	DLC
Ambadiha	58	454	0.66	Private	DLC
Ambadiha	27	441	0.25	Private	DLC
Ambadiha	27	442	0.40	Private	DLC
Ambadiha	66	443	0.45	Private	DLC
Ambadiha	67	453	0.23	Private	DLC
Ambadiha	67	452	0.54	Private	DLC
Ambadiha	37	451	0.27	Private	DLC
		Total	**18.09**		
Astia	10	172	0.16	Private	DLC
Astia	70	173	0.11	Private	DLC
Astia	82	174	0.37	Private	DLC
Astia	82	175	1.01	Private	DLC
Astia	67	177	2.79	Private	DLC
Astia	64	178	2.89	Private	DLC
Astia	71	179	0.49	Private	DLC
Astia	82	180	0.81	Private	DLC
Astia	82	181	0.96	Private	DLC

Astia	64	182	0.69	Private	DLC
Astia	94	183	1.98	Private	DLC
Astia	67	184	0.66	Private	DLC
Astia	64	185	0.84	Private	DLC
Astia	10	187	0.47	Private	DLC
Astia	10	188	0.35	Private	DLC
Astia	10	192	0.62	Private	DLC
Astia	87	193	0.51	Private	DLC
Astia	62	194	0.92	Private	DLC
Astia	82	118	0.81	Private	DLC
Astia	18	119	0.47	Private	DLC
Astia	3	120	0.71	Private	DLC
Astia	43	121	0.29	Private	DLC
Astia	80	122	0.48	Private	DLC
Astia	6	126	0.73	Private	DLC
Astia	51	135	0.80	Private	DLC
Astia	51	142	0.20	Private	DLC
Astia	1	143	0.60	Private	DLC
Astia	37	144	0.35	Private	DLC
Astia	85	145	1.07	Private	DLC
Astia	67	146	0.72	Private	DLC
Astia	64	147	0.45	Private	DLC
Astia	64	148	0.54	Private	DLC
Astia	108	136	0.38	Private	DLC
Astia	108	137	0.25	Private	DLC
Astia	108	138	0.62	Private	DLC
Astia	108	134	0.97	Private	DLC
Astia	64	151	0.12	Private	DLC
Astia	70	152	0.11	Private	DLC
Astia	82	153	0.23	Private	DLC
Astia	85	154	0.19	Private	DLC
Astia	105	155	0.28	Private	DLC
Astia	93	161	1.53	Private	DLC
Astia	65	156	0.47	Private	DLC
Astia	31	157	0.27	Private	DLC
Astia	65	158	0.23	Private	DLC
Astia	20	159	0.76	Private	DLC
Astia	31	166	0.87	Private	DLC
Astia	64	169	0.91	Private	DLC
Astia	82	163	0.15	Private	DLC
Astia	71	164	0.12	Private	DLC
Astia	71	165	0.20	Private	DLC
Astia	61	1259	1.23	Private	DLC
Astia	23	1263	0.69	Private	DLC
Astia	270	1265	1.09	Private	DLC
Astia	307/13	1266	0.75	Private	DLC
Astia	135	1267	2.41	Private	DLC
Astia	78	1268	1.66	Private	DLC
Astia	251	1269	2.45	Private	DLC
Astia	281	1270	0.72	Private	DLC

Astia	16	1271	1.32	Private	DLC
Astia	211	1272	2.17	Private	DLC
Astia	178	1273	1.73	Private	DLC
Astia	71	1274	1.05	Private	DLC
Astia	17	1275	2.40	Private	DLC
Astia	17	1276	0.87	Private	DLC
Astia	147	1277	0.93	Private	DLC
Astia	232	1278	0.75	Private	DLC
Astia	211	1279	1.76	Private	DLC
Astia	166	1280	0.78	Private	DLC
Astia	142	1281	1.05	Private	DLC
Astia	54	1283	0.65	Private	DLC
Astia	54	1284	1.30	Private	DLC
Astia	290	1288	5.44	Private	DLC
Astia	23	1289	0.83	Private	DLC
Astia	276	1290	1.34	Private	DLC
Astia	273	1292	1.57	Private	DLC
Astia	23	1293	0.73	Private	DLC
Astia	219	1294	0.68	Private	DLC
Astia	232	1295	0.92	Private	DLC
Astia	159	1296	1.63	Private	DLC
Astia	286	1297	0.54	Private	DLC
Astia	286	1298	0.33	Private	DLC
Astia	155	1299	0.46	Private	DLC
Astia	155	1300	0.69	Private	DLC
Astia	290	1302	0.49	Private	DLC
Astia	107	1303	1.47	Private	DLC
Astia	232	1304	1.05	Private	DLC
Astia	218	1305	1.04	Private	DLC
Astia	10	1553	0.72	Private	DLC
Astia	172	1554	0.82	Private	DLC
		Total	**82.02**		
Badarpur	454	1598	4.00	Govt.	DLC
		Total	**4.00**		
Baghasahi	95	617	0.43	Private	DLC
Baghasahi	94	616	0.73	Private	DLC
Baghasahi	61	618	0.08	Private	DLC
Baghasahi	60	619	0.52	Private	DLC
Baghasahi	94	613	0.83	Private	DLC
Baghasahi	95	614	0.33	Private	DLC
Baghasahi	7	611	0.67	Private	DLC
Baghasahi	7	604	0.55	Private	DLC
Baghasahi	22	603	0.28	Private	DLC
Baghasahi	84	602	0.13	Private	DLC
Baghasahi	10	595	0.30	Private	DLC
Baghasahi	24	596	0.24	Private	DLC
Baghasahi	20	597	0.24	Private	DLC
Baghasahi	7	222	0.33	Private	DLC
Baghasahi	41	223	1.87	Private	DLC
Baghasahi	52	594	0.59	Private	DLC

Baghasahi	62	593	0.51	Private	DLC
Baghasahi	24	591	0.59	Private	DLC
Baghasahi	8	599	0.39	Private	DLC
Baghasahi	77	592	0.78	Private	DLC
Baghasahi	46	598	0.15	Private	DLC
Baghasahi	19	600	0.26	Private	DLC
Baghasahi	77	601	0.11	Private	DLC
Baghasahi	24	590	0.13	Private	DLC
Baghasahi	8	589	0.17	Private	DLC
Baghasahi	46	588	0.36	Private	DLC
Baghasahi	77	586	0.43	Private	DLC
Baghasahi	87	606	0.24	Private	DLC
Baghasahi	20	605	0.58	Private	DLC
Baghasahi	81	585	0.64	Private	DLC
Baghasahi	94	609	0.47	Private	DLC
Baghasahi	87	608	0.32	Private	DLC
Baghasahi	70	607	0.46	Private	DLC
Baghasahi	70	568	0.37	Private	DLC
Baghasahi	47	545	0.42	Private	DLC
Baghasahi	78	547	0.21	Private	DLC
Baghasahi	94	546	0.15	Private	DLC
Baghasahi	87	548	0.14	Private	DLC
Baghasahi	84	534	0.28	Private	DLC
Baghasahi	87	550	0.21	Private	DLC
Baghasahi	78	551	0.13	Private	DLC
Baghasahi	94	552	0.54	Private	DLC
Baghasahi	52	553	0.33	Private	DLC
Baghasahi	47	554	0.85	Private	DLC
Baghasahi	7	555	0.58	Private	DLC
Baghasahi	94	557	0.59	Private	DLC
		Total	**19.51**		
Bhaliapada	3	1	0.57	Private	DLC
Bhaliapada	37	2	0.36	Private	DLC
Bhaliapada	2	3	1.25	Private	DLC
Bhaliapada	64	4	0.60	Private	DLC
Bhaliapada	3	5	0.77	Private	DLC
Bhaliapada	38	6	0.79	Private	DLC
Bhaliapada	58	7	0.62	Private	DLC
Bhaliapada	83	8	1.07	Private	DLC
Bhaliapada	46	9	0.59	Private	DLC
Bhaliapada	44	10	1.17	Private	DLC
Bhaliapada	19	11	0.74	Private	DLC
Bhaliapada	27	12	0.38	Private	DLC
Bhaliapada	6	13	0.42	Private	DLC
Bhaliapada	47	14	0.27	Private	DLC
Bhaliapada	47	15	0.29	Private	DLC
Bhaliapada	39	16	0.41	Private	DLC
Bhaliapada	66	17	0.34	Private	DLC
Bhaliapada	89	18	0.24	Private	DLC
Bhaliapada	39	19	0.19	Private	DLC

Bhaliapada	68	20	0.49	Private	DLC
Bhaliapada	8	21	0.59	Private	DLC
Bhaliapada	39	22	0.42	Private	DLC
Bhaliapada	30	23	1.40	Private	DLC
Bhaliapada	18	28	0.24	Private	DLC
Bhaliapada	32	29	0.43	Private	DLC
Bhaliapada	46	30	0.47	Private	DLC
Bhaliapada	22	32	0.68	Private	DLC
Bhaliapada	64	33	0.28	Private	DLC
Bhaliapada	72	34	0.34	Private	DLC
Bhaliapada	95	39	0.20	Private	DLC
Bhaliapada	2	35	0.36	Govt.	DLC
Bhaliapada	64	36	0.36	Private	DLC
Bhaliapada	3	37	0.40	Private	DLC
Bhaliapada	13	38	0.85	Private	DLC
Bhaliapada	67	198	0.24	Private	DLC
Bhaliapada	9	199	0.40	Private	DLC
Bhaliapada	53	514	0.18	Private	DLC
Bhaliapada	46	201	0.21	Private	DLC
Bhaliapada	53	202	0.42	Private	DLC
Bhaliapada	86	203	0.79	Private	DLC
Bhaliapada	67	204	0.57	Private	DLC
Bhaliapada	55	217	0.66	Private	DLC
Bhaliapada	22	218	0.30	Private	DLC
Bhaliapada	58	219	0.34	Private	DLC
Bhaliapada	52	220	0.48	Private	DLC
Bhaliapada	95	221	0.87	Private	DLC
Bhaliapada	85	222	0.40	Govt.	DLC
Bhaliapada	85	223	0.45	Private	DLC
Bhaliapada	6	224	0.30	Private	DLC
Bhaliapada	86	225	0.17	Private	DLC
Bhaliapada	86	226	0.52	Private	DLC
Bhaliapada	95	476	0.99	Private	DLC
Bhaliapada	55	780	0.58	Govt.	DLC
Bhaliapada	51	779	0.57	Private	DLC
Bhaliapada	23	785	0.75	Private	DLC
Bhaliapada	87	787	0.92	Private	DLC
Bhaliapada	88	788	0.81	Private	DLC
Bhaliapada	146	789	0.45	Private	DLC
Bhaliapada	57	792	0.24	Private	DLC
Bhaliapada	146	793	1.16	Private	DLC
Bhaliapada	3	795	0.60	Private	DLC
Bhaliapada	21	778	0.26	Private	DLC
Bhaliapada	58	796	0.24	Private	DLC
Bhaliapada	129	797	0.80	Private	DLC
Bhaliapada	68	798	0.36	Private	DLC
Bhaliapada	8	799	0.36	Private	DLC
Bhaliapada	8	800	1.36	Private	DLC
Bhaliapada	146	810	0.73	Private	DLC
Bhaliapada	139	791	0.63	Private	DLC

Bhaliapada	46	811	0.41	Private	DLC
Bhaliapada	54	812	0.44	Private	DLC
Bhaliapada	146	790	0.32	Private	DLC
Bhaliapada	46	813	0.36	Private	DLC
Bhaliapada	21	814	0.36	Private	DLC
Bhaliapada	129	815	0.43	Private	DLC
Bhaliapada	146	818	1.45	Private	DLC
Bhaliapada	54	812	0.41	Private	DLC
Bhaliapada	86	816	0.66	Private	DLC
		Total	**42.53**		
Bharadasul	43	46	0.22	Private	DLC
Bharadasul	24	45	0.76	Private	DLC
Bharadasul	14	44	0.07	Private	DLC
Bharadasul	14	4	1.23	Private	DLC
Bharadasul	23	7	0.11	Private	DLC
Bharadasul	23	8	0.77	Private	DLC
Bharadasul	23	40	0.06	Private	DLC
Bharadasul	59	41	0.09	Private	DLC
Bharadasul	43	94	0.24	Private	DLC
Bharadasul	29	96	0.51	Private	DLC
Bharadasul	32	90	1.07	Private	DLC
Bharadasul	16	88	0.74	Private	DLC
Bharadasul	24	85	0.78	Private	DLC
Bharadasul	25	86	0.05	Private	DLC
Bharadasul	25	87	0.01	Private	DLC
Bharadasul	16	145	0.33	Private	DLC
Bharadasul	13	146	0.64	Private	DLC
Bharadasul	31	147	0.42	Private	DLC
Bharadasul	29	83	0.63	Private	DLC
Bharadasul	29	84	0.06	Private	DLC
Bharadasul	12	81	0.27	Private	DLC
Bharadasul	31	80	0.04	Private	DLC
Bharadasul	6	76	0.22	Private	DLC
Bharadasul	47	78	0.34	Private	DLC
Bharadasul	62	149	1.05	Private	DLC
Bharadasul	12	150	0.91	Private	DLC
Bharadasul	21	72	1.26	Private	DLC
Bharadasul	31	79	0.08	Private	DLC
Bharadasul	62/7	417	0.63	Private	DLC
		Total	**13.59**		
Chahulia	418	250	0.40	Govt. (SFS Plantation)	DLC
Chahulia		237	1.66	Govt. (SFS Plantation)	DLC
Chahulia		244	0.20	Govt. (SFS Plantation)	DLC
Chahulia		238	0.95	Govt. (SFS Plantation)	DLC
Chahulia		264	0.05	Govt. (SFS Plantation)	DLC
Chahulia		204	0.38	Govt. (SFS Plantation)	DLC

Chahulia		205	0.23	Govt. (SFS Plantation)	DLC
Chahulia		223	1.16	Govt. (SFS Plantation)	DLC
Chahulia		1788	3.15	Govt. (SFS Plantation)	DLC
		Total	**8.18**		
Kochiasul	115	468	0.18	Govt. (SFS Plantation)	DLC
Kochiasul		469	0.28	Govt. (SFS Plantation)	DLC
Kochiasul		444	2.02	Govt. (SFS Plantation)	DLC
Kochiasul		437	2.50	Govt. (SFS Plantation)	DLC
		Total	**4.98**		
Sarumula	41	805	0.49	Private	DLC
Sarumula	117	806	0.45	Private	DLC
Sarumula	57	807	0.32	Private	DLC
Sarumula	58	804	0.17	Private	DLC
Sarumula	58	808	0.40	Private	DLC
Sarumula	21	803	0.20	Private	DLC
Sarumula	91	809	0.20	Private	DLC
Sarumula	18	801	0.21	Private	DLC
Sarumula	129	802	0.21	Private	DLC
		Total	**2.65**		
Musamari	108	237	0.80	Private	DLC
Musamari	153/1	236	1.60	Private	DLC
Musamari	22	235	0.57	Private	DLC
Musamari	47	234	0.56	Private	DLC
Musamari	5	233	0.85	Private	DLC
Musamari	49	205	1.58	Private	DLC
Musamari	110	204	0.44	Private	DLC
Musamari	76	206	0.88	Private	DLC
Musamari	129	207	0.92	Private	DLC
Musamari	153	208	0.97	Private	DLC
Musamari	112	203	0.07	Private	DLC
Musamari	56	141	0.92	Private	DLC
Musamari	7	145	0.86	Private	DLC
Musamari	62	144	0.45	Private	DLC
Musamari	134	193	0.20	Private	DLC
Musamari	137	142	0.36	Private	DLC
Musamari	68	148	0.63	Private	DLC
Musamari	15	147	0.60	Private	DLC
Musamari	128	153	0.10	Private	DLC
Musamari	123	152	1.22	Private	DLC
Musamari	47	149	1.07	Private	DLC
Musamari	30	150	0.11	Private	DLC
Musamari	30	69	0.74	Private	DLC
Musamari	20	66	0.70	Private	DLC
Musamari	128	63	0.08	Private	DLC
Musamari	93	62	0.65	Private	DLC

Musamari	125	61	0.06	Private	DLC
Musamari	93	54	0.26	Private	DLC
Musamari	115	67	0.69	Private	DLC
Musamari	165	68	0.25	Govt.	DLC
Musamari	15	46	1.76	Private	DLC
		Total	**20.95**		
Podapada	7	455	0.05	Private	DLC
Podapada	9	456	0.16	Private	DLC
Podapada	14	457	0.21	Private	DLC
Podapada	34	458	0.24	Private	DLC
Podapada	15	459	0.71	Private	DLC
Podapada	5	460	0.39	Private	DLC
Podapada	20	461	0.35	Private	DLC
Podapada	61	462	0.31	Private	DLC
Podapada	32	463	0.27	Private	DLC
Podapada	1	464	0.37	Private	DLC
Podapada	34	465	0.50	Private	DLC
Podapada	9	466	0.56	Private	DLC
Podapada	20	467	0.29	Private	DLC
Podapada	7	468	0.40	Private	DLC
Podapada	1	469	0.23	Private	DLC
Podapada	7	470	0.10	Private	DLC
Podapada	11	471	0.35	Private	DLC
Podapada	16	472	0.28	Private	DLC
Podapada	58	473	0.32	Private	DLC
Podapada	12	474	0.67	Private	DLC
Podapada	58	475	0.36	Private	DLC
Podapada	7	476	0.30	Private	DLC
Podapada	39	478	0.15	Private	DLC
Podapada	48	479	0.03	Private	DLC
Podapada	1	480	0.14	Private	DLC
Podapada	2	481	0.17	Private	DLC
Podapada	43	482	0.16	Private	DLC
Podapada	45	483	0.04	Private	DLC
Podapada	10	484	0.16	Private	DLC
Podapada	61/3	485	0.14	Private	DLC
Podapada	51	486	0.04	Private	DLC
Podapada	54	487	0.32	Private	DLC
Podapada	7	566	0.46	Private	DLC
Podapada	2	565	0.58	Private	DLC
Podapada	7	561	0.32	Private	DLC
Podapada	34	562	0.49	Private	DLC
Podapada	16	560	0.45	Private	DLC
Podapada	28	665	0.21	Private	DLC
Podapada	43	549	0.25	Private	DLC
Podapada	28	664	0.20	Private	DLC
Podapada	39	548	0.20	Private	DLC
Podapada	4	547	0.64	Private	DLC
Podapada	48	533	0.15	Private	DLC
Podapada	48	534	0.15	Private	DLC

Podapada	48	535	0.20	Private	DLC
Podapada	51	492	0.71	Private	DLC
Podapada	28	662	0.20	Private	DLC
Podapada	39	531	0.21	Private	DLC
		Total	**14.19**		
Rangamatia	46	437	1.61	Private	DLC
Rangamatia	101	493	0.17	Private	DLC
Rangamatia	24	492	0.17	Private	DLC
Rangamatia	36	491	0.24	Private	DLC
Rangamatia	18	438	0.16	Private	DLC
Rangamatia	114	439	0.64	Private	DLC
Rangamatia	18	440	0.54	Private	DLC
Rangamatia	72	453	0.44	Private	DLC
Rangamatia	114/8	1349	0.29	Private	DLC
Rangamatia	3	448	0.69	Private	DLC
Rangamatia	118	460	0.38	Govt.	DLC
Rangamatia	118	461	0.30	Govt.	DLC
Rangamatia	32	462	0.46	Private	DLC
Rangamatia	31	457	0.77	Private	DLC
Rangamatia	58	464	1.74	Private	DLC
Rangamatia	36	555	1.53	Private	DLC
Rangamatia	118	459	0.56	Govt.	DLC
Rangamatia	72	453	0.44	Private	DLC
Rangamatia	36	484	0.24	Private	DLC
Rangamatia	36	489	0.29	Private	DLC
Rangamatia	36	487	0.08	Private	DLC
Rangamatia	36	488	0.10	Private	DLC
Rangamatia	50	490	0.34	Private	DLC
Rangamatia	50	454	0.32	Private	DLC
Rangamatia	61	1316	0.34	Private	DLC
Rangamatia	61	1315	0.33	Private	DLC
Rangamatia	24	421	1.43	Private	DLC
Rangamatia	114/11	431	0.47	Private	DLC
Rangamatia	36	1327	0.31	Private	DLC
Rangamatia	42	430	0.35	Private	DLC
Rangamatia	42	422	0.32	Private	DLC
Rangamatia	72	423	0.26	Private	DLC
Rangamatia	72	424	0.23	Private	DLC
Rangamatia	114/4	427	0.03	Private	DLC
Rangamatia	58	426	1.46	Private	DLC
Rangamatia	72	394	1.36	Private	DLC
Rangamatia	46	393	1.02	Private	DLC
Rangamatia	30	392	0.18	Private	DLC
Rangamatia	55	390	0.13	Private	DLC
Rangamatia	55	391	0.60	Private	DLC
Rangamatia	65	388	0.48	Private	DLC
Rangamatia	65	386	0.77	Private	DLC
Rangamatia	18	379	0.39	Private	DLC
Rangamatia	114	380	0.08	Private	DLC
Rangamatia	100	374	0.43	Private	DLC

