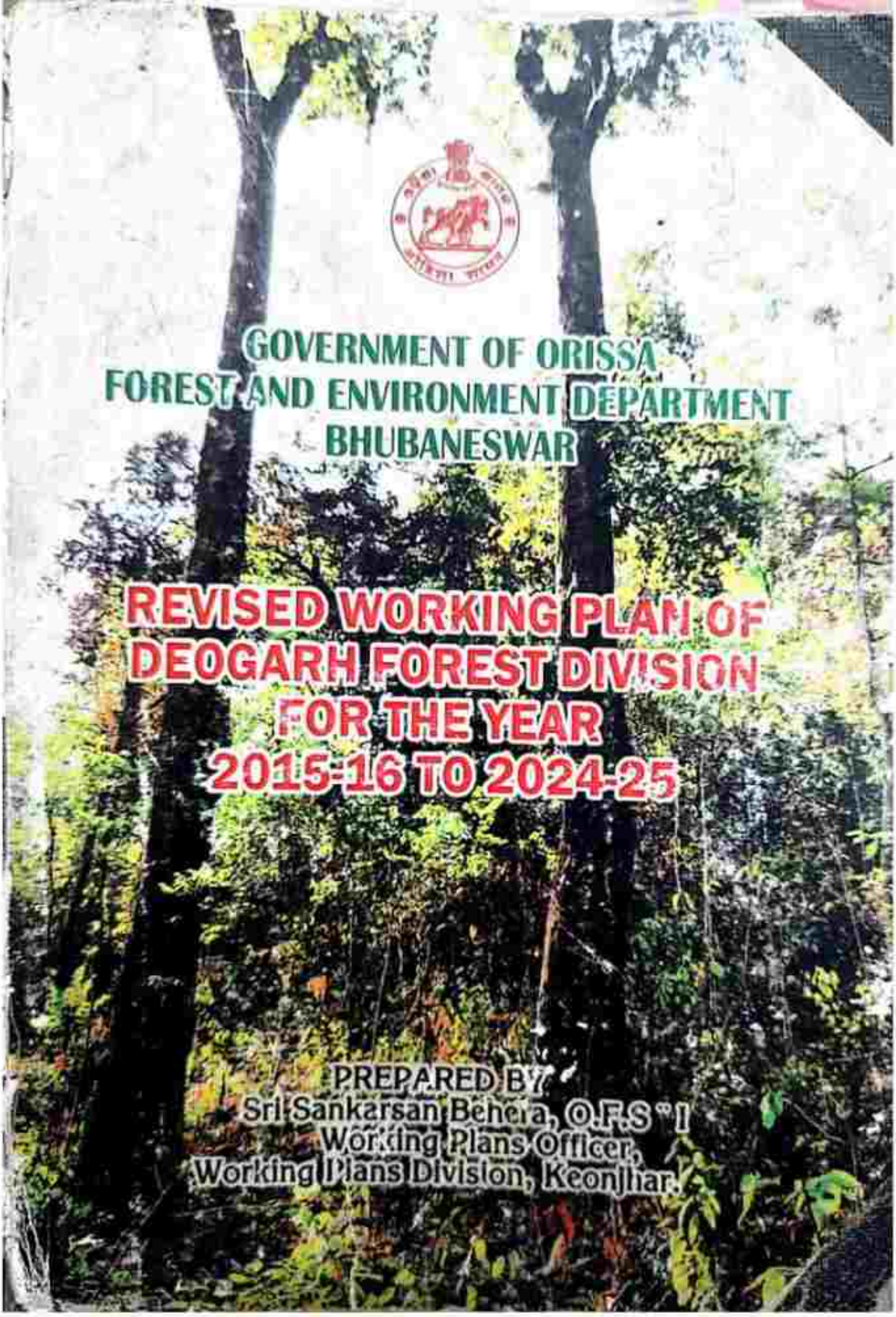


GOVERNMENT OF ORISSA
FOREST AND ENVIRONMENT DEPARTMENT
BHUBANESWAR

REVISED WORKING PLAN OF DEOGARH FOREST DIVISION FOR THE YEAR 2015-16 TO 2024-25

PREPARED BY
Sri Sankarsan Behera, O.F.S "I
Working Plans Officer,
Working Plans Division, Keonjhar.

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Government of India/ भारत सरकार
Ministry of Environment, Forest & Climate Change/ पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Eastern Regional Office/ पूर्वी क्षेत्रीय कार्यालय
A/3, Chandrasekharpur/ ए/3, चन्द्रशेखरपुर
Bhubaneswar - 751 023/ भुवनेश्वर - 751 023
Telephone: 0674-2301213, 2301248, 2302452, 2302453. Fax: 0674-2302432. E-mail: roez.bbsr-mef@nic.

No. 13-FCWP/OS-Deo

29th January, 2016

To

The Principal Secretary,
Forest Department,
Govt. of Odisha,
Sachivalaya, Bhubaneswar.

Sub: Approval of draft revised Working Plan of Deogarh Forest Division for the period 2015-16 to 2024-25

Ref: The CCF, Odisha letter No. 19460/11F(SFM)-02/2014 dated 28.11.2015.

Sir,

The revised draft Working Plan of Deogarh Forest Division for the period 2015-16 to 2024-25 has been examined and it is observed that the clarifications sought by MoEF&CC have been incorporated in the said working plan. Accordingly, I am directed to inform that after examination of the working plan of Deogarh Forest Division, the Central Government (MoEF&CC) with the powers vested under Forest (Conservation) Act, 1980, has decided to accord approval of the working plan of Deogarh Forest Division for the period 2015-16 to 2024-25, subject to the following General and Specific conditions.

The formal endorsement / approval from the State Govt. may also be obtained.

General Conditions:

1. The orders of Hon'ble Supreme Court of India in the matter of W.P. No.202/95 Godaverman Thirumulkpad Vs Union of India and related interlocutory applications shall be strictly complied with. Any prescription or operation at variance with the order of Hon'ble Apex Court shall be kept in abeyance till such order is in force or otherwise not modified.

2. Further, in strict compliance with Hon'ble Supreme Court's order dated 22.09.2000, the State Government of Odisha shall ensure that regeneration of forest is commensurate with fellings, if any, to be carried out under the present working plan.

3. Consequently, **no felling should be carried out without making allocation of requisite funds for undertaking regeneration operation** in order to ensure regeneration to be commensurate with fellings. In case of failure of regeneration or any shortfall in achieving the target of regeneration, further harvesting shall remain suspended till backlog/ shortfall in regeneration is made up and subsequent format approval from the Eastern Regional Office is obtained.

4. This working plan is approved for the period 2015-16 to 2024-25.

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5. Only wind fallen / uprooted trees shall be allowed to be harvested after its special approval of the list of enumerated trees by the CF (T). In case of epidemic outbreak, special permission for tree felling may be obtained from the CCF (Working Plan) under intimation to Eastern Regional Office.

6. Deviation statement along with the prescribed documents shall be reported and got endorsed from the competent authority by the end of the year of operation. Accordingly a summary of the report/certificate shall be submitted along with the Annual Action Taken Report to the E.R.O. for information and record.

7. A mid-term evaluation of the implementation of working plan prescriptions and its impact on the forests may be done after the end of initial five years for which reasonable number of benchmark / sample plots may be maintained.

8. No new road shall be constructed and no fresh forest area shall be broken for widening / reconstruction of existing roads without obtaining prior approval under Forest (Conservation) Act, 1980

9. Approval of the working plan does not permit to carry out any non-forestry work including construction of building, for which necessary permission under F(C) Act shall be obtained, as may be required.

10. CF (T) shall submit to the CCF (WP) / PCCF the yearly action taken report against the physical & financial targets of felling & regeneration against each working circle of this W.P. by the end of the year of operation.

11. Prescriptions must be provided for demarcation of undemarcated balance forest area. The length of undemarcated forest area, number of pillars and funds required to demarcate it and year wise plan for demarcation so as to complete it at the earliest should be provided.

12. Immediate action may be taken for repairing old pillars. Prescriptions may be provided for revisiting all pillars every five years for purpose of maintenance and appropriate action be taken depending on condition of boundary pillars. Staff in charge of beat will verify physically the boundary pillars and shall give a certificate annually to the DFO with copy to the CCF, Working Plan confirming that no fresh encroachments have taken place. Vulnerable areas will be verified by the Range Officers.

13. The detail copy of the PF/RF Notification may be compiled and a copy of each shall be kept with the DFO/Working Plan Officer and CCF, Working Plan for reference.