Rangamatia	42	372	0.49	Private	DLC
Rangamatia	44	364	0.66	Private	DLC
Rangamatia	36	363	1.01	Private	DLC
Rangamatia	75	365	0.60	Private	DLC
Rangamatia	36	371	0.56	Private	DLC
Rangamatia	105	366	0.69	Private	DLC
Rangamatia	61	342	0.60	Private	DLC
Rangamatia	18	334	0.31	Private	DLC
Rangamatia	114	335	0.32	Private	DLC
Rangamatia	90	330	0.30	Private	DLC
Rangamatia	33	331	0.33	Private	DLC
Rangamatia	68	332	0.23	Private	DLC
Rangamatia	1	343	1.76	Private	DLC
Rangamatia	16	350	0.26	Private	DLC
Rangamatia	84	359	0.19	Private	DLC
Rangamatia	68	360	0.20	Private	DLC
Rangamatia	45	361	0.39	Private	DLC
Rangamatia	98	325	0.26	Private	DLC
Rangamatia	111	327	0.17	Private	DLC
Rangamatia	111	504	0.25	Private	DLC
Rangamatia	84	516	0.39	Private	DLC
Rangamatia	114	337	0.06	Private	DLC
Rangamatia	18	415	0.21	Private	DLC
Rangamatia	58	416	0.71	Private	DLC
Rangamatia	42	417	0.35	Private	DLC
Rangamatia	28	418	0.24	Private	DLC
Rangamatia	36	419	0.28	Private	DLC
Rangamatia	114	410	0.36	Private	DLC
Rangamatia	100	408	0.23	Private	DLC
Rangamatia	61	402	0.41	Private	DLC
Rangamatia	18	407	0.23	Private	DLC
Rangamatia	36	401	0.44	Private	DLC
Rangamatia	114	411	0.09	Private	DLC
		Total	**37.05**		
Takadida	108	39	0.40	Private	DLC
Takadida	23	35	0.20	Private	DLC
Takadida	108	17	0.13	Private	DLC
Takadida	77	18	0.66	Private	DLC
Takadida	57	21	0.25	Private	DLC
Takadida	9	20	0.35	Private	DLC
Takadida	120	22	0.18	Private	DLC
Takadida	118/7	23	0.20	Private	DLC
Takadida	58	24	0.09	Private	DLC
Takadida	40	25	0.08	Private	DLC
Takadida	34	26	0.92	Private	DLC
Takadida	53	27	0.25	Private	DLC
Takadida	88	28	0.15	Private	DLC
Takadida	48	29	0.70	Private	DLC
Takadida	10	30	0.17	Private	DLC
Takadida	61	31	0.74	Private	DLC

Takadida	85	635	0.40	Private	DLC
Takadida	61	47	0.55	Private	DLC
Takadida	94	46	0.14	Private	DLC
Takadida	48	44	0.16	Private	DLC
Takadida	88	32	0.61	Private	DLC
Takadida	48	33	0.89	Private	DLC
		Total	**8.22**		
Takadia	18	34	0.52	Private	DLC
Takadia	30	42	0.30	Private	DLC
Takadia	91	43	0.03	Private	DLC
Takadia	120	52	0.03	Private	DLC
Takadia	106	55	0.31	Private	DLC
Takadia	94	58	0.17	Private	DLC
Takadia	48	54	0.13	Private	DLC
		Total	**1.49**		
Mahulia	82	59	2.40	Private	DLC
Mahulia	53	58	0.20	Private	DLC
Mahulia	53	57	0.06	Private	DLC
Mahulia	44	60	0.58	Private	DLC
Mahulia	118	61	0.04	Private	DLC
Mahulia	68	62	1.33	Private	DLC
Mahulia	53	63	1.86	Private	DLC
Mahulia	80	64	0.52	Private	DLC
Mahulia	39	65	0.87	Private	DLC
Mahulia	10	56	1.15	Private	DLC
Mahulia	28	52	0.47	Private	DLC
Mahulia	22	55	0.29	Private	DLC
Mahulia	42	518	0.28	Private	DLC
Mahulia	100	50	1.80	Private	DLC
Mahulia	21	53	0.25	Private	DLC
Mahulia	4	54	0.35	Private	DLC
Mahulia	85	553	0.40	Private	DLC
Mahulia	85	41	0.36	Private	DLC
Mahulia	4	42	0.12	Private	DLC
Mahulia	21	43	0.05	Private	DLC
		Total	**13.38**		
Thengatandi	77	371	0.37	Private	DLC
Thengatandi	131	372	0.38	Private	DLC
Thengatandi	108	373	0.30	Private	DLC
Thengatandi	71	375	0.52	Private	DLC
Thengatandi	135	368	0.20	Private	DLC
Thengatandi	120	346	0.42	Private	DLC
Thengatandi	126	352	0.30	Private	DLC
Thengatandi	2	374	0.38	Private	DLC
Thengatandi	40	760	0.22	Private	DLC
Thengatandi	6	768	0.14	Private	DLC
Thengatandi	159	366	0.18	Private	DLC
Thengatandi	135	367	0.04	Private	DLC
Thengatandi	135	370	0.20	Private	DLC
Thengatandi	104	958	0.09	Private	DLC

Thengatandi	118	937	0.08	Private	DLC
Thengatandi	151	936	0.09	Private	DLC
Thengatandi	126	347	0.27	Private	DLC
Thengatandi	131	174	0.13	Private	DLC
Thengatandi	77	175	0.14	Private	DLC
Thengatandi	159	176	0.13	Private	DLC
Thengatandi	27	177	0.22	Private	DLC
Thengatandi	135	178	0.13	Private	DLC
Thengatandi	108	179	0.13	Private	DLC
Thengatandi	82	180	0.34	Private	DLC
		Total	**5.40**		
Ambagadia	25	352	0.05	Private	DLC
Ambagadia	30	354	0.13	Private	DLC
Ambagadia	19	30	0.30	Private	DLC
Ambagadia	13	35	0.04	Private	DLC
Ambagadia	13	52	0.41	Private	DLC
Ambagadia	13	58	0.32	Private	DLC
Ambagadia	58	59	0.15	Private	DLC
Ambagadia	23	345	0.15	Private	DLC
Ambagadia	10	4	0.15	Private	DLC
Ambagadia	56	51	1.03	Private	DLC
Ambagadia	55	130	0.35	Private	DLC
Ambagadia	46	260	0.14	Private	DLC
Ambagadia	30	262	0.06	Private	DLC
Ambagadia	30	263	0.23	Private	DLC
Ambagadia	46	264	0.12	Private	DLC
Ambagadia	25	265	0.22	Private	DLC
Ambagadia	57	266	0.42	Private	DLC
Ambagadia	57	267	0.22	Private	DLC
Ambagadia	24	268	0.14	Private	DLC
Ambagadia	69	255	0.15	Govt.	DLC
Ambagadia	70	256	8.44	Govt.	DLC
Ambagadia	70	257	0.07	Govt.	DLC
Ambagadia	72	258	0.27	Govt.	DLC
Ambagadia	57	259	0.49	Private	DLC
Ambagadia	24	273	0.39	Private	DLC
Ambagadia	70	272	2.60	Govt.	DLC
Ambagadia	40	321	0.72	Private	DLC
Ambagadia	60	329	0.10	Private	DLC
Ambagadia	46	330	0.07	Private	DLC
Ambagadia	68	331	0.12	Govt.	DLC
Ambagadia	68	332	0.07	Govt.	DLC
Ambagadia	24	338	0.18	Private	DLC
Ambagadia	57	339	0.10	Private	DLC
Ambagadia	71	340	0.78	Govt.	DLC
Ambagadia	70	341	0.10	Govt.	DLC
Ambagadia	72	343	0.50	Govt.	DLC
Ambagadia	25	344	0.05	Private	DLC
Ambagadia	23	345	0.15	Private	DLC
Ambagadia	57	350	0.10	Private	DLC

Ambagadia	30	351	0.07	Private	DLC
Ambagadia	52	349	0.13	Private	DLC
Ambagadia	25	352	0.12	Private	DLC
Ambagadia	60	353	0.11	Private	DLC
Ambagadia	30	354	0.13	Private	DLC
Ambagadia	61	355	0.20	Private	DLC
Ambagadia	52	356	0.08	Private	DLC
Ambagadia	40	357	0.09	Private	DLC
Ambagadia	57	358	0.07	Private	DLC
Ambagadia	46	359	0.06	Private	DLC
Ambagadia	47	360	0.10	Private	DLC
		Total	**21.24**		
Anua (Mango)	21	1616	1.78	Private	DLC
Anua (Mango)	106	1617	2.03	Private	DLC
Anua (Mango)	140	1618	1.18	Private	DLC
Anua (Mango)	238	1624	0.18	Private	DLC
Anua (Mango)	47	1625	0.66	Private	DLC
Anua (Mango)	237	1626	0.57	Private	DLC
Anua (Mango)	234	1627	1.79	Private	DLC
Anua (Mango)	270	1628	0.88	Private	DLC
Anua (Mango)	103	1629	2.67	Private	DLC
Anua (Mango)	92	1630	1.42	Private	DLC
Anua (Mango)	154	1631	4.36	Private	DLC
Anua (Mango)	162	1632	0.47	Private	DLC
Anua (Mango)	210	1633	2.50	Private	DLC
Anua (Mango)	90	1635	2.18	Private	DLC
Anua (Mango)	184	1636	1.84	Private	DLC
Anua (Mango)	39	1637	1.04	Private	DLC
Anua (Mango)	32	1638	1.66	Private	DLC
Anua (Mango)	152	1639	1.24	Private	DLC
Anua (Mango)	126	1640	1.18	Private	DLC
Anua (Mango)	218	1647	1.15	Private	DLC
Anua (Mango)	218	1648	1.15	Private	DLC
Anua (Mango)	283	1649	1.04	Private	DLC
Anua (Mango)	61	1650	1.05	Private	DLC
Anua (Mango)	146	1651	2.96	Private	DLC
Anua (Mango)	157	1652	0.83	Private	DLC
Anua (Mango)	214	1653	1.09	Private	DLC
Anua (Mango)	231	1654	1.12	Private	DLC
Anua (Mango)	76	1655	1.13	Private	DLC
Anua (Mango)	101	1657	1.77	Private	DLC
Anua (Mango)	17	1658	0.70	Private	DLC
		Total	**43.62**		
Anua (KûRê)	62	1424	5.29	Private	DLC
Anua (KûRê)	62	1427	0.42	Private	DLC
		Total	**5.71**		
Baunstata	8	86	2.00	Private	DLC
Baunstata		790	65.00	Private	DLC
Baunstata		986	15.00	Private	DLC
Baunstata		1524	32.00	Private	DLC

Baunstata		1749	46.50	Private	DLC
Baunstata		1772	5.50	Private	DLC
Baunstata		1997	2.00	Private	DLC
Baunstata		2080	16.50	Private	DLC
		Total	**184.50**		
Panchamania	84	558	11.00	Private	DLC
Panchamania		576	21.00	Private	DLC
Panchamania		637	33.50	Private	DLC
Panchamania		675	5.00	Private	DLC
Panchamania		674	2.00	Private	DLC
Panchamania		558	2.00	Private	DLC
		Total	**74.50**		
Majanadiha	135	1	16.00	Private	DLC
Majanadiha		589	11.50	Private	DLC
Majanadiha		603	15.00	Private	DLC
Majanadiha		1/842	20.00	Private	DLC
Majanadiha		1/843	15.50	Private	DLC
Majanadiha		1/844	17.00	Private	DLC
Majanadiha		603/845	14.00	Private	DLC
Majanadiha		601	7.00	Private	DLC
		Total	**116.00**		
Dhansole	25	217	51.00	Private	DLC
Dhansole		217/244	4.00	Private	DLC
		Total	**55.00**		
Khunta	64	12	8.00	Private	DLC
		Total	**8.00**		
Raghabpur	237	247	4.00	Govt.	DLC
Raghabpur		536	1.00	Govt.	DLC
		Total	**5.00**		
Gandagahali	76	84	0.32	Private	DLC
Gandagahali	42	85	0.20	Private	DLC
Gandagahali	70	86	0.45	Private	DLC
Gandagahali	44	87	0.50	Private	DLC
Gandagahali	33	102	0.47	Private	DLC
Gandagahali	71	103	0.34	Private	DLC
Gandagahali	34	104	0.85	Private	DLC
Gandagahali	119/12	105	0.52	Private	DLC
Gandagahali	18	106	0.27	Private	DLC
Gandagahali	18	107	0.38	Private	DLC
Gandagahali	67	108	0.20	Private	DLC
Gandagahali	67	109	0.23	Private	DLC
Gandagahali	67	110	0.17	Private	DLC
Gandagahali	60	111	0.88	Private	DLC
Gandagahali	113	112	0.53	Private	DLC
Gandagahali	111	113	0.38	Private	DLC
Gandagahali	85	115	0.95	Private	DLC
Gandagahali	35	116	1.05	Private	DLC
Gandagahali	125	117	0.14	Govt.	DLC
Gandagahali	15	118	0.12	Private	DLC
Gandagahali	10	120	0.57	Private	DLC

Gandagahali	13	121	0.61	Private	DLC
Gandagahali	6	122	0.55	Private	DLC
Gandagahali	19	123	1.23	Private	DLC
Gandagahali	111	174	0.14	Private	DLC
Gandagahali	113	175	0.14	Private	DLC
Gandagahali	85	176	0.28	Private	DLC
Gandagahali	93	177	0.72	Private	DLC
Gandagahali	21	189	0.15	Private	DLC
Gandagahali	21	190	0.30	Private	DLC
Gandagahali	21	191	0.16	Private	DLC
Gandagahali	64	192	0.70	Private	DLC
Gandagahali	24	194	1.70	Private	DLC
Gandagahali	24	195	1.20	Private	DLC
Gandagahali	16	196	0.30	Private	DLC
Gandagahali	57	197	0.26	Private	DLC
Gandagahali	97	312	0.26	Private	DLC
Gandagahali	97	313	0.06	Private	DLC
Gandagahali	125	214	0.20	Govt.	DLC
Gandagahali	111	216	0.07	Private	DLC
Gandagahali	113	217	0.09	Private	DLC
Gandagahali	85	218	0.15	Private	DLC
Gandagahali	125	225	0.11	Govt.	DLC
Gandagahali	94	226	0.06	Private	DLC
Gandagahali	97	232	0.05	Private	DLC
Gandagahali	97	233	0.12	Private	DLC
Gandagahali	97	234	0.60	Private	DLC
Gandagahali	97	235	0.08	Private	DLC
Gandagahali	39	240	0.22	Private	DLC
Gandagahali	110	700	1.02	Private	DLC
		Total	**21.05**		
Kapoi	190	75	3.60	Govt. , Rakshit Gochar, (SFS Plantation)	DLC
		Total	**3.60**		
Betnasia	35	211	2.20	Govt. , Rakshit Gochar, (SFS Plantation)	DLC
		Total	**2.20**		
Khuntapal	182	1063	0.40	Private	DLC
Khuntapal	8	740	0.10	Private	DLC
Khuntapal	219	791	0.64	Private	DLC
Khuntapal	74	792	0.25	Private	DLC
Khuntapal	219	790	0.48	Private	DLC
Khuntapal	54	800	0.26	Private	DLC
Khuntapal	111	797	0.42	Private	DLC
Khuntapal	137	799	0.21	Private	DLC
Khuntapal	8	798	0.61	Private	DLC
Khuntapal	64	814	0.27	Private	DLC
Khuntapal	188	815	0.14	Private	DLC
Khuntapal	193	817	0.19	Private	DLC
Khuntapal	8	818	0.82	Private	DLC

Khuntapal	83	825	0.06	Private	DLC
Khuntapal	83	826	0.05	Private	DLC
Khuntapal	83	827	0.18	Private	DLC
Khuntapal	83	828	0.15	Private	DLC
Khuntapal	98	830	0.20	Private	DLC
Khuntapal	234	824	0.92	Private	DLC
Khuntapal	3	821	0.90	Private	DLC
Khuntapal	234	831	0.90	Private	DLC
Khuntapal	124	1138	0.16	Private	DLC
Khuntapal	3	1144	0.46	Private	DLC
Khuntapal	238/13	1143	0.22	Private	DLC
Khuntapal	3	823	0.44	Private	DLC
Khuntapal	124	1142	0.35	Private	DLC
Khuntapal	3	1141	0.46	Private	DLC
Khuntapal	15	849	0.01	Private	DLC
Khuntapal	14	850	0.70	Private	DLC
Khuntapal	5	851	0.16	Private	DLC
Khuntapal	98	848	0.21	Private	DLC
Khuntapal	124	1140	0.30	Private	DLC
Khuntapal	97	1116	0.56	Private	DLC
Khuntapal	217	1117	1.04	Private	DLC
Khuntapal	98	855	1.29	Private	DLC
Khuntapal	8	856	2.70	Private	DLC
Khuntapal	105	854	0.06	Private	DLC
		Total	**17.27**		
Olidihi	87	367	1.20	Private	DLC
Olidihi	32	368	1.52	Private	DLC
Olidihi	35	369	1.69	Private	DLC
Olidihi	56	370	0.97	Private	DLC
Olidihi	98	371	1.08	Private	DLC
Olidihi	3	372	2.08	Private	DLC
Olidihi	44	374	0.39	Private	DLC
Olidihi	89	375	0.73	Private	DLC
Olidihi	87	376	1.18	Private	DLC
Olidihi	87	377	1.32	Private	DLC
Olidihi	91	378	0.98	Private	DLC
Olidihi	46	379	0.86	Private	DLC
Olidihi	16	380	1.10	Private	DLC
Olidihi	100/8	381	0.86	Private	DLC
Olidihi	19	382	1.89	Private	DLC
Olidihi	34	383	0.44	Private	DLC
Olidihi	89	384	0.34	Private	DLC
Olidihi	47	385	0.52	Private	DLC
Olidihi	100/12	386	1.54	Private	DLC
Olidihi	41	387	2.44	Private	DLC
Olidihi	100/4	388	2.46	Private	DLC
Olidihi	3	389	0.58	Private	DLC
Olidihi	4	390	0.65	Private	DLC
Olidihi	21	391	0.14	Private	DLC
Olidihi	72	392	0.93	Private	DLC

Olidihi	67	393	1.39	Private	DLC
Olidihi	17	394	1.62	Private	DLC
Olidihi	16	395	0.70	Private	DLC
Olidihi	88	396	0.54	Private	DLC
Olidihi	97	397	1.29	Private	DLC
Olidihi	69	398	0.40	Private	DLC
Olidihi	60	399	0.74	Private	DLC
Olidihi	37	401	1.34	Private	DLC
Olidihi	5	402	0.78	Private	DLC
Olidihi	71	403	0.63	Private	DLC
Olidihi	98	404	0.71	Private	DLC
Olidihi	56	405	0.77	Private	DLC
Olidihi	65	406	0.12	Private	DLC
Olidihi	97	407	1.29	Private	DLC
Olidihi	92	408	0.96	Private	DLC
Olidihi	91	409	1.13	Private	DLC
Olidihi	4	417	0.86	Private	DLC
Olidihi	3	418	0.79	Private	DLC
Olidihi	44	419	0.39	Private	DLC
		Total	**44.34**		
Sarasole	237	1221	1.87	Govt.	DLC
Sarasole		1222	2.60	Govt.	DLC
Sarasole		1218	1.45	Govt.	DLC
Sarasole		1217	0.58	Govt.	DLC
Sarasole		1215	0.37	Govt.	DLC
Sarasole		1214	1.74	Govt.	DLC
Sarasole		1232	1.70	Govt.	DLC
Sarasole		1220	1.44	Govt.	DLC
Sarasole		1219	1.83	Govt.	DLC
Sarasole		260	1.65	Govt.	DLC
Sarasole		262	1.50	Govt.	DLC
Sarasole		251	0.46	Govt.	DLC
Sarasole		257	0.18	Govt.	DLC
Sarasole		258	0.13	Govt.	DLC
Sarasole		259	0.71	Govt.	DLC
Sarasole		255	1.63	Govt.	DLC
Sarasole		261	1.24	Govt.	DLC
Sarasole		1223	0.32	Govt.	DLC
Sarasole		1224	0.46	Govt.	DLC
Sarasole		1230	0.69	Govt.	DLC
Sarasole		1227	0.41	Govt.	DLC
Sarasole		1228	0.32	Govt.	DLC
Sarasole		1229	0.33	Govt.	DLC
Sarasole		1203	0.69	Govt.	DLC
Sarasole		1202	0.55	Govt.	DLC
Sarasole		1231	0.82	Govt.	DLC
Sarasole		256	0.71	Govt.	DLC
Sarasole		1225	0.46	Govt.	DLC
Sarasole		1233	2.11	Govt.	DLC
Sarasole		1238	2.12	Govt.	DLC

Sarasole		1241	0.63	Govt.	DLC
Sarasole		1252	0.74	Govt.	DLC
		Total	**32.44**		
Valiagadia	59	1	3.00	Govt.	DLC
Valiagadia		189	3.50	Govt.	DLC
		Total	**6.50**		
Duarsuni	101	50	5.56	Govt.	DLC
Duarsuni		66	1.36	Govt.	DLC
		Total	**6.92**		
Jhatioda	295	24/1492	3.50	Govt.	DLC
		Total	**3.50**		
Gopinathpur	24/1	14	2.00	Govt.	DLC
Gopinathpur		16	1.95	Govt.	DLC
		Total	**3.95**		
		TAHASIL TOTAL	**951.57**	**ACRE**	
			385.10	**HECTAR**	

DLC FOREST AREA OF UDALA TAHASIL

DISTICT - MAYURBHANJA , TAHASIL - UDALA

MOUJA	KHATA NO	PLOT NO	AREA	OWNERSHIP	STATUS
Sudsudia		1253	0.14	Govt.	DLC
Sudsudia		1260	0.08	Govt.	DLC
Sudsudia		1261	0.05	Govt.	DLC
Sudsudia		1262	0.03	Govt.	DLC
Sudsudia		1265	0.04	Govt.	DLC
Sudsudia		1266	0.10	Govt.	DLC
Sudsudia		1267	0.01	Govt.	DLC
Sudsudia		1268	0.14	Govt.	DLC
Sudsudia		1270	0.46	Govt.	DLC
Sudsudia	499	1181	2.08	Govt.	DLC
Sudsudia		1185	0.64	Govt.	DLC
Sudsudia		1215	0.05	Govt.	DLC
Sudsudia		1218	0.23	Govt.	DLC
Sudsudia	146	1183	0.35	Private.	DLC
Sudsudia	24	1184	0.34	Private.	DLC
Sudsudia	14	1180	0.15	Private.	DLC
Sudsudia		1197	0.15	Private.	DLC
Sudsudia	216	1186	0.31	Private.	DLC
Sudsudia	223	1188	0.29	Private.	DLC
Sudsudia	4	1221	1.15	Private.	DLC
Sudsudia	27	1222	0.19	Private.	DLC
Sudsudia		1276	0.56	Private.	DLC
Sudsudia	16	1263	0.54	Private.	DLC
Sudsudia	31	1179	0.11	Private.	DLC
Sudsudia		1199	0.23	Private.	DLC
Sudsudia	34	1274	0.12	Private.	DLC
Sudsudia	69	1225	0.24	Private.	DLC
Sudsudia		1230	0.38	Private.	DLC
Sudsudia	75	1200	0.27	Private.	DLC
Sudsudia		1244	0.48	Private.	DLC
Sudsudia	89	1195	0.55	Private.	DLC

Sudsudia	104	1249	0.21	Private.	DLC
Sudsudia		1256	0.40	Private.	DLC
Sudsudia	106	1201	0.25	Private.	DLC
Sudsudia	111	1277	0.85	Private.	DLC
Sudsudia	121	1233	0.44	Private.	DLC
Sudsudia	122	1232	0.25	Private.	DLC
Sudsudia	141	1204	0.27	Private.	DLC
Sudsudia		1209	0.63	Private.	DLC
Sudsudia		1211	0.14	Private.	DLC
Sudsudia	145	1198	0.31	Private.	DLC
Sudsudia	146	1183	0.35	Private.	DLC
Sudsudia	171	1254	0.13	Private.	DLC
Sudsudia		1255	0.48	Private.	DLC
Sudsudia	183	1259	0.24	Private.	DLC
Sudsudia	185	1236	0.23	Private.	DLC
Sudsudia		1257	0.12	Private.	DLC
Sudsudia	186	1272	0.24	Private.	DLC
Sudsudia	208	1219	0.55	Private.	DLC
Sudsudia	216	1186	0.31	Private.	DLC
Sudsudia	223	1188	0.29	Private.	DLC
Sudsudia	228	1223	0.18	Private.	DLC
Sudsudia		1243	0.55	Private.	DLC
Sudsudia	233	1240	0.39	Private.	DLC
Sudsudia	261	1264	0.29	Private.	DLC
Sudsudia	278	1275	0.45	Private.	DLC
Sudsudia	283	1190	0.12	Private.	DLC
Sudsudia	301	1194	0.43	Private.	DLC
Sudsudia		1238	0.43	Private.	DLC
Sudsudia	308	1189	0.15	Private.	DLC
Sudsudia	496	1213	0.12	Govt.	DLC
Sudsudia		1214	0.21	Govt.	DLC
Sudsudia		1251	0.12	Govt.	DLC
Sudsudia		1252	0.05	Govt.	DLC
		Total	**20.64**		
Sansal	5	267	2.74	Private.	DLC
Sansal	11	271	0.18	Private.	DLC
Sansal	61	470	4.78	Private.	DLC
Sansal	67	272	0.17	Private.	DLC
Sansal	24	268	0.18	Private.	DLC
Sansal	117	270	0.18	Private.	DLC
Sansal	106	456	0.24	Private.	DLC
Sansal	133	273	1.00	Private.	DLC
Sansal	134	469	3.51	Private.	DLC
Sansal	155	465	1.87	Private.	DLC
Sansal		467	1.83	Private.	DLC
Sansal		457	1.46	Private.	DLC
		Total	**18.14**		
Kaptipada	852	1722	30.00	Govt.	DLC
		Total	**30.00**		
Janakpur	28	82	1.19	Private.	DLC

Janakpur		83	0.98	Private.	DLC
Janakpur		84	0.80	Private.	DLC
Janakpur		85	0.87	Private.	DLC
Janakpur		86	0.90	Private.	DLC
Janakpur		87	0.96	Private.	DLC
Janakpur		88	1.24	Private.	DLC
		Total	**6.94**		
Beldiha	268	357	1.20	Private.	DLC
Beldiha		358	3.20	Private.	DLC
Beldiha		310	0.63	Private.	DLC
Beldiha		311	0.30	Private.	DLC
Beldiha		305	0.53	Private.	DLC
Beldiha		306	2.08	Private.	DLC
Beldiha	407	312	0.50	Govt.	DLC
Beldiha	410	14	0.51	Govt.	DLC
Beldiha	290	307	0.97	Private.	DLC
		Total	**9.92**		
Jamdiha	9	2444	3.10	Private.	DLC
Jamdiha	3	2458	1.80	Private.	DLC
Jamdiha	201	2438	3.84	Private.	DLC
Jamdiha	172	2430	0.85	Private.	DLC
Jamdiha	220	2431	0.96	Govt.	DLC
Jamdiha	80	2432	3.08	Private.	DLC
Jamdiha	204	2433	1.52	Private.	DLC
Jamdiha	186	2434	1.46	Private.	DLC
Jamdiha	160	2435	1.04	Private.	DLC
Jamdiha	221	2436	0.97	Private.	DLC
Jamdiha	148	2437	1.02	Private.	DLC
Jamdiha	187	2425	2.40	Private.	DLC
Jamdiha	169	2445	0.52	Private.	DLC
Jamdiha	147	2446	4.04	Private.	DLC
Jamdiha	195	2447	1.73	Private.	DLC
Jamdiha	196	2448	0.30	Private.	DLC
Jamdiha	195	2449	0.84	Private.	DLC
Jamdiha	196	2450	0.36	Private.	DLC
Jamdiha	189	2455	1.56	Private.	DLC
Jamdiha	196	2456	0.88	Private.	DLC
Jamdiha	215	2457	0.69	Private.	DLC
Jamdiha	220	2459	0.16	Govt.	DLC
Jamdiha	80	2460	0.69	Private.	DLC
Jamdiha	204	2461	0.27	Private.	DLC
Jamdiha	186	2462	0.27	Private.	DLC
Jamdiha	134	2463	1.27	Private.	DLC
Jamdiha	44	2466	1.44	Private.	DLC
Jamdiha	146	2468	0.40	Private.	DLC
Jamdiha	117	2469	0.10	Private.	DLC
Jamdiha		2470	0.32	Private.	DLC
Jamdiha	220	2471	0.80	Govt.	DLC
Jamdiha	166	2479	7.00	Private.	DLC
Jamdiha	196	2478	0.49	Private.	DLC

		Total	**46.17**		
Jamdiha Hamlet (Satabass)	4	2052	0.12	Private.	DLC
Jamdiha Hamlet (Satabass)		2055	0.85	Private.	DLC
Jamdiha Hamlet (Satabass)	99	2056	0.54	Private.	DLC
Jamdiha Hamlet (Satabass)	4	2058	0.77	Private.	DLC
Jamdiha Hamlet (Satabass)	22	2068	1.20	Private.	DLC
Jamdiha Hamlet (Satabass)	200	2069	0.35	Private.	DLC
Jamdiha Hamlet (Satabass)	4	870	0.40	Private.	DLC
Jamdiha Hamlet (Satabass)	105	260	0.60	Private.	DLC
Jamdiha Hamlet (Satabass)	227	281	0.42	Private.	DLC
Jamdiha Hamlet (Satabass)	418	253	2.51	Private.	DLC
		Total	**7.76**		
Chandrapur	560	1019	2.04	Private.	DLC
Chandrapur		1020	0.15	Private.	DLC
Chandrapur	20	1021	0.59	Private.	DLC
Chandrapur	1014	1027	0.93	Private.	DLC
Chandrapur	20	4799	0.70	Private.	DLC
Chandrapur	423	1022	1.24	Private.	DLC
Chandrapur	680	1023	0.80	Private.	DLC
Chandrapur	168	1024	1.40	Private.	DLC
Chandrapur	560	1025	0.27	Private.	DLC
Chandrapur	559	1026	0.28	Private.	DLC
Chandrapur		891	3.45	Private.	DLC
Chandrapur	556	902	0.25	Private.	DLC
Chandrapur	560	931	2.20	Private.	DLC
Chandrapur	420	932	1.00	Private.	DLC
Chandrapur		933	2.10	Private.	DLC
Chandrapur	569	934	0.40	Private.	DLC
Chandrapur	181	948	0.42	Private.	DLC
Chandrapur	560	912	3.86	Private.	DLC
Chandrapur		913	0.46	Private.	DLC
Chandrapur	559	914	0.20	Private.	DLC
Chandrapur		915	0.18	Private.	DLC
Chandrapur	560	916	0.44	Private.	DLC
Chandrapur	559	917	0.69	Private.	DLC
Chandrapur		918	0.83	Private.	DLC
Chandrapur	560	919	0.50	Private.	DLC
Chandrapur		921	2.68	Private.	DLC
Chandrapur		922	0.55	Private.	DLC
Chandrapur		923	0.34	Private.	DLC
Chandrapur	559	920	0.08	Private.	DLC
Chandrapur		924	0.35	Private.	DLC
Chandrapur	856	925	0.12	Private.	DLC

Chandrapur		927	0.11	Private.	DLC
Chandrapur		928	1.34	Private.	DLC
Chandrapur		929	0.45	Private.	DLC
Chandrapur		930	0.13	Private.	DLC
Chandrapur		925	0.12	Govt.	DLC
		Total	**31.65**		
Manikpur	56	1652	0.88	Private.	DLC
Manikpur	23	1655	0.92	Private.	DLC
Manikpur	186	1663	0.50	Private.	DLC
Manikpur	127	1664	0.20	Private.	DLC
Manikpur		373	1.02	Private.	DLC
Manikpur	133	377	1.00	Private.	DLC
Manikpur	10	380	1.14	Private.	DLC
Manikpur	104	381	0.46	Private.	DLC
Manikpur	29	379	2.95	Private.	DLC
Manikpur	136	390	2.23	Private.	DLC
		Total	**11.30**		
Ghuntbani	105	1243	3.15	Private.	DLC
Ghuntbani	147	1244	0.87	Private.	DLC
Ghuntbani		1245	0.45	Private.	DLC
Ghuntbani	95	1246	0.55	Private.	DLC
Ghuntbani	96	1386	0.50	Private.	DLC
Ghuntbani	268	216	0.90	Govt.	DLC
Ghuntbani		217	0.80	Govt.	DLC
Ghuntbani		218	0.44	Govt.	DLC
Ghuntbani	260	207	1.01	Govt.	DLC
Ghuntbani		208	0.82	Govt.	DLC
Ghuntbani		210	0.99	Govt.	DLC
Ghuntbani		213	2.17	Govt.	DLC
Ghuntbani		214	1.67	Govt.	DLC
		Total	**14.32**		
Sialia (156)	123	375	0.43	Govt.	DLC
Sialia (156)		376	0.71	Govt.	DLC
Sialia (156)		377	0.56	Govt.	DLC
Sialia (156 A)		378	0.55	Govt.	DLC
Sialia (156)		379	0.65	Govt.	DLC
Sialia (156)		380	0.36	Govt.	DLC
Sialia (156)		381	0.36	Govt.	DLC
Sialia (156)		382	0.89	Govt.	DLC
Sialia (156)		383	0.58	Govt.	DLC
Sialia (156)		384	0.69	Govt.	DLC
Sialia (156)		385	0.30	Govt.	DLC
		Total	**6.08**		
Sialia (152) (B)	177	1160	2.30	Govt.	DLC
Sialia (152) (B)		1166	8.43	Govt.	DLC
		Total	**10.73**		
Balidiha	131	609	10.31	Govt.	DLC
Balidiha		683	0.33	Govt.	DLC
Balidiha		691	0.26	Govt.	DLC
Balidiha	128	692	0.36	Govt.	DLC

Balidiha	131	689	1.48	Govt.	DLC
Balidiha		539	2.08	Govt.	DLC
Balidiha		540	0.72	Govt.	DLC
Balidiha		541	0.22	Govt.	DLC
Balidiha		542	2.89	Govt.	DLC
Balidiha		543	1.13	Govt.	DLC
Balidiha		546	2.08	Govt.	DLC
Balidiha		548	0.93	Govt.	DLC
		Total	**22.79**		
Belijoda	246	1317	0.36	Govt.	DLC
Belijoda		1318	0.29	Govt.	DLC
Belijoda		1316	0.15	Govt.	DLC
Belijoda		1332	0.94	Govt.	DLC
Belijoda		1333	0.39	Govt.	DLC
Belijoda		1335	2.40	Govt.	DLC
Belijoda		1336	0.38	Govt.	DLC
Belijoda		1337	0.46	Govt.	DLC
Belijoda		1339	0.55	Govt.	DLC
Belijoda		1338	0.64	Govt.	DLC
Belijoda		1334	0.83	Govt.	DLC
Belijoda	243	1373	0.44	Govt.	DLC
		Total	**7.83**		
Atanati	15	377	0.10	Private.	DLC
Atanati		381	0.03	Private.	DLC
Atanati	18	373	0.35	Private.	DLC
Atanati	19	374	0.38	Private.	DLC
Atanati	24	305	0.77	Private.	DLC
Atanati	27	332	0.37	Private.	DLC
Atanati		338	1.13	Private.	DLC
Atanati	66	379	0.04	Private.	DLC
Atanati		384	0.05	Private.	DLC
Atanati	84	290	0.90	Private.	DLC
Atanati	96	372	0.43	Private.	DLC
Atanati	100	313	0.90	Private.	DLC
Atanati	108	289	0.76	Private.	DLC
Atanati	109	312	0.10	Private.	DLC
Atanati	111	311	0.95	Private.	DLC
Atanati		297	0.13	Private.	DLC
Atanati		296	0.76	Private.	DLC
Atanati		306	0.15	Private.	DLC
Atanati	114	378	0.03	Private.	DLC
Atanati		380	0.05	Private.	DLC
Atanati		383	0.03	Private.	DLC
Atanati	115	353	0.27	Private.	DLC
Atanati		354	0.27	Private.	DLC
Atanati		355	0.14	Private.	DLC
Atanati		356	0.11	Private.	DLC
Atanati		357	0.31	Private.	DLC
Atanati	117	382	0.03	Private.	DLC
Atanati	122	304	1.00	Private.	DLC

Atanati	132	288	0.31	Private.	DLC
Atanati	140	369	0.20	Private.	DLC
Atanati		370	0.13	Private.	DLC
Atanati		371	0.43	Private.	DLC
		Total	**11.61**		
Anandapur	102	271	0.31	Govt.	DLC
Anandapur		274	0.43	Govt.	DLC
Anandapur		279	0.26	Govt.	DLC
Anandapur		288	0.91	Govt.	DLC
Anandapur		310	0.22	Govt.	DLC
Anandapur	105	277	6.52	Govt.	DLC
Anandapur		289	0.64	Govt.	DLC
Anandapur		2016	0.77	Govt.	DLC
Anandapur		2017	0.202	Govt.	DLC
Anandapur		2051	0.98	Govt.	DLC
Anandapur		2052	1.54	Govt.	DLC
		Total	**12.78**		
Khaourdiha	135	124	14.37	Govt.	DLC
Khaourdiha		126	11.00	Govt.	DLC
Khaourdiha		127	5.00	Govt.	DLC
Khaourdiha		95	3.17	Govt.	DLC
Khaourdiha		343	3.66	Govt.	DLC
Khaourdiha		96	1.02	Govt.	DLC
Khaourdiha		346	1.13	Govt.	DLC
Khaourdiha		406	0.79	Govt.	DLC
		Total	**40.14**		
Murari	151	265	4.40	Govt.	DLC
Murari		26	1.60	Govt.	DLC
Murari		34	1.45	Govt.	DLC
Murari		19	0.94	Govt.	DLC
		Total	**8.39**		
Talakunda	91	68	7.81	Govt.	DLC
Talakunda		64/398	1.60	Govt.	DLC
Talakunda		120	1.30	Govt.	DLC
Talakunda		99	0.75	Govt.	DLC
		Total	**11.46**		
Kulbandha	100	398	12.81	Govt.	DLC
Kulbandha		359	3.43	Govt.	DLC
Kulbandha		361	3.57	Govt.	DLC
		Total	**19.81**		
Girish Ch. Pur	150	130	1.25	Govt.	DLC
Girish Ch. Pur		131	1.35	Govt.	DLC
Girish Ch. Pur		132	1.85	Govt.	DLC
Girish Ch. Pur		143	0.87	Govt.	DLC
Girish Ch. Pur		146	1.37	Govt.	DLC
Girish Ch. Pur		147	0.35	Govt.	DLC
Girish Ch. Pur		148	0.44	Govt.	DLC
Girish Ch. Pur		151	0.71	Govt.	DLC
Girish Ch. Pur		142	1.38	Govt.	DLC
Girish Ch. Pur		126	0.61	Govt.	DLC