14. The Department should prepare a programme for DGPS survey of forest boundaries and prepare geo-referenced maps with important administrative and management details.

15. The detail of area settled under Forest Rights Act, 2006 may be incorporated in Working Plan with surveyed maps

16. Plantation details along with current status (conditions of plantation and survival) may also be included along with GPS surveyed boundary locations shown on a map, so that chances of mismanagement, confusion, encroachment and problem of identification of the site are reduced.

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17. The encroachment details, if any, may be furnished along with a map.

18. Identification of locally important medicinal plant species which are becoming rarer should be done based on data and discussion with local Vaidyas. The details of the above should be provided in the Working Plan.

19. State Forest Department shall initiate the process for the preservation of old available maps.

Specific Conditions:

The prescriptions under the proposed working circles are approved with observations stated above and with specific condition that:

1. "No forest, bearing naturally grown trees shall be clear felled for any purpose what so ever.

2. The Bamboos extracted in the Bamboo coupes due for working for every year will be supplied to the local people/bamboo artisans as per their requirement on priority basis before disposing the bamboo for commercial purposes.

Central Govt. reserves the right to review, modify or withdraw this approval at any time if any of the conditions of approval are not implemented or relevant modifications in the Working is required so as to keep it in conformity with the orders, circulars and guidelines issued by the Central Govt. under Forest (Conservation) Act, 1980 or any other statute and National Forest Policy.

Yours faithfully,

(S. Mohapatra)
Conservator of Forests (Central)

Copy to:

1. The Addl. Director General of Forests (FC), Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Agni Wing, Aliganj, Jorbagh Road, New Delhi-110 003 for kind information.
2. The Principal Chief Conservator of Forests, Forest Department, Govt. of Orissa, Aranya Bhawan, Chandrasekharpur, Bhubaneswar for kind information and necessary action.
3. The Addl. PCCF (P&SM), Forest Department, Govt. of Orissa, Aranya Bhawan, Chandrasekharpur, Bhubaneswar for kind information and necessary action.
4. The Managing Director, Orissa Forest Development Corporation Limited, Bhubaneswar for kind information.
5. Guard File.

Conservator of Forests (Central)

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BY FAX

STATE FOREST HEADQUARTERS, ODISHA
OFFICE OF THE PRINCIPAL CHIEF CONSERVATOR OF FORESTS,
ARANYA BHAWAN, CHANDRASEKHARPUR, BHUBANESWAR-23.

Memo No. 2393 /11F(SFM)-02/2014
Dated, Bhubaneswar the 29/31 February, 2016

To

The Divisional Forest Officer,
Deogarh Forest Division.

Sub: - Approval of draft revised Working Plan of Deogarh Forest Division for the period from 2015-16 to 2024-25.

I am directed to say that Government of India, Ministry of Environment, Forests & Climate Change, Eastern Regional Office, Chandrasekharpur, Bhubaneswar vide their letter No.13-FCWP/ OS-Deo, dt.29.01.2016 (copy enclosed) have accorded approval of the working Plan of Deogarh Forest Division for the period from 2015-16 to 2024-25 subject to the General and Specific conditions mentioned therein, which should be followed scrupulously. You are requested to give delivery both bamboo and timber coupes due for working during 2015-16 to OFDC Ltd immediately.

This is most 'URGENT'.

Encls. – As above,

1.2.2016
Additional PCCF
(Protection & Sustainable Management)

Memo No. 2394 /Dt. 2-2-16

Copy along with a copy of the le letter No.13-FCWP/ OS-Deo, dt.29.01.2016 of Government of India, Ministry of Environment, Forests & Climate Change,, Eastern Regional Office, Chandrasekharpur, Bhubaneswar forwarded to RCCF, Rourkela Circle for information and necessary action.

1.2.2016
Additional PCCF
(Protection & Sustainable Management)

Contd...P-2

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Memo No. 2395 /Dt. 2-2-16.

Copy along with a copy of the letter No.13-FCWP/ OS-D dt.29.01.2016 of Government of India, Ministry of Environment, Forest Climate Change, Eastern Regional Office, Chandrasekharp Bhubaneswar forwarded to the Working Plans Officer, Keonjhar Circle information and necessary action.

1-2-2016
Additional PCCF
(Protection & Sustainable Management)

Memo No. 2396 /Dt. 2-2-16

Copy along with a copy of the letter No.13-FCWP/ OS-Deo dt.29.01.2016 of Government of India, Ministry of Environment, Forests & Climate Change, Eastern Regional Office, Chandrasekharpur, Bhubaneswar forwarded to the Managing Director, OFDC Ltd, Kharvelnagar, Bhubaneswar for information and necessary action.

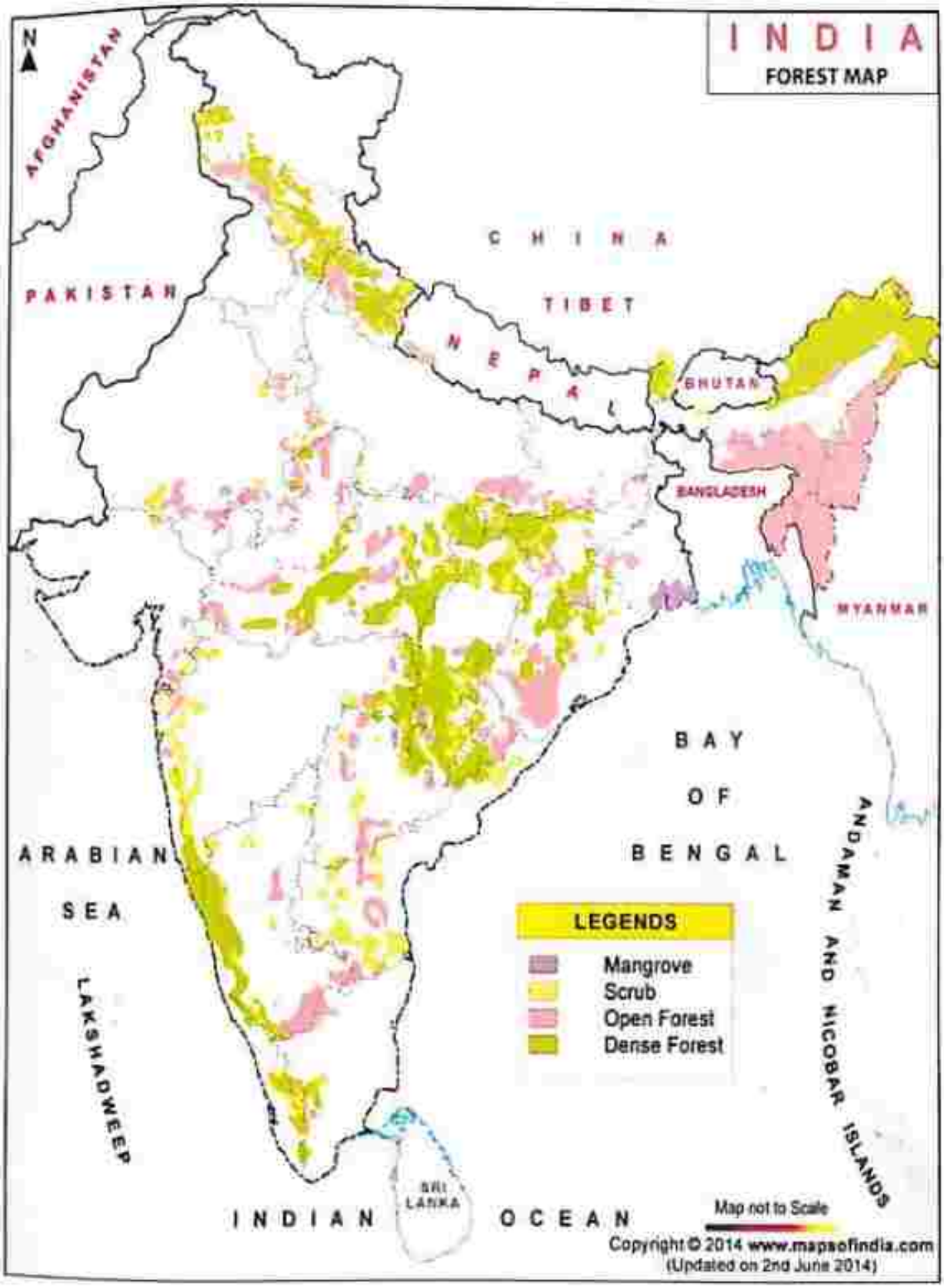
1-2-2016
Additional PCCF
(Protection & Sustainable Management)