Girish Ch. Pur		122	1.84	Govt.	DLC
		Total	**12.02**		
Satpautia	239	1432	0.44	Govt.	DLC
Satpautia		1433	0.42	Govt.	DLC
Satpautia		1434	0.42	Govt.	DLC
Satpautia		1435	0.34	Govt.	DLC
Satpautia		1436	0.39	Govt.	DLC
Satpautia		1439	0.40	Govt.	DLC
Satpautia		1440	0.33	Govt.	DLC
Satpautia		1443	0.30	Govt.	DLC
Satpautia		1444	0.29	Govt.	DLC
Satpautia		1447	0.41	Govt.	DLC
Satpautia		1448	0.33	Govt.	DLC
Satpautia		1451	0.40	Govt.	DLC
Satpautia		1452	0.29	Govt.	DLC
Satpautia		1455	0.34	Govt.	DLC
Satpautia		1456	0.32	Govt.	DLC
Satpautia		1459	0.08	Govt.	DLC
Satpautia		1560	0.09	Govt.	DLC
Satpautia		1463	0.12	Govt.	DLC
Satpautia		1464	0.17	Govt.	DLC
Satpautia		1467	0.24	Govt.	DLC
Satpautia		1490	0.17	Govt.	DLC
Satpautia		1491	0.13	Govt.	DLC
Satpautia		1492	0.15	Govt.	DLC
Satpautia		1493	0.21	Govt.	DLC
Satpautia		1494	0.23	Govt.	DLC
Satpautia		1495	0.18	Govt.	DLC
Satpautia		1496	0.16	Govt.	DLC
Satpautia		1497	0.17	Govt.	DLC
Satpautia		1498	0.12	Govt.	DLC
Satpautia		1499	0.21	Govt.	DLC
Satpautia		1500	0.22	Govt.	DLC
Satpautia		1501	0.27	Govt.	DLC
Satpautia		1502	0.37	Govt.	DLC
Satpautia		1503	0.25	Govt.	DLC
Satpautia		1504	0.25	Govt.	DLC
Satpautia		1505	0.26	Govt.	DLC
Satpautia		1257	0.48	Govt.	DLC
Satpautia		1259	0.28	Govt.	DLC
Satpautia		1260	0.33	Govt.	DLC
Satpautia		1262	0.55	Govt.	DLC
Satpautia		1263	0.40	Govt.	DLC
Satpautia		1265	0.50	Govt.	DLC
Satpautia		1266	0.74	Govt.	DLC
Satpautia		1268	0.31	Govt.	DLC
Satpautia		1269	0.14	Govt.	DLC
Satpautia		1271	0.70	Govt.	DLC
Satpautia		1272	0.61	Govt.	DLC
Satpautia		1274	0.23	Govt.	DLC

Satpautia		1275	0.12	Govt.	DLC
Satpautia		1277	0.42	Govt.	DLC
Satpautia		1278	0.13	Govt.	DLC
Satpautia		1280	0.04	Govt.	DLC
Satpautia		1281	0.08	Govt.	DLC
Satpautia		1283	0.04	Govt.	DLC
Satpautia		1289	0.36	Govt.	DLC
Satpautia		1299	0.23	Govt.	DLC
Satpautia		1300	0.11	Govt.	DLC
Satpautia		1300	0.92	Govt.	DLC
Satpautia		1302	0.45	Govt.	DLC
Satpautia		1303	0.47	Govt.	DLC
Satpautia		1304	0.20	Govt.	DLC
Satpautia		1305	0.26	Govt.	DLC
Satpautia	239	1306	0.29	Govt.	DLC
Satpautia		1307	0.75	Govt.	DLC
Satpautia		1308	0.70	Govt.	DLC
Satpautia		1309	0.40	Govt.	DLC
Satpautia		1311	0.57	Govt.	DLC
Satpautia		1312	0.73	Govt.	DLC
Satpautia		1313	0.66	Govt.	DLC
Satpautia		1314	0.69	Govt.	DLC
Satpautia		1315	0.73	Govt.	DLC
Satpautia		1316	0.65	Govt.	DLC
Satpautia		1317	0.50	Govt.	DLC
Satpautia		1318	0.54	Govt.	DLC
Satpautia		1319	0.55	Govt.	DLC
Satpautia		1322	0.42	Govt.	DLC
Satpautia		1325	0.49	Govt.	DLC
Satpautia		1326	0.32	Govt.	DLC
Satpautia		1327	0.29	Govt.	DLC
Satpautia		1328	0.33	Govt.	DLC
Satpautia		1329	0.32	Govt.	DLC
Satpautia		1330	0.09	Govt.	DLC
Satpautia		1331	0.10	Govt.	DLC
Satpautia		1333	0.25	Govt.	DLC
Satpautia		1334	0.22	Govt.	DLC
Satpautia		1335	0.42	Govt.	DLC
Satpautia		1336	0.21	Govt.	DLC
Satpautia		1337	0.57	Govt.	DLC
Satpautia		1338	0.11	Govt.	DLC
Satpautia		1339	0.48	Govt.	DLC
Satpautia		1340	0.47	Govt.	DLC
Satpautia		1341	0.52	Govt.	DLC
Satpautia		1342	0.53	Govt.	DLC
Satpautia		134	0.29	Govt.	DLC
Satpautia		1344	0.39	Govt.	DLC
Satpautia		1345	0.89	Govt.	DLC
Satpautia		1356	0.71	Govt.	DLC
Satpautia		1368	0.31	Govt.	DLC

Satpautia		1369	0.37	Govt.	DLC
Satpautia		1370	0.50	Govt.	DLC
Satpautia		1371	0.25	Govt.	DLC
Satpautia		1372	0.40	Govt.	DLC
Satpautia		1373	0.34	Govt.	DLC
Satpautia		1374	0.08	Govt.	DLC
Satpautia		1375	0.70	Govt.	DLC
Satpautia		1377	0.105	Govt.	DLC
Satpautia		1378	0.46	Govt.	DLC
Satpautia		1379	1.77	Govt.	DLC
Satpautia		1380	0.61	Govt.	DLC
Satpautia		1381	0.99	Govt.	DLC
Satpautia		1382	0.32	Govt.	DLC
Satpautia		941	0.40	Govt.	DLC
Satpautia		942	0.69	Govt.	DLC
Satpautia		943	0.17	Govt.	DLC
Satpautia		944	0.26	Govt.	DLC
Satpautia		945	0.30	Govt.	DLC
Satpautia		946	0.29	Govt.	DLC
Satpautia		947	0.32	Govt.	DLC
Satpautia		948	0.35	Govt.	DLC
Satpautia		949	0.48	Govt.	DLC
Satpautia		950	0.72	Govt.	DLC
Satpautia		951	0.43	Govt.	DLC
Satpautia		952	0.37	Govt.	DLC
Satpautia		953	0.41	Govt.	DLC
Satpautia		954	0.47	Govt.	DLC
Satpautia		959	0.62	Govt.	DLC
Satpautia		960	0.51	Govt.	DLC
Satpautia		961	0.39	Govt.	DLC
Satpautia		958	0.07	Govt.	DLC
Satpautia		962	0.27	Govt.	DLC
Satpautia		963	0.56	Govt.	DLC
Satpautia		964	0.55	Govt.	DLC
Satpautia		965	1.53	Govt.	DLC
Satpautia		1468	0.27	Govt.	DLC
Satpautia		1469	0.28	Govt.	DLC
Satpautia		1470	0.39	Govt.	DLC
Satpautia		1471	0.35	Govt.	DLC
Satpautia		1472	0.26	Govt.	DLC
Satpautia		1473	0.27	Govt.	DLC
Satpautia		1474	0.18	Govt.	DLC
Satpautia		1475	0.22	Govt.	DLC
Satpautia		1476	0.23	Govt.	DLC
Satpautia		1477	0.23	Govt.	DLC
Satpautia		1479	0.20	Govt.	DLC
Satpautia		1480	0.06	Govt.	DLC
Satpautia		1481	0.08	Govt.	DLC
Satpautia		1482	0.08	Govt.	DLC
Satpautia		1483	0.08	Govt.	DLC

Satpautia		1484	0.10	Govt.	DLC
Satpautia		1485	0.09	Govt.	DLC
Satpautia		1486	0.12	Govt.	DLC
Satpautia		1487	0.16	Govt.	DLC
Satpautia		1488	0.13	Govt.	DLC
Satpautia	242	177	0.97	Govt.	DLC
Satpautia		178	5.93	Govt.	DLC
Satpautia		179	0.26	Govt.	DLC
Satpautia		180	0.22	Govt.	DLC
Satpautia		181	0.23	Govt.	DLC
Satpautia		182	0.37	Govt.	DLC
Satpautia	239	122	0.11	Govt.	DLC
Satpautia		124	4.38	Govt.	DLC
Satpautia		118	0.71	Govt.	DLC
Satpautia		119	0.41	Govt.	DLC
Satpautia		121	0.25	Govt.	DLC
Satpautia		174	3.41	Govt.	DLC
Satpautia	242	38	2	Govt.	DLC
Satpautia		39	1.29	Govt.	DLC
Satpautia		40	1.80	Govt.	DLC
Satpautia		41	0.05	Govt.	DLC
Satpautia		44	0.31	Govt.	DLC
Satpautia		45	0.37	Govt.	DLC
Satpautia		47	0.11	Govt.	DLC
Satpautia		75	0.67	Govt.	DLC
Satpautia		114	1.71	Govt.	DLC
Satpautia		115	0.32	Govt.	DLC
Satpautia		130	0.20	Govt.	DLC
Satpautia	239	59	0.18	Govt.	DLC
Satpautia		60	0.21	Govt.	DLC
Satpautia		64	0.27	Govt.	DLC
Satpautia		65	0.34	Govt.	DLC
Satpautia		66	0.12	Govt.	DLC
Satpautia		67	0.22	Govt.	DLC
Satpautia		68	0.34	Govt.	DLC
Satpautia		69	0.40	Govt.	DLC
Satpautia		71	0.47	Govt.	DLC
Satpautia		72	0.27	Govt.	DLC
Satpautia		74	1.12	Govt.	DLC
Satpautia		76	0.47	Govt.	DLC
Satpautia		79	0.74	Govt.	DLC
Satpautia		1900	0.06	Govt.	DLC
Satpautia		1901	0.71	Govt.	DLC
Satpautia		1902	0.60	Govt.	DLC
Satpautia		1903	0.42	Govt.	DLC
Satpautia		1904	0.76	Govt.	DLC
Satpautia		1905	0.51	Govt.	DLC
Satpautia		1906	0.54	Govt.	DLC
Satpautia		1907	0.53	Govt.	DLC
Satpautia		1916	0.54	Govt.	DLC

Satpautia		1918	0.20	Govt.	DLC
Satpautia		1920	0.08	Govt.	DLC
Satpautia		1921	0.54	Govt.	DLC
Satpautia		1922	0.52	Govt.	DLC
Satpautia		1923	0.88	Govt.	DLC
Satpautia		1925	0.30	Govt.	DLC
Satpautia		1926	0.35	Govt.	DLC
Satpautia		1927	0.37	Govt.	DLC
Satpautia		1928	0.72	Govt.	DLC
Satpautia		1938	0.36	Govt.	DLC
Satpautia		1999	1.14	Govt.	DLC
Satpautia		2002	0.94	Govt.	DLC
Satpautia		2003	0.14	Govt.	DLC
Satpautia		2004	0.46	Govt.	DLC
Satpautia		2009	0.78	Govt.	DLC
Satpautia		2010	0.55	Govt.	DLC
Satpautia		2011	0.40	Govt.	DLC
Satpautia		2012	0.65	Govt.	DLC
Satpautia	239	79	0.74	Govt.	DLC
Satpautia		81	0.29	Govt.	DLC
Satpautia		84	0.88	Govt.	DLC
Satpautia		85	0.81	Govt.	DLC
Satpautia		87	0.28	Govt.	DLC
Satpautia		88	0.88	Govt.	DLC
Satpautia		89	0.18	Govt.	DLC
Satpautia		90	0.88	Govt.	DLC
Satpautia		91	1.09	Govt.	DLC
Satpautia		96	1.05	Govt.	DLC
Satpautia		97	1.56	Govt.	DLC
Satpautia		99	1.56	Govt.	DLC
Satpautia		100	1.40	Govt.	DLC
Satpautia		101	1.56	Govt.	DLC
Satpautia		102	1.52	Govt.	DLC
Satpautia		103	1.54	Govt.	DLC
Satpautia	75	105	0.78	Private.	DLC
Satpautia	96	106	0.98	Private.	DLC
Satpautia	239	107	0.49	Govt.	DLC
Satpautia		108	0.42	Govt.	DLC
Satpautia		109	0.18	Govt.	DLC
Satpautia		110	0.22	Govt.	DLC
Satpautia		111	0.39	Govt.	DLC
Satpautia		112	0.40	Govt.	DLC
Satpautia		113	3.08	Govt.	DLC
		Total	**124.34**		
Khejurdiha	190	484	1.15	Private.	DLC
Khejurdiha	76	485	0.69	Private.	DLC
Khejurdiha		486	0.40	Private.	DLC
Khejurdiha	59	487	0.32	Private.	DLC
Khejurdiha		488	0.09	Private.	DLC
Khejurdiha	88	487/604	0.32	Private.	DLC

Khejurdiha	50	488	0.09	Private.	DLC
Khejurdiha	55	489	0.94	Private.	DLC
Khejurdiha		490	0.27	Private.	DLC
Khejurdiha	5	491	0.11	Private.	DLC
Khejurdiha	89	492	0.25	Private.	DLC
Khejurdiha	82	493	0.06	Private.	DLC
Khejurdiha	76	494	0.55	Private.	DLC
Khejurdiha	22	495	0.26	Private.	DLC
Khejurdiha	46	499	0.48	Private.	DLC
Khejurdiha	52	506	1.37	Private.	DLC
Khejurdiha	123	507	0.13	Private.	DLC
Khejurdiha	46	510	0.89	Private.	DLC
Khejurdiha	135	511	0.11	Govt.	DLC
Khejurdiha		512	0.14	Govt.	DLC
Khejurdiha	42	513	0.75	Govt.	DLC
Khejurdiha	41	514	0.04	Private.	DLC
Khejurdiha	129	515	0.94	Private.	DLC
		Total	**10.35**		
Balimunduli (122)	122	265	35.52	Govt.	DLC
Balimunduli (122)		276	18.12	Govt.	DLC
Balimunduli (122)		368	4.55	Govt.	DLC
		Total	**58.19**		
Titia	180	11	67.81	Govt.	DLC
Titia		593	38.94	Govt.	DLC
Titia		597	4.88	Govt.	DLC
		Total	**111.63**		
Jauhad	96	16	1.42	Govt.	DLC
Jauhad	91	37/351	0.50	Govt.	DLC
Jauhad	96	89	0.40	Govt.	DLC
Jauhad		90	3.09	Govt.	DLC
Jauhad		97	0.38	Govt.	DLC
Jauhad		98	1.92	Govt.	DLC
		Total	**7.71**		
Badpheri	370	212	0.59	Govt.	DLC
Badpheri		213	0.47	Govt.	DLC
Badpheri		214	0.32	Govt.	DLC
Badpheri		216	0.50	Govt.	DLC
Badpheri		217	0.30	Govt.	DLC
Badpheri		218	0.37	Govt.	DLC
Badpheri		551	1.15	Govt.	DLC
Badpheri		543	2.52	Govt.	DLC
Badpheri		545	0.91	Govt.	DLC
Badpheri	372	204	10.07	Govt.	DLC
Badpheri		206	0.52	Govt.	DLC
Badpheri		207	0.21	Govt.	DLC
Badpheri		208	0.42	Govt.	DLC
Badpheri		209	2.36	Govt.	DLC
Badpheri		210	2.00	Govt.	DLC
Badpheri		211	1.14	Govt.	DLC
Badpheri		212	0.36	Govt.	DLC

Badpheri		220	0.55	Govt.	DLC
Badpheri		221	0.06	Govt.	DLC
Badpheri		222	0.70	Govt.	DLC
Badpheri		223	0.71	Govt.	DLC
Badpheri		225	0.04	Govt.	DLC
Badpheri		226	0.26	Govt.	DLC
Badpheri		228	0.50	Govt.	DLC
Badpheri		229	0.74	Govt.	DLC
Badpheri		230	0.50	Govt.	DLC
Badpheri		231	0.75	Govt.	DLC
Badpheri		232	0.83	Govt.	DLC
Badpheri		233	0.55	Govt.	DLC
Badpheri		234	0.65	Govt.	DLC
		Total	**31.05**		
Satabasa	76	873	2.17	Private.	DLC
Satabasa	174	2831	0.50	Private.	DLC
Satabasa	4	869	1.55	Private.	DLC
Satabasa	113	903	1.65	Private.	DLC
Satabasa	97	904	1.36	Private.	DLC
Satabasa	184	2779	1.50	Private.	DLC
Satabasa	213	2780	1.40	Private.	DLC
Satabasa	41	2049	1.36	Private.	DLC
Satabasa	183	2048	1.14	Private.	DLC
Satabasa	220	2042	3.74	Govt.	DLC
Satabasa	58	2046	2.00	Private.	DLC
Satabasa	4	2052	0.12	Private.	DLC
Satabasa		2053	0.24	Private.	DLC
Satabasa		2054	1.00	Private.	DLC
Satabasa	174	2051	0.10	Private.	DLC
Satabasa	99	2043	0.60	Private.	DLC
Satabasa	25	2045	0.24	Private.	DLC
Satabasa	220	2044	0.53	Govt.	DLC
		Total	**21.20**		
Budioder (Jamdiha Hamlet)	220	2510	0.70	Govt.	DLC
Budioder (Jamdiha Hamlet)		2511	1.00	Govt.	DLC
Budioder (Jamdiha Hamlet)		2509	0.67	Govt.	DLC
Budioder (Jamdiha Hamlet)		2512	2.01	Govt.	DLC
Budioder (Jamdiha Hamlet)		2513	0.71	Govt.	DLC
Budioder (Jamdiha Hamlet)		2514	0.27	Govt.	DLC
Budioder (Jamdiha Hamlet)	9	2515	1.04	Private.	DLC
Budioder (Jamdiha Hamlet)	87	2516	0.70	Private.	DLC
Budioder (Jamdiha Hamlet)	42	2517	1.16	Private.	DLC
Budioder (Jamdiha Hamlet)	99	2518	2.27	Private.	DLC

Budioder (Jamdiha Hamlet)	42	2519	0.37	Private.	DLC
Budioder (Jamdiha Hamlet)	177	2520	0.23	Private.	DLC
Budioder (Jamdiha Hamlet)	132	2521	0.29	Private.	DLC
Budioder (Jamdiha Hamlet)	179	2522	0.23	Private.	DLC
Budioder (Jamdiha Hamlet)	49	2523	0.20	Private.	DLC
Budioder (Jamdiha Hamlet)	7	2524	0.17	Private.	DLC
Budioder (Jamdiha Hamlet)	142	2160	0.70	Private.	DLC
Budioder (Jamdiha Hamlet)		2159	0.83	Private.	DLC
Budioder (Jamdiha Hamlet)	197	2165	0.74	Private.	DLC
Budioder (Jamdiha Hamlet)	201	2161	1.12	Private.	DLC
Budioder (Jamdiha Hamlet)	220	2173	3.67	Govt.	DLC
Budioder (Jamdiha Hamlet)		2150	0.13	Govt.	DLC
Budioder (Jamdiha Hamlet)	116	2151	0.17	Private.	DLC
Budioder (Jamdiha Hamlet)		2152	0.08	Private.	DLC
Budioder (Jamdiha Hamlet)		2153	0.58	Private.	DLC
Budioder (Jamdiha Hamlet)		2154	0.15	Private.	DLC
Budioder (Jamdiha Hamlet)	119	2155	0.76	Private.	DLC
Budioder (Jamdiha Hamlet)	220	2156	3.01	Govt.	DLC
		Total	**23.96**		
Ghuntabani (Nuagaon)	265	1334	1.83	Private.	DLC
Ghuntabani (Nuagaon)		1335	1.49	Private.	DLC
Ghuntabani (Nuagaon)		1336	1.38	Private.	DLC
Ghuntabani (Nuagaon)		1337	1.21	Private.	DLC
Ghuntabani (Nuagaon)		1338	0.47	Private.	DLC
Ghuntabani (Nuagaon)		1339	0.40	Private.	DLC
Ghuntabani (Nuagaon)		1340	0.61	Private.	DLC
Ghuntabani (Nuagaon)		1341	0.74	Private.	DLC
Ghuntabani (Nuagaon)		1342	1.83	Private.	DLC
Ghuntabani (Nuagaon)		1343	1.36	Private.	DLC
		Total	**11.32**		
Shriram ch. Pur (Hamlet Matihandi)	856	259	0.20	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		260	1.09	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)	530	261	0.75	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	856	262	0.13	Govt.	DLC