Memo No. 2397 /Dt. 2-2-16

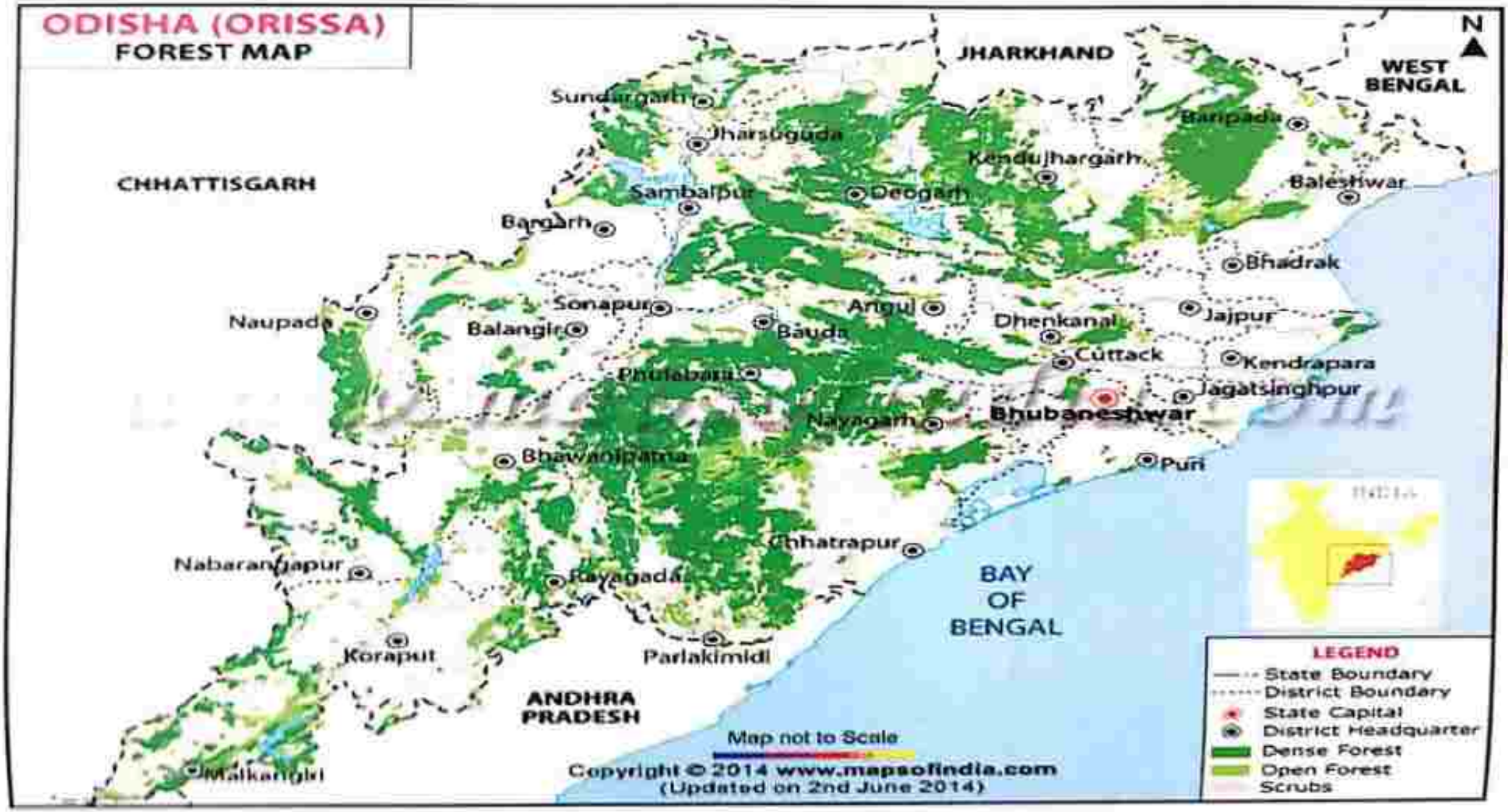
Copy forwarded to the Principal Secretary to Government, Forest & Environment Department, Government of Odisha, Bhubaneswar for information and necessary action.