Shriram ch. Pur (Hamlet Matihandi)		263	0.13	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)	59	264	1.04	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)		265	0.90	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	856	266	0.15	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		267	0.20	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		271	0.23	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		273	0.35	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		276	0.23	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		255	1.35	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		254	0.85	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)	856	1341	8.43	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		1342	6.87	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)		1343	3.95	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)	560	268	0.42	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	530	269	0.42	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	856	270	0.40	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)	105	272	1.90	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	120	274	1.00	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	559	275	0.52	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	768	277	1.40	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	855	278	0.12	Govt.	DLC
Shriram ch. Pur (Hamlet Matihandi)	559	279	0.90	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	345	547	0.11		DLC
Shriram ch. Pur (Hamlet Matihandi)		548	0.06	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)		549	0.18	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	307	550	0.58	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	284	551	0.49	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	27	552	0.26	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	372	553	0.22	Private.	DLC

Shriram ch. Pur (Hamlet Matihandi)	504	554	0.08	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	377	555	0.80	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	71	556	0.85	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	12	557	0.18	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)		558	1.22	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	366	559	0.08	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	1	560	0.93	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	87	561	0.43	Private.	DLC
Shriram ch. Pur (Hamlet Matihandi)	143	562	1.75	Private.	DLC
		Total	**42.15**		
Kainsari	154	1281	0.91	Private.	DLC
Kainsari	172	1282	0.35	Private.	DLC
Kainsari	154	1283	0.41	Private.	DLC
Kainsari		1284	0.74	Private.	DLC
Kainsari	17	1285	0.58	Private.	DLC
Kainsari		1286	0.46	Private.	DLC
Kainsari		1287	0.43	Private.	DLC
Kainsari	158	1288	0.64	Private.	DLC
Kainsari	55	1289	3.54	Private.	DLC
Kainsari	158	1290	0.17	Private.	DLC
Kainsari	154	1291	0.41	Private.	DLC
Kainsari	172	1293	0.23	Private.	DLC
Kainsari	55	1294	0.39	Private.	DLC
Kainsari		1297	0.74	Private.	DLC
Kainsari	145	1299	0.46	Private.	DLC
Kainsari	158	1301	0.45	Private.	DLC
Kainsari	85	1302	0.44	Private.	DLC
Kainsari	48	1303	0.46	Private.	DLC
Kainsari	128	1304	0.54	Private.	DLC
Kainsari	145	1305	0.17	Private.	DLC
Kainsari	40	1307	0.72	Private.	DLC
Kainsari	56	1314	0.52	Private.	DLC
Kainsari	142	1855	0.52	Private.	DLC
Kainsari	50	1858	0.48	Private.	DLC
Kainsari	145	1897	0.46	Private.	DLC
Kainsari		1897	0.46	Private.	DLC
Kainsari		1899	0.13	Private.	DLC
Kainsari		1901	0.17	Private.	DLC
Kainsari		1902	0.17	Private.	DLC
		Total	**16.15**		
B C Pur	500	2214	0.11	Private.	DLC
B C Pur	494	2215	0.10	Private.	DLC
B C Pur		2216	0.06	Private.	DLC
B C Pur	603	2217	0.20	Private.	DLC

B C Pur	250	2215	0.12	Private.	DLC
B C Pur	500	2219	0.85	Private.	DLC
B C Pur	101	2220	0.02	Private.	DLC
B C Pur	144	2221	0.04		DLC
B C Pur	641	2222	0.09	Govt.	DLC
B C Pur	644	2223	0.51	Govt.	DLC
B C Pur	301	2226	0.22	Private.	DLC
B C Pur	63	2227	0.10	Private.	DLC
B C Pur	250	2229	2.18	Private.	DLC
B C Pur	144	2224	1.57	Private.	DLC
B C Pur	286	2230	0.08	Private.	DLC
B C Pur	331	2231	0.08	Private.	DLC
B C Pur	60	2232	0.12	Private.	DLC
B C Pur	500	2161	1.20	Private.	DLC
B C Pur	643	2059	0.04	Govt.	DLC
B C Pur	228	2654	1.33	Private.	DLC
B C Pur	405	2855	0.22	Private.	DLC
B C Pur	351	2666	2.03	Private.	DLC
B C Pur	644	2668	0.02	Govt.	DLC
B C Pur	803	2770	1.00	Private.	DLC
B C Pur		2671	0.83	Private.	DLC
B C Pur	644	2669	0.02	Govt.	DLC
B C Pur	563	2674	1.09	Private.	DLC
B C Pur	211	2675	2.73	Private.	DLC
B C Pur	198	2778	1.00	Private.	DLC
B C Pur	210	2679	0.69	Private.	DLC
B C Pur		2680	0.36	Private.	DLC
B C Pur		2682	0.42	Private.	DLC
B C Pur	605	2682	0.51	Private.	DLC
B C Pur	158	2683	1.26	Private.	DLC
B C Pur	443	2684	0.55	Private.	DLC
B C Pur	414	2685	0.78	Private.	DLC
B C Pur	438	2686	0.59	Private.	DLC
B C Pur	93	2687	1.47	Private.	DLC
B C Pur	644	419	1.03	Govt.	DLC
B C Pur		4020	33.75	Govt.	DLC
B C Pur	220	2200	0.70	Private.	DLC
B C Pur		2203	0.64	Private.	DLC
B C Pur		2203	0.61	Private.	DLC
B C Pur		2209	0.07	Private.	DLC
B C Pur	343	2210	1.35	Private.	DLC
B C Pur	101	2212	0.61	Private.	DLC
B C Pur		2213	0.96	Private.	DLC
		Total	**64.31**		
Dhanghera	205	7	29.30	Govt.	DLC
Dhanghera	11	11	0.84	Govt.	DLC
Dhanghera		1 3	3.73	Govt.	DLC
Dhanghera		224	1.24	Govt.	DLC
Dhanghera		226	6.87	Govt.	DLC
		Total	**41.98**		

Hrisaloe	243	1521	6.25	Govt.	DLC
Hrisaloe		1526	11.25	Govt.	DLC
		Total	**17.50**		
Hatisahi	396	1320	10.31	Private.	DLC
Hatisahi	150	1349	1.91	Private.	DLC
Hatisahi		396	2.45	Private.	DLC
Hatisahi	50	1348	1.10	Private.	DLC
Hatisahi	396	3021	0.67	Private.	DLC
		Total	**16.44**		
Brundagadi	138	564	0.55	Private.	DLC
Brundagadi		565	0.05	Private.	DLC
Brundagadi	139	557	1.29	Private.	DLC
Brundagadi	87	1663	1.16	Private.	DLC
Brundagadi		1997	0.22	Private.	DLC
Brundagadi		1698	2.96	Private.	DLC
Brundagadi		1659	0.92	Private.	DLC
Brundagadi	63	822	1.08	Private.	DLC
Brundagadi		823	0.94	Private.	DLC
Brundagadi		824	1.01	Private.	DLC
Brundagadi		825	0.23	Private.	DLC
		Total	**10.41**		
Gadigan	431	1141	30.00	Govt.	DLC
		Total	**30.00**		
Raidihi	1330	155	18.69	Govt.	DLC
Raidihi	127	156	17.81	Govt.	DLC
Raidihi	130	158	13.48	Govt.	DLC
Raidihi		171	9.18	Govt.	DLC
Raidihi		412	9.72	Govt.	DLC
Raidihi		411	0.73	Govt.	DLC
Raidihi		423	20.11	Govt.	DLC
Raidihi		413	0.82	Govt.	DLC
Raidihi		223	36.01	Govt.	DLC
Raidihi		224	1.32	Govt.	DLC
Raidihi		416	3.80	Govt.	DLC
Raidihi	127	211	14.90	Govt.	DLC
		Total	**146.57**		
Badabeni		235	0.91	Govt.	DLC
Badabeni		348	1.13	Govt.	DLC
Badabeni		349	4.32	Govt.	DLC
Badabeni		351	1.51	Govt.	DLC
		Total	**7.87**		
Khunt(Badaveni 372)	61	301	1.90	Govt.	DLC
Khunt(Badaveni 372)		314	1.42	Govt.	DLC
Khunt(Badaveni 372)		317	4.12	Govt.	DLC
		Total	**7.44**		
Sirathali	352	278	1.35	Govt.	DLC
Sirathali		279	3.68	Govt.	DLC
Sirathali		280	0.58	Govt.	DLC
Sirathali		326	2.27	Govt.	DLC
Sirathali		357	0.11	Govt.	DLC

Sirathali		365	0.13	Govt.	DLC
Sirathali		454	0.96	Govt.	DLC
		Total	**9.08**		
Gadadharekumaripur	143	97	2.31	Govt.	DLC
Gadadharekumaripur		136	0.70	Govt.	DLC
Gadadharekumaripur		139	2.82	Govt.	DLC
Gadadharekumaripur		141	0.98	Govt.	DLC
Gadadharekumaripur		157	1.35	Govt.	DLC
		Total	**8.16**		
Purunabaripada	401	50	0.16	Govt.	DLC
Purunabaripada		52	3.61	Govt.	DLC
Purunabaripada		54	10.23	Govt.	DLC
Purunabaripada		187	2.16	Govt.	DLC
Purunabaripada		191	10.23	Govt.	DLC
Purunabaripada		193	0.74	Govt.	DLC
Purunabaripada		216	0.09	Govt.	DLC
Purunabaripada		264	4.26	Govt.	DLC
Purunabaripada		265	0.82	Govt.	DLC
		Total	**32.30**		
Baundia	221	9	25.94	Govt.	DLC
		Total	**25.94**		
Aipata	433	836	20.00	Govt.	DLC
		Total	**20.00**		
Takaetpur	89	2/227	0.88	Govt.	DLC
Takaetpur		179/226	22.90	Govt.	DLC
Takaetpur		179/235	29.35	Govt.	DLC
		Total	**53.13**		
Cndlima	344	39	3.92	Govt.	DLC
Cndlima		80	3.93	Govt.	DLC
		Total	**7.85**		
Kuamora	468	151	0.52	Govt.	DLC
Kuamora		281	4.90	Govt.	DLC
Kuamora		237	1.00	Govt.	DLC
Kuamora		154	8.75	Govt.	DLC
Kuamora		234	5.93	Govt.	DLC
		Total	**21.10**		
Uperpadada	260	193	4.24	Govt.	DLC
Uperpadada		228	2.23	Govt.	DLC
Uperpadada		743	1.41	Govt.	DLC
Uperpadada		880	0.12	Govt.	DLC
Uperpadada		681	10.35	Govt.	DLC
Uperpadada		887	9.41	Govt.	DLC
Uperpadada		924	2.55	Govt.	DLC
Uperpadada		961	1.10	Govt.	DLC
		Total	**31.41**		
Kusumia	204	635	2.78	Govt.	DLC
Kusumia		643	0.71	Govt.	DLC
Kusumia		644	0.80	Govt.	DLC
Kusumia		645	3.98	Govt.	DLC
Kusumia		1073	0.97	Govt.	DLC

Kusumia		1173	7.18	Govt.	DLC
Kusumia		1463	3.56	Govt.	DLC
		Total	**19.98**		
Sikidia	176	230	2.44	Govt.	DLC
Sikidia		667	4.73	Govt.	DLC
Sikidia		274	4.50	Govt.	DLC
Sikidia		664	0.59	Govt.	DLC
Sikidia		510	1.60	Govt.	DLC
		Total	**13.86**		
Chuliaposi	3	372	0.88	Private.	DLC
Chuliaposi	21	373	0.29	Private.	DLC
Chuliaposi	21	374	0.50	Private.	DLC
Chuliaposi	85	187	0.28	Private.	DLC
Chuliaposi		188	0.49	Private.	DLC
Chuliaposi	200	189	0.39	Private.	DLC
Chuliaposi	200	190	0.15	Private.	DLC
Chuliaposi	200	191	0.05	Private.	DLC
Chuliaposi	76	192	0.37	Private.	DLC
Chuliaposi		193	0.24	Private.	DLC
Chuliaposi	47	194	0.37	Private.	DLC
Chuliaposi	54	195	0.37	Private.	DLC
Chuliaposi	76	196	0.80	Private.	DLC
Chuliaposi	152	198	1.04	Private.	DLC
Chuliaposi	129	199	0.91	Private.	DLC
Chuliaposi	107	201	0.94	Private.	DLC
Chuliaposi	127	203	0.86	Private.	DLC
Chuliaposi	84	204	0.87	Private.	DLC
Chuliaposi	186	205	0.54	Private.	DLC
Chuliaposi	145	206	0.52	Private.	DLC
Chuliaposi	39	207	0.33	Private.	DLC
Chuliaposi	119	208	0.28	Private.	DLC
Chuliaposi	151	209	0.25	Private.	DLC
Chuliaposi	199	210	0.22	Private.	DLC
Chuliaposi	35	211	0.17	Private.	DLC
Chuliaposi	162	212	0.11	Private.	DLC
Chuliaposi	76	213	0.11	Private.	DLC
Chuliaposi	145	363	0.32	Private.	DLC
Chuliaposi	39	364	0.08	Private.	DLC
Chuliaposi	119	365	0.25	Private.	DLC
Chuliaposi	151	366	0.28	Private.	DLC
Chuliaposi	199	367	0.25	Private.	DLC
Chuliaposi	36	368	0.26	Private.	DLC
Chuliaposi	162	369	0.28	Private.	DLC
Chuliaposi	76	370	0.53	Private.	DLC
		Total	**14.58**		
Adapal	64	385	0.29	Private.	DLC
Adapal	198	1386	0.20	Private.	DLC
Adapal	147	1387	0.26	Private.	DLC
Adapal	497	1388	0.83	Private.	DLC
Adapal	498	1390	0.14	Private.	DLC

Adapal	250	1393	0.11	Private.	DLC
Adapal		1394	0.08	Private.	DLC
Adapal		1395	0.45	Private.	DLC
Adapal		1396	0.20	Private.	DLC
Adapal		1397	0.17	Private.	DLC
Adapal	493	1398	0.32	Private.	DLC
Adapal		1399	0.37	Private.	DLC
Adapal	83	1402	0.36	Private.	DLC
Adapal	216	1409	0.12	Private.	DLC
Adapal		1410	0.03	Private.	DLC
Adapal	255	1412	0.06	Private.	DLC
Adapal		1413	0.26	Private.	DLC
Adapal	216	1414	0.14	Private.	DLC
Adapal		1415	0.05	Private.	DLC
Adapal	255	1416	0.01	Private.	DLC
Adapal		1417	0.06	Private.	DLC
Adapal		1418	0.08	Private.	DLC
Adapal		1419	0.09	Private.	DLC
Adapal		1420	0.06	Private.	DLC
Adapal		1421	0.05	Private.	DLC
Adapal	83	1422	0.04	Private.	DLC
Adapal	20	1423	0.13	Private.	DLC
Adapal		1424	0.24	Private.	DLC
Adapal		1425	0.12	Private.	DLC
Adapal	546	1427	0.33	Private.	DLC
Adapal	188	1428	0.14	Private.	DLC
Adapal		1429	0.15	Private.	DLC
Adapal		1430	0.10	Private.	DLC
Adapal	35	1431	0.27	Private.	DLC
Adapal	337	1432	0.06	Private.	DLC
Adapal	337	1435	0.15	Private.	DLC
Adapal	505	1436	0.25	Private.	DLC
Adapal	63	1437	0.25	Private.	DLC
Adapal	35	1438	0.54	Private.	DLC
Adapal	232	1439	0.05	Private.	DLC
Adapal	83	1440	0.07	Private.	DLC
Adapal	542	1993	0.08	Private.	DLC
Adapal	337	1994	0.72	Private.	DLC
Adapal	530	1995	0.38	Private.	DLC
Adapal	57	1996	0.45	Private.	DLC
Adapal	190	1997	0.09	Private.	DLC
Adapal		1998	0.14	Private.	DLC
Adapal	336	1999	0.72	Private.	DLC
Adapal	402	2000	0.18	Private.	DLC
Adapal	244	2001	0.18	Private.	DLC
Adapal	88	2002	0.14	Private.	DLC
Adapal	336	2003	0.16	Private.	DLC
Adapal		2004	0.45	Private.	DLC
Adapal	208	2005	0.22	Private.	DLC
Adapal	88	2006	0.34	Private.	DLC

Adapal	126	2007	0.49	Private.	DLC
Adapal	519	69	0.12	Private.	DLC
Adapal	460	77	0.80	Private.	DLC
Adapal		78	0.68	Private.	DLC
Adapal		93	0.22	Private.	DLC
Adapal		94	0.68	Private.	DLC
Adapal		95	0.44	Private.	DLC
Adapal		96	0.35	Private.	DLC
Adapal		97	0.47	Private.	DLC
Adapal		98	0.27	Private.	DLC
Adapal		100	0.23	Private.	DLC
Adapal		101	0.58	Private.	DLC
Adapal		102	0.48	Private.	DLC
Adapal		103	0.61	Private.	DLC
Adapal		104	0.24	Private.	DLC
Adapal		319	0.10	Private.	DLC
Adapal		320	0.13	Private.	DLC
Adapal		321	0.47	Private.	DLC
Adapal		320	0.45	Private.	DLC
Adapal	560	264	1.61	Govt.	DLC
Adapal	700	711	3.08	Govt.	DLC
Adapal		1251	6.08	Govt.	DLC
Adapal		1274	8.09	Govt.	DLC
		Total	**38.60**		
Salamundali (Gharagadi Hamlet)	254	756	0.60	Private.	DLC
Salamundali (Gharagadi Hamlet)	340	757	1.25	Private.	DLC
Salamundali (Gharagadi Hamlet)	209	758	1.05	Private.	DLC
Salamundali (Gharagadi Hamlet)	408	759	0.71	Govt.	DLC
Salamundali (Gharagadi Hamlet)	198	760	2.14	Private.	DLC
Salamundali (Gharagadi Hamlet)	408	761	0.58	Govt.	DLC
Salamundali (Gharagadi Hamlet)	407	762	0.80	Govt.	DLC
Salamundali (Gharagadi Hamlet)	106	763	0.69	Private.	DLC
Salamundali (Gharagadi Hamlet)	408	764	0.23	Govt.	DLC
Salamundali (Gharagadi Hamlet)	345	765	1.50	Private.	DLC
Salamundali (Gharagadi Hamlet)	408	766	0.14	Govt.	DLC
Salamundali (Gharagadi Hamlet)	367	767	0.40	Private.	DLC
Salamundali (Gharagadi Hamlet)	62	768	1.00	Private.	DLC
Salamundali (Gharagadi Hamlet)	408	769	0.17	Govt.	DLC
Salamundali (Gharagadi Hamlet)	364	770	1.39	Private.	DLC