1-2-2016
Additional PCCF
(Protection & Sustainable Management)

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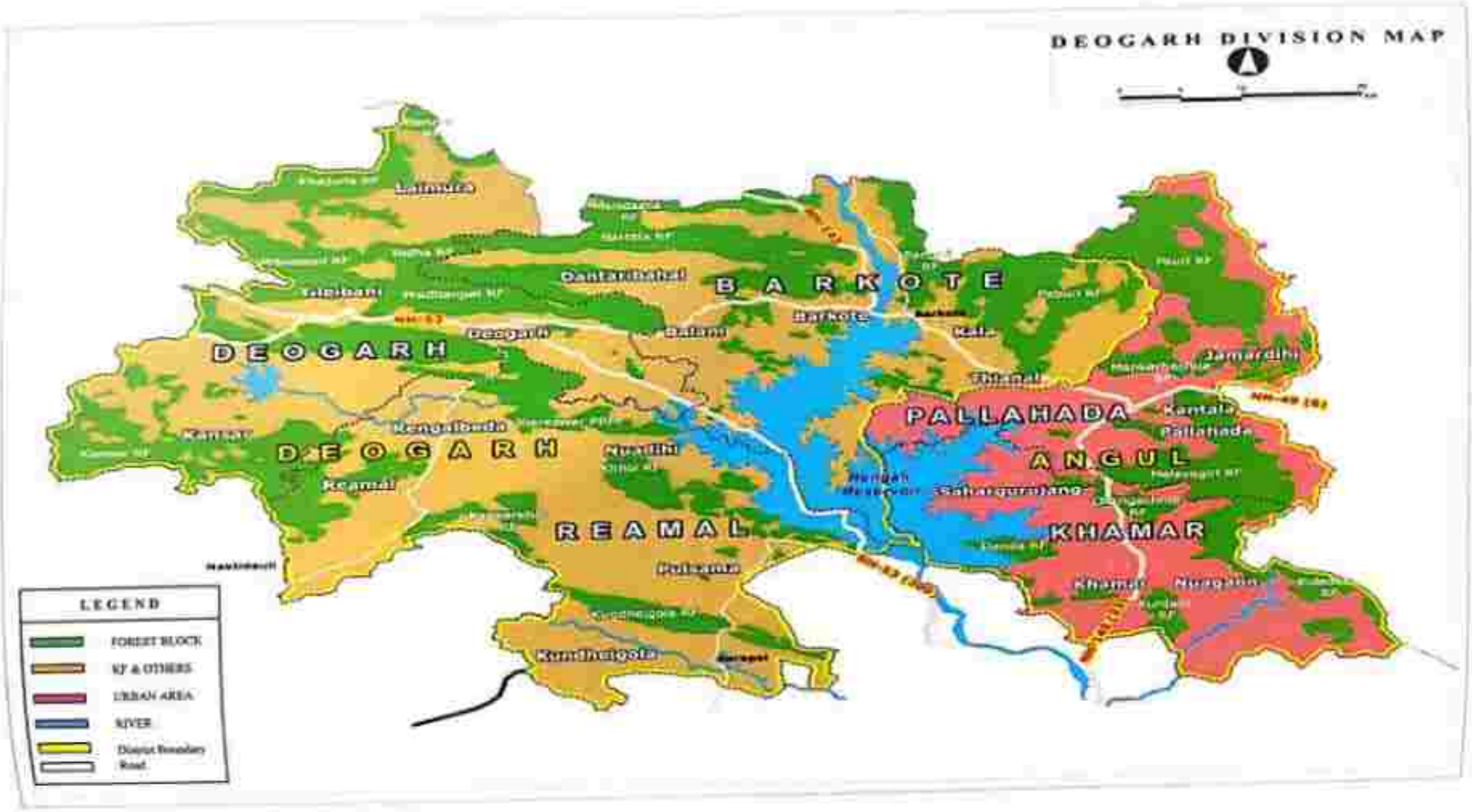


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ADMINISTRATIVE MAP OF DEOGARH FOREST DIVISION

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FOREWORD

Deogarh Forest Division comprises the entire Deogarh District (Geographical area 2940 Sq km) & Pallahara Sub-division of Angul District (Geographical area 1166.98 Sq km). The total geographical area of this division is 4106.98 Sq. km. It is situated between Longitude - E - 084° 29' 51.8" to E - 085° 15' 37.1" and Latitude N - 21° 17' 44.8" to N - 21° 40' 17.5". There are 05 Ranges viz. Deogarh, Barkote, Reamal coming under Deogarh District and Pallahara & Khamar under Pallahara sub-division of Angul District. Reamal Range and Khamar Range have been curved out from Deogarh Range and Pallahara Range respectively during 2003-04 reorganisation of Forest Department.