Salamundali (Gharagadi Hamlet)	250	771	0.81	Private.	DLC
Salamundali (Gharagadi Hamlet)	390	772	0.86	Private.	DLC
Salamundali (Gharagadi Hamlet)	407	773	0.04	Govt.	DLC
Salamundali (Gharagadi Hamlet)	299	774	1.23	Private.	DLC
Salamundali (Gharagadi Hamlet)	405	775	0.07	Govt.	DLC
Salamundali (Gharagadi Hamlet)		776	0.08	Govt.	DLC
Salamundali (Gharagadi Hamlet)		777	0.05	Govt.	DLC
Salamundali (Gharagadi Hamlet)	173	778	1.36	Private.	DLC
Salamundali (Gharagadi Hamlet)	408	779	0.90	Govt.	DLC
Salamundali (Gharagadi Hamlet)	209	780	1.29	Private.	DLC
		Total	**19.34**		
Salamundali (Nidharsahi Hamlet)	89	483	0.92	Private.	DLC
Salamundali (Nidharsahi Hamlet)	284	484	0.70	Private.	DLC
Salamundali (Nidharsahi Hamlet)	406	485	1.72	Govt.	DLC
Salamundali (Nidharsahi Hamlet)	44	486	1.17	Private.	DLC
Salamundali (Nidharsahi Hamlet)	35	487	1.60	Private.	DLC
Salamundali (Nidharsahi Hamlet)	65	488	1.38	Private.	DLC
Salamundali (Nidharsahi Hamlet)	83	489	0.80	Private.	DLC
Salamundali (Nidharsahi Hamlet)	332	490	0.30	Private.	DLC
Salamundali (Nidharsahi Hamlet)	204	491	1.05	Private.	DLC
Salamundali (Nidharsahi Hamlet)	372	492	0.37	Private.	DLC
Salamundali (Nidharsahi Hamlet)	127	493	0.35	Private.	DLC
Salamundali (Nidharsahi Hamlet)	89	494	0.43	Private.	DLC
Salamundali (Nidharsahi Hamlet)	72	495	0.22	Private.	DLC
Salamundali (Nidharsahi Hamlet)	40	496	0.22	Private.	DLC
Salamundali (Nidharsahi Hamlet)	191	497	0.25	Private.	DLC
Salamundali (Nidharsahi Hamlet)	192	498	0.17	Private.	DLC
Salamundali (Nidharsahi Hamlet)	33	499	0.14	Private.	DLC
Salamundali (Nidharsahi Hamlet)		500	0.65	Private.	DLC

Salamundali (Nidharsahi Hamlet)	321	501	1.69	Private.	DLC
Salamundali (Nidharsahi Hamlet)	261	502	0.82	Private.	DLC
Salamundali (Nidharsahi Hamlet)	203	503	0.83	Private.	DLC
Salamundali (Nidharsahi Hamlet)	245	504	3.23	Private.	DLC
Salamundali (Nidharsahi Hamlet)	44	506	0.29	Private.	DLC
Salamundali (Nidharsahi Hamlet)	11	507	2.11	Private.	DLC
Salamundali (Nidharsahi Hamlet)	306	508	3.70	Private.	DLC
Salamundali (Nidharsahi Hamlet)	366	509	2.55	Private.	DLC
Salamundali (Nidharsahi Hamlet)	56	511	4.09	Private.	DLC
Salamundali (Nidharsahi Hamlet)	162	512	1.85	Private.	DLC
Salamundali (Nidharsahi Hamlet)	332	513	1.08	Private.	DLC
Salamundali (Nidharsahi Hamlet)	76	514	1.38	Private.	DLC
Salamundali (Nidharsahi Hamlet)	101	515	1.22	Private.	DLC
Salamundali (Nidharsahi Hamlet)	108	516	1.10	Private.	DLC
Salamundali (Nidharsahi Hamlet)	260	517	1.13	Private.	DLC
Salamundali (Nidharsahi Hamlet)	33	528	1.08	Private.	DLC
Salamundali (Nidharsahi Hamlet)	265	529	1.27	Private.	DLC
Salamundali (Nidharsahi Hamlet)	392	530	1.46	Private.	DLC
Salamundali (Nidharsahi Hamlet)		531	0.23	Private.	DLC
Salamundali (Nidharsahi Hamlet)		532	0.72	Private.	DLC
Salamundali (Nidharsahi Hamlet)	361	533	0.29	Private.	DLC
Salamundali (Nidharsahi Hamlet)	228	534	0.20	Private.	DLC
Salamundali (Nidharsahi Hamlet)		535	1.26	Private.	DLC
Salamundali (Nidharsahi Hamlet)	98	536	2.09	Private.	DLC
Salamundali (Nidharsahi Hamlet)	265	537	1.32	Private.	DLC
Salamundali (Nidharsahi Hamlet)	366	540	1.32	Private.	DLC
Salamundali (Nidharsahi Hamlet)	306	541	0.56	Private.	DLC
Salamundali (Nidharsahi Hamlet)		542	0.23	Private.	DLC
Salamundali (Nidharsahi Hamlet)	377	543	0.10	Private.	DLC

Salamundali (Nidharsahi Hamlet)	44	544	0.31	Private.	DLC
		Total	**51.95**		
Govindpur	209	448	0.76	Private.	DLC
Govindpur	160	450	1.57	Private.	DLC
Govindpur	150	451	0.91	Private.	DLC
Govindpur	95	452	0.69	Private.	DLC
Govindpur	147	453	2.40	Private.	DLC
Govindpur	102	454	2.76	Private.	DLC
Govindpur	192	455	0.81	Private.	DLC
Govindpur	222	456	0.75	Private.	DLC
Govindpur		457	1.27	Private.	DLC
Govindpur	223	458	2.02	Private.	DLC
Govindpur	102	459	0.21	Private.	DLC
Govindpur	156	460	0.70	Private.	DLC
Govindpur	127	461	0.70	Private.	DLC
Govindpur	252	462	3.16	Private.	DLC
Govindpur	74	463	0.61	Private.	DLC
Govindpur		464	0.47	Private.	DLC
Govindpur	127	465	0.61	Private.	DLC
Govindpur	28	466	3.15	Private.	DLC
Govindpur	37	467	0.35	Private.	DLC
Govindpur	72	468	0.99	Private.	DLC
Govindpur		469	1.10	Private.	DLC
Govindpur	74	1239	0.67	Private.	DLC
Govindpur	184	470	1.07	Private.	DLC
Govindpur	99	471	0.79	Private.	DLC
Govindpur	58	472	0.09	Private.	DLC
Govindpur		473	0.36	Private.	DLC
Govindpur		474	0.40	Private.	DLC
Govindpur		475	0.35	Private.	DLC
Govindpur		476	0.30	Private.	DLC
Govindpur	207	477	1.30	Private.	DLC
Govindpur	34	478	1.32	Private.	DLC
Govindpur	126	479	1.40	Private.	DLC
Govindpur	35	514	0.68	Private.	DLC
Govindpur	206	515	0.35	Private.	DLC
Govindpur	206	516	0.13	Private.	DLC
Govindpur	50	517	0.60	Private.	DLC
Govindpur		518	0.10	Private.	DLC
Govindpur	32	519	0.58	Private.	DLC
Govindpur	229	520	0.58	Private.	DLC
Govindpur	244	521	0.61	Private.	DLC
Govindpur	128	522	0.39	Private.	DLC
Govindpur	192	523	0.44	Private.	DLC
Govindpur	104	524	0.31	Private.	DLC
Govindpur	224	525	0.23	Private.	DLC
Govindpur	249	526	0.22	Private.	DLC
Govindpur	192	527	0.06	Private.	DLC
Govindpur	55	528	1.27	Private.	DLC
Govindpur	103	529	0.21	Private.	DLC

Govindpur	79	530	0.20	Private.	DLC
Govindpur	207	591	0.40	Private.	DLC
Govindpur		592	0.70	Private.	DLC
Govindpur	183	574	0.89	Private.	DLC
Govindpur	257	531	0.40	Private.	DLC
Govindpur	37	532	2.55	Private.	DLC
Govindpur	28	533	76.00	Private.	DLC
Govindpur		534	0.35	Private.	DLC
Govindpur	37	535	0.11	Private.	DLC
Govindpur	28	536	0.54	Private.	DLC
Govindpur	220	537	0.09	Private.	DLC
Govindpur		538	0.74	Private.	DLC
Govindpur	12	563	0.55	Private.	DLC
Govindpur		564	0.26	Private.	DLC
Govindpur	132	565	0.23	Private.	DLC
Govindpur		566	0.22	Private.	DLC
Govindpur	242	567	0.25	Private.	DLC
Govindpur	222	568	0.29	Private.	DLC
Govindpur		569	0.51	Private.	DLC
Govindpur	193	570	0.35	Private.	DLC
Govindpur		571	0.30	Private.	DLC
Govindpur	84	572	1.42	Private.	DLC
Govindpur	246	561	1.24	Private.	DLC
Govindpur	53	562	0.87	Private.	DLC
Govindpur	84	575	0.31	Private.	DLC
Govindpur	252	576	0.24	Private.	DLC
Govindpur	99	577	0.26	Private.	DLC
Govindpur	58	578	0.26	Private.	DLC
Govindpur	74	579	0.31	Private.	DLC
Govindpur	81	580	0.28	Private.	DLC
Govindpur	223	581	0.31	Private.	DLC
Govindpur	27	582	1.20	Private.	DLC
Govindpur	188	1191	1.03	Private.	DLC
Govindpur	245	583	1.18	Private.	DLC
Govindpur	136	584	1.30	Private.	DLC
Govindpur	180	585	0.19	Private.	DLC
Govindpur	118	586	0.07	Private.	DLC
Govindpur	198	587	1.32	Private.	DLC
Govindpur	66	588	1.11	Private.	DLC
Govindpur	81	589	0.86	Private.	DLC
Govindpur	24	590	0.49	Private.	DLC
Govindpur	7	593	0.76	Private.	DLC
Govindpur	75	433	1.88	Private.	DLC
Govindpur	107	435	0.86	Private.	DLC
Govindpur	78	436	0.27	Private.	DLC
Govindpur	209	445	1.82	Private.	DLC
Govindpur	191	443	0.36	Private.	DLC
Govindpur	86	444	1.24	Private.	DLC
Govindpur	29	446	2.44	Private.	DLC
Govindpur	54	434	0.86	Private.	DLC

Govindpur	160	437	0.50	Private.	DLC
Govindpur	217	439	0.99	Private.	DLC
Govindpur	194	447	0.74	Private.	DLC
		Total	**153.70**		
Haldipal	175	1034	3.53	Govt.	DLC
Haldipal		1138	7.81	Govt.	DLC
Haldipal		1137	13.12	Govt.	DLC
Haldipal		1095	11.47	Govt.	DLC
Haldipal	172	1036	1.12	Govt.	DLC
		Total	**37.05**		
Jamsoli	180	77	7.18	Govt.	DLC
Jamsoli		132	2.79	Govt.	DLC
Jamsoli		133	0.55	Govt.	DLC
Jamsoli		134	0.26	Govt.	DLC
Jamsoli		135	0.21	Govt.	DLC
Jamsoli		136	0.22	Govt.	DLC
Jamsoli		137	0.45	Govt.	DLC
Jamsoli		81	0.50	Govt.	DLC
Jamsoli		82	0.37	Govt.	DLC
Jamsoli		18	0.32	Govt.	DLC
Jamsoli		54	0.08	Govt.	DLC
		Total	**12.93**		
Raghunathpur	147	239	3.50	Govt.	DLC
Raghunathpur		789	1.50	Govt.	DLC
Raghunathpur		264	0.15	Govt.	DLC
Raghunathpur		262	0.09	Govt.	DLC
		Total	**5.24**		
Salabani	55	23	7.41	Govt.	DLC
Salabani		3/332	4.94	Govt.	DLC
		Total	**12.35**		
Jualia	296	102	12.62	Private.	DLC
Jualia		541	17.26	Private.	DLC
		Total	**29.88**		
Gada	234	2/1613	13.40	Govt.	DLC
Gada	61	21	0.26	Govt.	DLC
Gada	142	22	0.17	Govt.	DLC
Gada	84	23	0.16	Govt.	DLC
Gada	230	24	0.40	Govt.	DLC
Gada	51	1468	0.30	Govt.	DLC
Gada	163	1471	0.33	Govt.	DLC
Gada	76	1472	0.55	Govt.	DLC
Gada	115	1478	0.30	Govt.	DLC
Gada	31	1479	0.25	Govt.	DLC
Gada	39	1462	0.21	Govt.	DLC
Gada	155	1463	0.24	Govt.	DLC
Gada	167	1464	0.23	Govt.	DLC
		Total	**16.80**		
Kirkichia	103	2	10.46	Govt.	DLC
Kirkichia	66	3	1.32	Govt.	DLC
Kirkichia	46	19	0.44	Govt.	DLC

Kirkichia	98	20	0.50	Govt.	DLC
Kirkichia	29	21	0.50	Govt.	DLC
Kirkichia	40	33	0.27	Govt.	DLC
Kirkichia	3	34	0.26	Govt.	DLC
Kirkichia	10	35	0.17	Govt.	DLC
Kirkichia	103	157	6.09	Govt.	DLC
		Total	**20.01**		
Dimagadia	311	1726	5.00	Govt.	DLC
Dimagadia		1691	7.00	Govt.	DLC
Dimagadia		1730	8.00	Govt.	DLC
		Total	**20.00**		
Mouda	361	699	8.75	Govt.	DLC
Mouda		621	0.07	Govt.	DLC
		Total	**8.82**		
Parichipur	66	42	2.59	Govt.	DLC
Parichipur		103	1.32	Govt.	DLC
Parichipur		105	21.20	Govt.	DLC
Parichipur		114	5.36	Govt.	DLC
Parichipur		140	3.01	Govt.	DLC
Parichipur		151	13.54	Govt.	DLC
Parichipur		166	4.17	Govt.	DLC
Parichipur		168	1.96	Govt.	DLC
Parichipur		173	7.51	Govt.	DLC
Parichipur		175	4.16	Govt.	DLC
		Total	**64.82**		
Debagan	695	122	6.06	Govt.	DLC
Debagan		214	4.24	Govt.	DLC
Debagan		239	0.92	Govt.	DLC
Debagan		258	0.48	Govt.	DLC
Debagan		271	0.60	Govt.	DLC
Debagan		477	2.12	Govt.	DLC
Debagan		479	0.56	Govt.	DLC
Debagan		707	2.73	Govt.	DLC
Debagan		991	34.73	Govt.	DLC
Debagan		100	0.85	Govt.	DLC
Debagan		1112	0.20	Govt.	DLC
Debagan		1685	1.91	Govt.	DLC
Debagan		1681	0.65	Govt.	DLC
Debagan		1688	1.17	Govt.	DLC
Debagan		1777	1.56	Govt.	DLC
Debagan		1871	1.20	Govt.	DLC
Debagan		1873	2.06	Govt.	DLC
Debagan		1883	2.08	Govt.	DLC
Debagan		1902	1.14	Govt.	DLC
Debagan		1915	6.11	Govt.	DLC
Debagan		1926	7.86	Govt.	DLC
		Total	**79.23**		
Pasuda	319	44	0.70	Govt.	DLC
Pasuda		52	3.00	Govt.	DLC
Pasuda		55	2.64	Govt.	DLC

		Total	**6.34**		
Raipada	244	22	5.93	Govt.	DLC
		Total	**5.93**		
Nahara	123	189	7.50	Govt.	DLC
		Total	**7.50**		
Kudialhunta	19	107/207	5.00	Private.	DLC
		Total	**5.00**		
Chadada	136	637	1.59	Govt.	DLC
Chadada		647	2.60	Govt.	DLC
Chadada		649	1.36	Govt.	DLC
Chadada		651	3.94	Govt.	DLC
Chadada	135	651/694	3.00	Govt.	DLC
		Total	**12.49**		
Khejurdiha	129	516	1.09	Private.	DLC
Khejurdiha	89	517	0.57	Private.	DLC
Khejurdiha	82	518	0.37	Private.	DLC
Khejurdiha		519	0.40	Private.	DLC
		Total	**2.43**		
Barakuli	240	1	0.33	Govt.	DLC
Barakuli	64	2	0.32	Private.	DLC
Barakuli		4	0.37	Private.	DLC
Barakuli		5	0.61	Private.	DLC
Barakuli	161	8	0.52	Private.	DLC
Barakuli	239	9	0.04	Govt.	DLC
Barakuli	5	14	0.72	Private.	DLC
Barakuli	31	13	0.26	Private.	DLC
Barakuli		8	0.79	Private.	DLC
Barakuli	239	20	0.68	Govt.	DLC
Barakuli	163	21	0.34	Private.	DLC
		Total	**4.98**		
Bangara	219	2313	0.19	Private.	DLC
Bangara		2324	0.37	Private.	DLC
Bangara	367	2342	0.54	Govt.	DLC
Bangara		2407	0.56	Govt.	DLC
Bangara		2416	1.10	Govt.	DLC
Bangara		2418	0.26	Govt.	DLC
Bangara		2430	0.70	Private.	DLC
Bangara	208	2346	1.06	Private.	DLC
Bangara	14	2347	1.12	Private.	DLC
Bangara	329	2348	1.15	Private.	DLC
Bangara	304	2349	1.12	Private.	DLC
Bangara	177	2350	1.04	Private.	DLC
Bangara	370	2351	0.77	Govt.	DLC
Bangara		2352	0.93	Govt.	DLC
Bangara		2353	**0.49**	Govt.	DLC
Bangara		2358	0.17	Govt.	DLC
Bangara		2364	0.29	Govt.	DLC
Bangara		2368	0.91	Govt.	DLC
Bangara		2370	0.63	Govt.	DLC
Bangara		2372	0.30	Govt.	DLC

Bangara		2377	0.09	Govt.	DLC
Bangara		2387	0.94	Govt.	DLC
Bangara		2389	0.15	Govt.	DLC
Bangara		2392	0.23	Govt.	DLC
Bangara		2398	0.28	Govt.	DLC
Bangara		2400	0.54	Govt.	DLC
Bangara		2401	0.65	Govt.	DLC
Bangara		2409	0.15	Govt.	DLC
Bangara		2410	0.87	Govt.	DLC
Bangara		2411	1.51	Govt.	DLC
Bangara		2414	0.83	Govt.	DLC
Bangara		2415	0.60	Private.	DLC
Bangara		2416	1.10	Govt.	DLC
Bangara		2418	0.26	Govt.	DLC
Bangara		2430	0.70	Govt.	DLC
		Total	**22.60**		
Potaldiha	8	1332	0.14	Private.	DLC
Potaldiha		1333	2.95	Private.	DLC
Potaldiha	180	1330	0.42	Private.	DLC
Potaldiha	4	1344	0.60	Private.	DLC
Potaldiha		1362	2.33	Private.	DLC
Potaldiha	278	1345	0.36	Private.	DLC
Potaldiha	107	1346	0.38	Private.	DLC
Potaldiha	185	1357	0.51	Private.	DLC
Potaldiha	179	1359	0.49	Private.	DLC
Potaldiha	124	1225	0.22	Private.	DLC
Potaldiha	135	1224	1.15	Private.	DLC
Potaldiha	118	944	1.23	Private.	DLC
Potaldiha		942	0.07	Private.	DLC
Potaldiha	203	1354	1.03	Private.	DLC
Potaldiha	125	933	0.05	Private.	DLC
Potaldiha	67	934	0.05	Private.	DLC
Potaldiha	47	935	0.05	Private.	DLC
Potaldiha	33	936	0.05	Private.	DLC
		Total	**12.08**		
Kuabuda	154		48.76	Govt (Asan &Arjun Plantation)	DLC
Kuabuda			12.59	Govt (Asan &Arjun Plantation)	DLC
		Total	**61.35**		
Bhangasole	152		8.87	Govt (Asan &Arjun Plantation)	DLC
		Total	**8.87**		
Dubulabeda	66		16.00	Govt (Asan &Arjun Plantation)	DLC
		Total	**16.00**		
Chandua	269		24.33	Govt (Asan &Arjun Plantation)	DLC
		Total	**24.33**		
Dhadipada	97		28.08	Govt (Mango Plantation)	DLC
		Total	**28.08**		

Tikarpada	110		14.00	Govt (Gochar)	DLC
		Total	14.00		
BADA SIMULIA	398	1	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	6	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	7	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	9	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	11	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	12	0.36	GOVT (AJA)	DLC
BADA SIMULIA	398	13	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	16	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	18	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	19	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	26	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	28	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	29	0.73	GOVT (AJA)	DLC
BADA SIMULIA	398	31	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	36	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	37	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	38	0.99	GOVT (AJA)	DLC
BADA SIMULIA	398	40	2.74	GOVT (AJA)	DLC
BADA SIMULIA	398	41	1.05	GOVT (AJA)	DLC
BADA SIMULIA	398	42	0.68	GOVT (AJA)	DLC
BADA SIMULIA	398	43	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	45	0.72	GOVT (AJA)	DLC
BADA SIMULIA	398	48	0.58	GOVT (AJA)	DLC
BADA SIMULIA	398	49	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	50	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	51	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	52	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	58	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	59	0.50	GOVT (AJA)	DLC
BADA SIMULIA	398	63	0.68	GOVT (AJA)	DLC
BADA SIMULIA	398	64	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	65	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	66	0.61	GOVT (AJA)	DLC
BADA SIMULIA	398	67	0.82	GOVT (AJA)	DLC
BADA SIMULIA	398	68	0.38	GOVT (AJA)	DLC
BADA SIMULIA	398	69	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	70	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	72	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	73	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	75	2.85	GOVT (AJA)	DLC
BADA SIMULIA	398	76	0.59	GOVT (AJA)	DLC
BADA SIMULIA	398	79	1.28	GOVT (AJA)	DLC
BADA SIMULIA	398	80	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	81	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	82	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	83	1.79	GOVT (AJA)	DLC
BADA SIMULIA	398	84	0.65	GOVT (AJA)	DLC

BADA SIMULIA	398	85	0.73	GOVT (AJA)	DLC
BADA SIMULIA	398	86	0.94	GOVT (AJA)	DLC
BADA SIMULIA	398	88	0.85	GOVT (AJA)	DLC
BADA SIMULIA	398	89	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	90	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	91	0.75	GOVT (AJA)	DLC
BADA SIMULIA	398	92	1.50	GOVT (AJA)	DLC
BADA SIMULIA	398	93	1.27	GOVT (AJA)	DLC
BADA SIMULIA	398	94	0.98	GOVT (AJA)	DLC
BADA SIMULIA	398	95	1.96	GOVT (AJA)	DLC
BADA SIMULIA	398	96	2.62	GOVT (AJA)	DLC
BADA SIMULIA	398	97	0.71	GOVT (AJA)	DLC
BADA SIMULIA	398	98	1.63	GOVT (AJA)	DLC
BADA SIMULIA	398	99	0.53	GOVT (AJA)	DLC
BADA SIMULIA	398	100	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	101	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	102	9.06	GOVT (AJA)	DLC
BADA SIMULIA	398	105	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	110	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	111	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	116	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	117	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	120	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	121	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	122	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	129	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	130	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	133	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	134	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	138	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	144	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	145	3.24	GOVT (AJA)	DLC
BADA SIMULIA	398	146	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	147	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	148	0.79	GOVT (AJA)	DLC
BADA SIMULIA	398	149	1.20	GOVT (AJA)	DLC
BADA SIMULIA	398	150	1.57	GOVT (AJA)	DLC
BADA SIMULIA	398	151	1.65	GOVT (AJA)	DLC
BADA SIMULIA	398	153	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	155	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	156	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	161	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	200	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	201	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	202	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	203	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	209	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	210	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	245	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	250	0.04	GOVT (AJA)	DLC

BADA SIMULIA	398	314	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	325	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	326	0.88	GOVT (AJA)	DLC
BADA SIMULIA	398	329	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	330	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	331	5.31	GOVT (AJA)	DLC
BADA SIMULIA	398	333	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	339	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	341	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	348	0.64	GOVT (AJA)	DLC
BADA SIMULIA	398	350	0.57	GOVT (AJA)	DLC
BADA SIMULIA	398	351	1.34	GOVT (AJA)	DLC
BADA SIMULIA	398	352	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	353	1.18	GOVT (AJA)	DLC
BADA SIMULIA	398	354	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	355	0.36	GOVT (AJA)	DLC
BADA SIMULIA	398	357	0.59	GOVT (AJA)	DLC
BADA SIMULIA	398	358	1.54	GOVT (AJA)	DLC
BADA SIMULIA	398	359	0.66	GOVT (AJA)	DLC
BADA SIMULIA	398	360	1.06	GOVT (AJA)	DLC
BADA SIMULIA	398	361	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	362	0.89	GOVT (AJA)	DLC
BADA SIMULIA	398	367	16.46	GOVT (AJA)	DLC
BADA SIMULIA	398	368	1.08	GOVT (AJA)	DLC
BADA SIMULIA	398	369	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	371	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	375	0.72	GOVT (AJA)	DLC
BADA SIMULIA	398	378	1.40	GOVT (AJA)	DLC
BADA SIMULIA	398	379	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	380	0.98	GOVT (AJA)	DLC
BADA SIMULIA	398	381	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	384	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	385	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	386	1.14	GOVT (AJA)	DLC
BADA SIMULIA	398	390	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	396	1.84	GOVT (AJA)	DLC
BADA SIMULIA	398	399	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	400	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	401	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	405	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	408	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	409	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	413	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	416	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	426	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	432	0.70	GOVT (AJA)	DLC
BADA SIMULIA	398	435	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	436	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	438	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	447	0.05	GOVT (AJA)	DLC

BADA SIMULIA	398	451	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	460	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	461	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	462	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	463	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	469	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	471	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	476	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	480	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	481	0.98	GOVT (AJA)	DLC
BADA SIMULIA	398	483	0.77	GOVT (AJA)	DLC
BADA SIMULIA	398	484	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	485	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	487	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	488	0.33	GOVT (AJA)	DLC
BADA SIMULIA	398	489	1.66	GOVT (AJA)	DLC
BADA SIMULIA	398	492	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	493	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	495	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	496	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	498	0.79	GOVT (AJA)	DLC
BADA SIMULIA	398	499	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	501	0.47	GOVT (AJA)	DLC
BADA SIMULIA	398	502	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	505	0.96	GOVT (AJA)	DLC
BADA SIMULIA	398	506	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	507	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	508	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	509	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	516	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	519	0.57	GOVT (AJA)	DLC
BADA SIMULIA	398	520	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	522	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	527	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	528	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	529	1.22	GOVT (AJA)	DLC
BADA SIMULIA	398	530	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	533	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	534	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	539	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	540	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	541	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	542	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	546	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	549	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	550	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	551	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	552	0.81	GOVT (AJA)	DLC
BADA SIMULIA	398	553	0.73	GOVT (AJA)	DLC
BADA SIMULIA	398	554	1.52	GOVT (AJA)	DLC

BADA SIMULIA	398	155	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	556	0.64	GOVT (AJA)	DLC
BADA SIMULIA	398	558	0.38	GOVT (AJA)	DLC
BADA SIMULIA	398	559	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	561	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	564	0.66	GOVT (AJA)	DLC
BADA SIMULIA	398	567	0.38	GOVT (AJA)	DLC
BADA SIMULIA	398	570	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	571	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	573	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	575	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	579	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	580	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	585	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	586	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	587	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	594	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	613	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	619	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	627	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	628	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	629	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	630	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	626	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	641	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	654	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	655	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	661	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	662	0.69	GOVT (AJA)	DLC
BADA SIMULIA	398	667	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	671	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	675	0.59	GOVT (AJA)	DLC
BADA SIMULIA	398	677	0.72	GOVT (AJA)	DLC
BADA SIMULIA	398	678	13.12	GOVT (AJA)	DLC
BADA SIMULIA	398	683	2.08	GOVT (AJA)	DLC
BADA SIMULIA	398	684	0.83	GOVT (AJA)	DLC
BADA SIMULIA	398	658	0.42	GOVT (AJA)	DLC
BADA SIMULIA	398	686	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	687	0.50	GOVT (AJA)	DLC
BADA SIMULIA	398	688	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	693	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	706	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	707	1.54	GOVT (AJA)	DLC
BADA SIMULIA	398	715	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	716	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	717	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	732	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	733	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	742	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	743	0.17	GOVT (AJA)	DLC

BADA SIMULIA	398	748	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	751	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	753	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	757	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	758	0.36	GOVT (AJA)	DLC
BADA SIMULIA	398	759	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	763	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	764	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	766	0.81	GOVT (AJA)	DLC
BADA SIMULIA	398	770	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	771	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	774	0.58	GOVT (AJA)	DLC
BADA SIMULIA	398	777	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	778	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	779	1.76	GOVT (AJA)	DLC
BADA SIMULIA	398	781	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	787	0.63	GOVT (AJA)	DLC
BADA SIMULIA	398	789	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	790	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	792	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	793	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	795	0.66	GOVT (AJA)	DLC
BADA SIMULIA	398	796	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	798	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	799	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	802	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	803	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	806	0.74	GOVT (AJA)	DLC
BADA SIMULIA	398	807	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	810	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	811	1.29	GOVT (AJA)	DLC
BADA SIMULIA	398	812	1.00	GOVT (AJA)	DLC
BADA SIMULIA	398	814	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	816	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	818	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	819	0.82	GOVT (AJA)	DLC
BADA SIMULIA	398	820	0.96	GOVT (AJA)	DLC
BADA SIMULIA	398	822	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	823	0.58	GOVT (AJA)	DLC
BADA SIMULIA	398	826	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	827	1.64	GOVT (AJA)	DLC
BADA SIMULIA	398	830	0.71	GOVT (AJA)	DLC
BADA SIMULIA	398	832	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	833	1.34	GOVT (AJA)	DLC
BADA SIMULIA	398	835	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	836	1.79	GOVT (AJA)	DLC
BADA SIMULIA	398	838	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	841	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	843	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	844	0.59	GOVT (AJA)	DLC

BADA SIMULIA	398	845	0.52	GOVT (AJA)	DLC
BADA SIMULIA	398	846	1.86	GOVT (AJA)	DLC
BADA SIMULIA	398	847	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	850	0.69	GOVT (AJA)	DLC
BADA SIMULIA	398	853	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	856	0.58	GOVT (AJA)	DLC
BADA SIMULIA	398	858	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	859	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	860	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	861	1.00	GOVT (AJA)	DLC
BADA SIMULIA	398	863	1.26	GOVT (AJA)	DLC
BADA SIMULIA	398	864	3.50	GOVT (AJA)	DLC
BADA SIMULIA	398	872	0.57	GOVT (AJA)	DLC
BADA SIMULIA	398	873	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	874	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	878	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	881	0.83	GOVT (AJA)	DLC
BADA SIMULIA	398	884	0.78	GOVT (AJA)	DLC
BADA SIMULIA	398	889	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	891	0.69	GOVT (AJA)	DLC
BADA SIMULIA	398	892	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	900	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	905	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	906	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	909	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	918	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	923	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	927	0.75	GOVT (AJA)	DLC
BADA SIMULIA	398	928	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	940	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	943	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	944	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	945	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	946	1.03	GOVT (AJA)	DLC
BADA SIMULIA	398	947	0.71	GOVT (AJA)	DLC
BADA SIMULIA	398	948	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	949	2.22	GOVT (AJA)	DLC
BADA SIMULIA	398	956	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	957	2.32	GOVT (AJA)	DLC
BADA SIMULIA	398	958	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	959	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	963	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	965	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	966	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	969	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	970	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	971	0.64	GOVT (AJA)	DLC
BADA SIMULIA	398	972	1.06	GOVT (AJA)	DLC
BADA SIMULIA	398	973	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	926	0.54	GOVT (AJA)	DLC

BADA SIMULIA	398	977	1.35	GOVT (AJA)	DLC
BADA SIMULIA	398	978	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	979	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	980	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	981	4.02	GOVT (AJA)	DLC
BADA SIMULIA	398	982	0.47	GOVT (AJA)	DLC
BADA SIMULIA	398	983	0.69	GOVT (AJA)	DLC
BADA SIMULIA	398	986	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	987	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	989	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	991	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	993	1.26	GOVT (AJA)	DLC
BADA SIMULIA	398	994	1.25	GOVT (AJA)	DLC
BADA SIMULIA	398	997	0.38	GOVT (AJA)	DLC
BADA SIMULIA	398	1007	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1008	1.72	GOVT (AJA)	DLC
BADA SIMULIA	398	1009	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	1012	0.74	GOVT (AJA)	DLC
BADA SIMULIA	398	1014	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1020	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	1022	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1025	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1028	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	1030	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	1032	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1038	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	1046	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1047	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	1051	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1069	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	1072	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1073	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	1074	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	1075	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1077	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1078	1.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1079	0.56	GOVT (AJA)	DLC
BADA SIMULIA	398	1080	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1082	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1083	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	1084	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1085	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1086	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	1092	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	1093	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1095	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	1097	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	1099	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	1100	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	1102	0.08	GOVT (AJA)	DLC

BADA SIMULIA	398	1103	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	1104	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	1105	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	1106	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	1107	0.76	GOVT (AJA)	DLC
BADA SIMULIA	398	1108	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	1109	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	1110	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1112	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	1118	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	1119	0.64	GOVT (AJA)	DLC
BADA SIMULIA	398	1120	1.50	GOVT (AJA)	DLC
BADA SIMULIA	398	1121	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	1122	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	1123	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	1124	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	1128	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	1132	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1133	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1134	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	1135	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	1138	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	1140	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1154	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	1157	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	1158	0.42	GOVT (AJA)	DLC
BADA SIMULIA	398	1161	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	1163	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	1172	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	1173	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	1175	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	1176	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	1178	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1179	0.74	GOVT (AJA)	DLC
BADA SIMULIA	398	1185	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	1186	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1254	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1259	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	1271	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1274	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	1279	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1277	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	1278	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	1282	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	1283	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1287	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1289	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1292	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	1294	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1296	0.28	GOVT (AJA)	DLC

BADA SIMULIA	398	1299	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	1302	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1303	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1304	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1306	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1315	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	1317	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	1320	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	1321	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	1323	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	1324	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	1326	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	1327	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1328	0.92	GOVT (AJA)	DLC
BADA SIMULIA	398	1329	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	1330	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	1333	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	1337	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1346	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	1347	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1349	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1350	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1352	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1354	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	1355	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	1356	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1357	0.79	GOVT (AJA)	DLC
BADA SIMULIA	398	1358	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	1359	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	1360	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	1361	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1362	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1363	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	1372	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1373	0.97	GOVT (AJA)	DLC
BADA SIMULIA	398	1374	0.64	GOVT (AJA)	DLC
BADA SIMULIA	398	1375	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1382	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	1383	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	1384	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1385	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	1389	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1391	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1399	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1400	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1410	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	1411	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	1412	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	1413	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	1414	0.80	GOVT (AJA)	DLC

BADA SIMULIA	398	1417	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	1419	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1421	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	1422	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	1426	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	1429	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1433	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	1435	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1436	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	1438	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	1441	1.72	GOVT (AJA)	DLC
BADA SIMULIA	398	1443	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	1444	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	1445	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	1446	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	1447	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	1448	0.75	GOVT (AJA)	DLC
BADA SIMULIA	398	1449	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1450	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	1451	1.98	GOVT (AJA)	DLC
BADA SIMULIA	398	1456	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	1459	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1461	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1469	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	1470	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	1474	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1475	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1477	0.72	GOVT (AJA)	DLC
BADA SIMULIA	398	1484	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	1485	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1486	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1487	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	1488	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	1489	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	1490	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	1491	0.61	GOVT (AJA)	DLC
BADA SIMULIA	398	1492	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	1493	0.63	GOVT (AJA)	DLC
BADA SIMULIA	398	1494	0.83	GOVT (AJA)	DLC
BADA SIMULIA	398	1498	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	1499	0.86	GOVT (AJA)	DLC
BADA SIMULIA	398	1500	0.65	GOVT (AJA)	DLC
BADA SIMULIA	398	1501	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1502	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1503	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	1507	0.52	GOVT (AJA)	DLC
BADA SIMULIA	398	1509	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1511	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1512	0.63	GOVT (AJA)	DLC
BADA SIMULIA	398	1515	3.25	GOVT (AJA)	DLC

BADA SIMULIA	398	1517	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	1518	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	1519	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	1522	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	1523	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1525	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	1526	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1527	3.88	GOVT (AJA)	DLC
BADA SIMULIA	398	1529	2.68	GOVT (AJA)	DLC
BADA SIMULIA	398	1530	0.86	GOVT (AJA)	DLC
BADA SIMULIA	398	1532	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	1537	0.33	GOVT (AJA)	DLC
BADA SIMULIA	398	1538	1.00	GOVT (AJA)	DLC
BADA SIMULIA	398	1541	0.76	GOVT (AJA)	DLC
BADA SIMULIA	398	1542	0.74	GOVT (AJA)	DLC
BADA SIMULIA	398	1547	1.90	GOVT (AJA)	DLC
BADA SIMULIA	398	1548	0.91	GOVT (AJA)	DLC
BADA SIMULIA	398	1549	0.92	GOVT (AJA)	DLC
BADA SIMULIA	398	1554	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1555	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	1559	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	1564	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1565	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	1590	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1591	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	1601	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	1608	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1609	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1614	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	1617	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	1620	2.28	GOVT (AJA)	DLC
BADA SIMULIA	398	1625	0.69	GOVT (AJA)	DLC
BADA SIMULIA	398	1626	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1629	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1630	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	1631	0.47	GOVT (AJA)	DLC
BADA SIMULIA	398	1634	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	1641	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1647	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1648	0.42	GOVT (AJA)	DLC
BADA SIMULIA	398	1649	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	1660	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	1661	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	1662	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	1664	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	1668	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	1671	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	1672	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1674	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1675	0.21	GOVT (AJA)	DLC

BADA SIMULIA	398	1676	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1677	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	1678	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1679	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1681	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	1383	0.48	GOVT (AJA)	DLC
BADA SIMULIA	398	1684	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	1686	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	1694	0.73	GOVT (AJA)	DLC
BADA SIMULIA	398	1696	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	1699	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	1703	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1704	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	1705	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	1706	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	1711	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1712	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1713	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1714	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	1715	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1716	0.63	GOVT (AJA)	DLC
BADA SIMULIA	398	1720	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1724	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	1725	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	1726	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	1730	0.42	GOVT (AJA)	DLC
BADA SIMULIA	398	1734	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	1735	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1737	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1738	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1739	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1740	4.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1741	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1742	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	1743	0.33	GOVT (AJA)	DLC
BADA SIMULIA	398	1744	5.45	GOVT (AJA)	DLC
BADA SIMULIA	398	1745	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	1746	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	1747	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	1748	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	1749	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	1750	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1751	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	1752	0.95	GOVT (AJA)	DLC
BADA SIMULIA	398	1753	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	1754	1.44	GOVT (AJA)	DLC
BADA SIMULIA	398	1761	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1763	4.33	GOVT (AJA)	DLC
BADA SIMULIA	398	1764	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	1765	0.66	GOVT (AJA)	DLC

BADA SIMULIA	398	1766	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	1768	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	1769	1.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1771	0.74	GOVT (AJA)	DLC
BADA SIMULIA	398	1772	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	1775	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	1777	0.33	GOVT (AJA)	DLC
BADA SIMULIA	398	1778	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1780	4.74	GOVT (AJA)	DLC
BADA SIMULIA	398	1783	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	1784	0.77	GOVT (AJA)	DLC
BADA SIMULIA	398	1788	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	1789	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	1790	1.45	GOVT (AJA)	DLC
BADA SIMULIA	398	1792	0.38	GOVT (AJA)	DLC
BADA SIMULIA	398	1793	0.80	GOVT (AJA)	DLC
BADA SIMULIA	398	1794	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	1795	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	1796	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1800	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1801	0.56	GOVT (AJA)	DLC
BADA SIMULIA	398	1802	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	1804	2.79	GOVT (AJA)	DLC
BADA SIMULIA	398	1808	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	1816	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	1817	0.38	GOVT (AJA)	DLC
BADA SIMULIA	398	1818	2.33	GOVT (AJA)	DLC
BADA SIMULIA	398	1822	1.35	GOVT (AJA)	DLC
BADA SIMULIA	398	1824	7.07	GOVT (AJA)	DLC
BADA SIMULIA	398	1827	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	1828	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	1830	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	1834	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1836	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1838	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	1840	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	1842	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1844	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	1845	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1846	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	1847	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1860	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1861	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	1862	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	1863	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1864	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1866	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	1867	2.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1869	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	1874	0.05	GOVT (AJA)	DLC

BADA SIMULIA	398	1877	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	1878	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1879	1.59	GOVT (AJA)	DLC
BADA SIMULIA	398	1883	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	1894	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1902	1.21	GOVT (AJA)	DLC
BADA SIMULIA	398	1910	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	1913	1.94	GOVT (AJA)	DLC
BADA SIMULIA	398	1914	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1916	0.53	GOVT (AJA)	DLC
BADA SIMULIA	398	1924	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1928	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	1929	1.43	GOVT (AJA)	DLC
BADA SIMULIA	398	1938	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	1940	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1943	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	1947	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	1948	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	1950	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1951	3.46	GOVT (AJA)	DLC
BADA SIMULIA	398	1959	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	1962	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	1963	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	1964	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	1965	1.07	GOVT (AJA)	DLC
BADA SIMULIA	398	1966	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	1967	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	1968	0.53	GOVT (AJA)	DLC
BADA SIMULIA	398	1969	2.48	GOVT (AJA)	DLC
BADA SIMULIA	398	1970	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	1971	5.56	GOVT (AJA)	DLC
BADA SIMULIA	398	1972	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	1975	0.77	GOVT (AJA)	DLC
BADA SIMULIA	398	1976	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	1977	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	1978	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1979	2.91	GOVT (AJA)	DLC
BADA SIMULIA	398	1980	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	1981	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	1990	0.77	GOVT (AJA)	DLC
BADA SIMULIA	398	1991	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	1992	3.52	GOVT (AJA)	DLC
BADA SIMULIA	398	1996	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	1999	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	2002	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	2003	0.58	GOVT (AJA)	DLC
BADA SIMULIA	398	2004	2.16	GOVT (AJA)	DLC
BADA SIMULIA	398	2009	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2011	0.36	GOVT (AJA)	DLC
BADA SIMULIA	398	2012	0.97	GOVT (AJA)	DLC

BADA SIMULIA	398	2015	1.48	GOVT (AJA)	DLC
BADA SIMULIA	398	2018	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	2019	0.57	GOVT (AJA)	DLC
BADA SIMULIA	398	2023	4.80	GOVT (AJA)	DLC
BADA SIMULIA	398	2025	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	2026	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2027	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	2028	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2029	0.42	GOVT (AJA)	DLC
BADA SIMULIA	398	2030	0.94	GOVT (AJA)	DLC
BADA SIMULIA	398	2032	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	2033	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	2034	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	2035	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	2041	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	2042	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2043	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2046	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	2047	0.56	GOVT (AJA)	DLC
BADA SIMULIA	398	2049	1.03	GOVT (AJA)	DLC
BADA SIMULIA	398	2050	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2052	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2055	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2057	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2062	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2065	0.50	GOVT (AJA)	DLC
BADA SIMULIA	398	2068	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2069	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2071	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	2080	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2082	2.36	GOVT (AJA)	DLC
BADA SIMULIA	398	2083	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2084	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2095	1.43	GOVT (AJA)	DLC
BADA SIMULIA	398	2097	5.47	GOVT (AJA)	DLC
BADA SIMULIA	398	2098	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2099	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2100	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2104	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	2105	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2108	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	2109	0.73	GOVT (AJA)	DLC
BADA SIMULIA	398	2110	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	2118	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2120	0.33	GOVT (AJA)	DLC
BADA SIMULIA	398	2123	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2126	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	2127	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	2129	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2132	0.36	GOVT (AJA)	DLC

BADA SIMULIA	398	2133	6.56	GOVT (AJA)	DLC
BADA SIMULIA	398	2136	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2140	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2141	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2142	0.97	GOVT (AJA)	DLC
BADA SIMULIA	398	2144	0.98	GOVT (AJA)	DLC
BADA SIMULIA	398	2145	1.52	GOVT (AJA)	DLC
BADA SIMULIA	398	2147	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2149	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2151	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	2152	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	2153	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	2154	1.58	GOVT (AJA)	DLC
BADA SIMULIA	398	2155	0.94	GOVT (AJA)	DLC
BADA SIMULIA	398	2158	0.51	GOVT (AJA)	DLC
BADA SIMULIA	398	2162	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2166	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	2167	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2168	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2169	0.50	GOVT (AJA)	DLC
BADA SIMULIA	398	2174	1.61	GOVT (AJA)	DLC
BADA SIMULIA	398	2175	0.33	GOVT (AJA)	DLC
BADA SIMULIA	398	2182	2.01	GOVT (AJA)	DLC
BADA SIMULIA	398	2183	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2184	3.29	GOVT (AJA)	DLC
BADA SIMULIA	398	2186	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2194	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2196	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	2199	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2205	0.99	GOVT (AJA)	DLC
BADA SIMULIA	398	2206	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	2207	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2221	1.98	GOVT (AJA)	DLC
BADA SIMULIA	398	2222	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2223	0.50	GOVT (AJA)	DLC
BADA SIMULIA	398	2225	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2230	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	2233	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2234	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	2238	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2239	9.00	GOVT (AJA)	DLC
BADA SIMULIA	398	2241	0.85	GOVT (AJA)	DLC
BADA SIMULIA	398	2243	4.98	GOVT (AJA)	DLC
BADA SIMULIA	398	2249	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2251	1.69	GOVT (AJA)	DLC
BADA SIMULIA	398	2258	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	2259	0.36	GOVT (AJA)	DLC
BADA SIMULIA	398	2260	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2262	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2264	0.14	GOVT (AJA)	DLC

BADA SIMULIA	398	2265	0.95	GOVT (AJA)	DLC
BADA SIMULIA	398	2266	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	2267	1.49	GOVT (AJA)	DLC
BADA SIMULIA	398	2269	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	2270	1.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2271	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	2275	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	2276	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	2277	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	2278	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	2286	0.79	GOVT (AJA)	DLC
BADA SIMULIA	398	2288	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2289	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	2294	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2295	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	2296	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2267	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	2298	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	2301	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	2303	0.71	GOVT (AJA)	DLC
BADA SIMULIA	398	2304	0.99	GOVT (AJA)	DLC
BADA SIMULIA	398	2305	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	2308	0.57	GOVT (AJA)	DLC
BADA SIMULIA	398	2309	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	2313	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	2318	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2319	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	2320	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	2321	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2322	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2325	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2329	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2332	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	2335	0.47	GOVT (AJA)	DLC
BADA SIMULIA	398	2338	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	2340	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	2347	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2352	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	2356	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	2358	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	2359	0.84	GOVT (AJA)	DLC
BADA SIMULIA	398	2365	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2366	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	2367	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	2368	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	2370	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	2380	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	2381	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2386	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	2389	0.24	GOVT (AJA)	DLC

BADA SIMULIA	398	2392	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	2401	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	2403	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	2407	0.48	GOVT (AJA)	DLC
BADA SIMULIA	398	2409	0.70	GOVT (AJA)	DLC
BADA SIMULIA	398	2410	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2411	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2412	0.61	GOVT (AJA)	DLC
BADA SIMULIA	398	2413	0.50	GOVT (AJA)	DLC
BADA SIMULIA	398	2417	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	2420	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	2428	0.71	GOVT (AJA)	DLC
BADA SIMULIA	398	2431	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	2433	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2434	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2436	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	3437	0.69	GOVT (AJA)	DLC
BADA SIMULIA	398	2439	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2440	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2441	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2443	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2446	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2447	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	2449	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2450	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2451	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	2452	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	2453	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	2455	0.48	GOVT (AJA)	DLC
BADA SIMULIA	398	2457	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2458	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	2463	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	2469	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	2470	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	2471	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	2472	0.80	GOVT (AJA)	DLC
BADA SIMULIA	398	2473	4.76	GOVT (AJA)	DLC
BADA SIMULIA	398	2474	1.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2475	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	2478	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2479	1.85	GOVT (AJA)	DLC
BADA SIMULIA	398	2481	0.66	GOVT (AJA)	DLC
BADA SIMULIA	398	2483	2.50	GOVT (AJA)	DLC
BADA SIMULIA	398	2484	3.82	GOVT (AJA)	DLC
BADA SIMULIA	398	2485	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	2487	0.83	GOVT (AJA)	DLC
BADA SIMULIA	398	2488	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2489	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	2490	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2491	0.08	GOVT (AJA)	DLC

BADA SIMULIA	398	2500	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2501	2.34	GOVT (AJA)	DLC
BADA SIMULIA	398	2503	5.62	GOVT (AJA)	DLC
BADA SIMULIA	398	2504	0.77	GOVT (AJA)	DLC
BADA SIMULIA	398	2505	0.36	GOVT (AJA)	DLC
BADA SIMULIA	398	2506	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	2507	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	2510	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	2511	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	2512	0.87	GOVT (AJA)	DLC
BADA SIMULIA	398	2513	0.34	GOVT (AJA)	DLC
BADA SIMULIA	398	2514	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	2515	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	2516	0.89	GOVT (AJA)	DLC
BADA SIMULIA	398	2518	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	2531	1.42	GOVT (AJA)	DLC
BADA SIMULIA	398	2539	5.91	GOVT (AJA)	DLC
BADA SIMULIA	398	2542	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	2544	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2545	0.68	GOVT (AJA)	DLC
BADA SIMULIA	398	2549	1.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2552	3.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2554	1.37	GOVT (AJA)	DLC
BADA SIMULIA	398	2555	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2562	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2564	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2565	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	2566	0.48	GOVT (AJA)	DLC
BADA SIMULIA	398	2568	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	2573	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2574	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	2588	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2589	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	2601	22.00	GOVT (AJA)	DLC
BADA SIMULIA	398	2603	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2604	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	2605	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2608	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2610	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	2611	1.24	GOVT (AJA)	DLC
BADA SIMULIA	398	2634	0.52	GOVT (AJA)	DLC
BADA SIMULIA	398	2635	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	2637	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	2638	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	2642	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	2643	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	2647	0.50	GOVT (AJA)	DLC
BADA SIMULIA	398	2654	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	2655	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	2656	0.25	GOVT (AJA)	DLC

BADA SIMULIA	398	2662	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	2663	0.36	GOVT (AJA)	DLC
BADA SIMULIA	398	2664	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2667	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	2669	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	2670	1.26	GOVT (AJA)	DLC
BADA SIMULIA	398	2672	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2673	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2674	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	2675	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	2678	0.42	GOVT (AJA)	DLC
BADA SIMULIA	398	2680	1.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2683	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2685	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2687	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	2688	2.00	GOVT (AJA)	DLC
BADA SIMULIA	398	2689	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	2692	1.21	GOVT (AJA)	DLC
BADA SIMULIA	398	2693	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2696	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	2697	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2704	0.59	GOVT (AJA)	DLC
BADA SIMULIA	398	2706	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	2707	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2708	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	2712	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2713	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	2715	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2716	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	2717	0.72	GOVT (AJA)	DLC
BADA SIMULIA	398	2718	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	2719	1.89	GOVT (AJA)	DLC
BADA SIMULIA	398	2725	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2727	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	2729	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2733	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	2734	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2735	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2739	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2740	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2746	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	2747	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2748	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2752	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	2753	1.67	GOVT (AJA)	DLC
BADA SIMULIA	398	2754	0.54	GOVT (AJA)	DLC
BADA SIMULIA	398	2758	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2759	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	2761	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	2766	0.06	GOVT (AJA)	DLC

BADA SIMULIA	398	2767	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2779	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2781	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	2782	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	2785	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2785	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2790	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2791	1.04	GOVT (AJA)	DLC
BADA SIMULIA	398	2792	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2797	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	2799	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2800	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	2807	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2808	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	2809	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2810	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2813	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	2815	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	2816	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	2817	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	2821	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	2822	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2824	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	2825	1.60	GOVT (AJA)	DLC
BADA SIMULIA	398	2830	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2831	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	2836	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2837	0.77	GOVT (AJA)	DLC
BADA SIMULIA	398	2838	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	2839	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	2840	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	2841	0.59	GOVT (AJA)	DLC
BADA SIMULIA	398	2842	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	2843	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2844	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2845	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2846	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	2848	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2851	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2853	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2854	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2855	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	2859	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	2879	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	2882	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	2885	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2892	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	2895	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2897	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	2898	0.10	GOVT (AJA)	DLC

BADA SIMULIA	398	2899	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	2901	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	2902	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	2906	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	2908	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2909	0.41	GOVT (AJA)	DLC
BADA SIMULIA	398	2928	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2931	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	2943	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2353	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	2954	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	2955	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2966	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	2970	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	2973	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	2979	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	2981	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	3025	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	3045	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3053	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	3055	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	3083	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	3114	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3139	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	3155	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	3158	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3214	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	3215	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	3308	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3318	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	3340	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	3352	0.74	GOVT (AJA)	DLC
BADA SIMULIA	398	3368	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	3376	0.99	GOVT (AJA)	DLC
BADA SIMULIA	398	3378	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	3396	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	3399	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	3406	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	3407	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	3437	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	3439	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	3440	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	3441	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	3443	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	3446	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	3460	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	3461	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	3462	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	3463	2.53	GOVT (AJA)	DLC
BADA SIMULIA	398	3470	0.41	GOVT (AJA)	DLC

BADA SIMULIA	398	3477	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	3479	0.43	GOVT (AJA)	DLC
BADA SIMULIA	398	3482	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	3489	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	3499	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	3502	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	3505	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	3506	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	3507	0.13	GOVT (AJA)	DLC
BADA SIMULIA	398	3512	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3513	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	3516	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	3518	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	3522	0.16	GOVT (AJA)	DLC
BADA SIMULIA	398	3526	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	3527	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	3528	0.57	GOVT (AJA)	DLC
BADA SIMULIA	398	3530	0.55	GOVT (AJA)	DLC
BADA SIMULIA	398	3545	0.32	GOVT (AJA)	DLC
BADA SIMULIA	398	3546	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3550	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3551	0.01	GOVT (AJA)	DLC
BADA SIMULIA	398	3552	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	3553	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	3556	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	3557	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	3559	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3560	0.25	GOVT (AJA)	DLC
BADA SIMULIA	398	3561	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	3562	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	3588	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	3625	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	3629	0.02	GOVT (AJA)	DLC
BADA SIMULIA	398	3635	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	3638	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	3639	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	3642	0.46	GOVT (AJA)	DLC
BADA SIMULIA	398	3645	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	3648	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	3652	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	3654	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	3655	1.12	GOVT (AJA)	DLC
BADA SIMULIA	398	3657	0.62	GOVT (AJA)	DLC
BADA SIMULIA	398	3659	0.79	GOVT (AJA)	DLC
BADA SIMULIA	398	3662	2.27	GOVT (AJA)	DLC
BADA SIMULIA	398	3664	1.79	GOVT (AJA)	DLC
BADA SIMULIA	398	3665	0.93	GOVT (AJA)	DLC
BADA SIMULIA	398	3666	0.38	GOVT (AJA)	DLC
BADA SIMULIA	398	3667	0.36	GOVT (AJA)	DLC
BADA SIMULIA	398	3668	0.34	GOVT (AJA)	DLC

BADA SIMULIA	398	3669	0.39	GOVT (AJA)	DLC
BADA SIMULIA	398	3670	0.82	GOVT (AJA)	DLC
BADA SIMULIA	398	3671	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	3672	1.09	GOVT (AJA)	DLC
BADA SIMULIA	398	3675	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	3676	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	3677	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	3680	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	3683	0.40	GOVT (AJA)	DLC
BADA SIMULIA	398	3685	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	3686	2.47	GOVT (AJA)	DLC
BADA SIMULIA	398	3687	0.67	GOVT (AJA)	DLC
BADA SIMULIA	398	3688	0.92	GOVT (AJA)	DLC
BADA SIMULIA	398	3693	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	3695	0.12	GOVT (AJA)	DLC
BADA SIMULIA	398	3702	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	3703	1.12	GOVT (AJA)	DLC
BADA SIMULIA	398	3704	0.26	GOVT (AJA)	DLC
BADA SIMULIA	398	3706	1.46	GOVT (AJA)	DLC
BADA SIMULIA	398	3708	4.54	GOVT (AJA)	DLC
BADA SIMULIA	398	3711	2.80	GOVT (AJA)	DLC
BADA SIMULIA	398	3714	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	3716	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	3717	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	3719	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	3722	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	3724	0.18	GOVT (AJA)	DLC
BADA SIMULIA	398	3725	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	3726	0.23	GOVT (AJA)	DLC
BADA SIMULIA	398	3727	0.57	GOVT (AJA)	DLC
BADA SIMULIA	398	3736	7.01	GOVT (AJA)	DLC
BADA SIMULIA	398	3745	1.90	GOVT (AJA)	DLC
BADA SIMULIA	398	328/3748	0.28	GOVT (AJA)	DLC
BADA SIMULIA	398	975/3749	0.30	GOVT (AJA)	DLC
BADA SIMULIA	398	2610/3751	0.35	GOVT (AJA)	DLC
BADA SIMULIA	398	2112/3753	0.21	GOVT (AJA)	DLC
BADA SIMULIA	398	1344/3758	0.19	GOVT (AJA)	DLC
BADA SIMULIA	398	2016/3759	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	3358/3760	0.04	GOVT (AJA)	DLC
BADA SIMULIA	398	3354/3761	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	2081/3763	0.58	GOVT (AJA)	DLC
BADA SIMULIA	398	46/3764	0.60	GOVT (AJA)	DLC
BADA SIMULIA	398	39/3765	0.68	GOVT (AJA)	DLC
BADA SIMULIA	398	62/3766	0.61	GOVT (AJA)	DLC
BADA SIMULIA	398	47/3767	0.27	GOVT (AJA)	DLC
BADA SIMULIA	398	715/3768	0.22	GOVT (AJA)	DLC
BADA SIMULIA	398	1906/3769	0.10	GOVT (AJA)	DLC
BADA SIMULIA	398	954/3770	0.70	GOVT (AJA)	DLC
BADA SIMULIA	398	740/3771	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	724/3772	0.13	GOVT (AJA)	DLC

BADA SIMULIA	398	882/3774	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	594/3777	0.29	GOVT (AJA)	DLC
BADA SIMULIA	398	911/3778	0.57	GOVT (AJA)	DLC
BADA SIMULIA	398	780/3780	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	204/3781	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2612/3782	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	2720/3783	0.17	GOVT (AJA)	DLC
BADA SIMULIA	398	1309/3784	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	821/3786	0.07	GOVT (AJA)	DLC
BADA SIMULIA	398	914/3787	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	813/3788	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	1087/3790	0.70	GOVT (AJA)	DLC
BADA SIMULIA	398	812/3792	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	1513/3794	0.20	GOVT (AJA)	DLC
BADA SIMULIA	398	2351/3795	0.11	GOVT (AJA)	DLC
BADA SIMULIA	398	2660/3796	0.49	GOVT (AJA)	DLC
BADA SIMULIA	398	2253/3797	1.33	GOVT (AJA)	DLC
BADA SIMULIA	398	773/3798	0.31	GOVT (AJA)	DLC
BADA SIMULIA	398	3285/3802	0.09	GOVT (AJA)	DLC
BADA SIMULIA	398	1033/3805	0.24	GOVT (AJA)	DLC
BADA SIMULIA	398	2445/3808	0.03	GOVT (AJA)	DLC
BADA SIMULIA	398	3707/3809	0.45	GOVT (AJA)	DLC
BADA SIMULIA	398	2252/3815	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	3628/3717	0.08	GOVT (AJA)	DLC
BADA SIMULIA	398	3599/3819	0.05	GOVT (AJA)	DLC
BADA SIMULIA	398	2137/3821	0.15	GOVT (AJA)	DLC
BADA SIMULIA	398	2139/3822	0.37	GOVT (AJA)	DLC
BADA SIMULIA	398	2476/3823	4.25	GOVT (AJA)	DLC
BADA SIMULIA	398	2753/3824	0.50	GOVT (AJA)	DLC
BADA SIMULIA	398	2951/3825	1.00	GOVT (AJA)	DLC
BADA SIMULIA	398	1983/3830	0.44	GOVT (AJA)	DLC
BADA SIMULIA	398	3856	0.14	GOVT (AJA)	DLC
BADA SIMULIA	398	3857	0.06	GOVT (AJA)	DLC
BADA SIMULIA	398	2951/3892	0.47	GOVT (AJA)	DLC
BADA SIMULIA	398	2144/3864	1.44	GOVT (AJA)	DLC
BADA SIMULIA	398	3476/3865	0.78	GOVT (AJA)	DLC
BADA SIMULIA	398	1078/3866	0.43	GOVT (AJA)	DLC
		Total	**691.70**		
	TAHASIL TOTAL		**2912.84**	**Acre**	
			1178.81	**Hectar**	
GRAND TOTAL DLC FOREST IN DIVISION			**1741.01**	**Hectar**	

ABSTRACT

Total DLC Forest of Baripada Forest Division	
TAHASIL	**AREA (HA)**
Udala Tahasil	**1178.81**
Rasgobindpur Tahasil	**385.10**
Baripada Tahasil	**52.66**
Badsahi Tahasil	**124.45**
Total	**1741.01**