For scientific management of forest there is a Working Plan prepared by Sri Bhagirathi Behera, IFS, Working Plans Officer, Angul for the period 1995-96 to 2014-15 approved by ministry of Environment & Forest Govt. of India vide their letter No.13-FOWP/OS-BAMRA, Dt.14.05.1997. These present Working Plan will expire on 2014-15. The first PWPR was prepared by me on dt.11.01.2012. The first PWPR has been approved in the Working Plan committee meeting held on dt.18.06.2013.

The Working Plan will be prepared for a period of 10 years for 30 no's of Reserve Forests, 41 no's of Proposed Reserve Forests and 01 no's of PF. After 05 years of implementation and wherever necessary the prescription will be modified suitably.

SRI SUBASH CHANDRA SWAIN, I. F. S.
Regional Chief Conservator of Forests,
Rourkela Circle, Rourkela.

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FOREWORD

Deogarh Forest Division comprises the entire Deogarh District (Geographical area 2940 Sq km) & Pallahara Sub-division of Angul District (Geographical area 1166.98 Sq km). The total geographical area of this division is 4106.98 Sq. km. It is situated between Longitude - E - 084° 29' 51.8" to E - 085° 15' 37.1" and Latitude N - 21° 17' 44.8" to N - 21° 40' 17.5". After re-organization, Deogarh Forest Division has 05 Ranges, 20 Sections, 90 beats and 04 Check gates. For scientific management of forest, the Working Plan was prepared by Sri Bhagirathi Behera, IFS, Working Plans Officer, Angul for the period 1995-96 to 2014-15. The first PWPR was prepared by Subash Chandra Swain on dt.11.01.2012 and approved in the Working Plan committee meeting held on dt.18.06.2013.

Sri Sankarsan Behera, O.F.S (I), Working Plan Officer, Keonjhar prepared the 2nd Preliminary Working Plan Report for revision of Working Plan of Deogarh Division & it was submitted to PCCF, Odisha vide his memo No.206 on dt.24.06.2014. The Working Plan will be prepared for a period of ten years for 30 RFs, 41 PRFs and 01 PF. After five years of implementation and wherever necessary the prescription will be modified suitably by the competent authority.

SRI LINGARAJ OTTA, I. F. S.
Regional Chief Conservator of Forests,
Rourkela Circle, Rourkela

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INTRODUCTION

For scientific management of forest the Working Plan of Bamra and Deogarh Division has been prepared by Sri Bhagirathi Behera, IFS, Working Plans Officer, Angul for the period from 1995-96 to 2014-15 and it was approved by Ministry of Environment and Forest, Govt. of India vide their Letter No.13-FOWP/OS-BAMARA, Dt.14.05.1997. It has been decided that the above Plan will be revised and a separate Plan will be prepared for Deogarh Division. Therefore for the revision of the above Plan the 1st PWPR meeting was conducted on dt.18.06.2013.

Bhuyans and Kondhas were the original inhabitants, who used the forest of this tract before 10th century A.D. There was forest administration of this division before 1880. The logs of were floated in the River Brahmani to Jenapur of Cuttack District. Rajkumar sleeper business was started in 1890 and stopped in 1924. Demarcation works was started in the year 1907 after the appointment of a Dehradun trained Forest Ranger in the year 1906. Agency Forest Officer was the adviser of forest administration from 1920 to 1934. The Forest Rules of the State was published in 1924. The first Working Plan of this division was prepared by Sri Mathur Outhored for the period from 1933 to 1943. This Plan had been extended for next 05 years. Dr. Mooney's Plan was for the period for 1950 to 1970. Sri S.S Panigrahi's Plan was for the period 1970 to 1990. Sri Bhagirathi Behera's Plan is for the period for 1995-96 to 2014-15. The Zamindar Saheb prepared a Scheme for Kulabira Ex-zamindary forests, which was re-drafted by D.F.O, Sambalpur East after 1933-34. Mr. K.L Sengupta's Scheme was for the period 1943-44 to 1972-73. Sri Ananta Tripathy's Scheme was for the period 1978-79 to 1993-94.

Sri Subash Chandra Swain, I.F.S, Regional Chief Conservator of Forests, Rourkela Circle, Rourkela prepared the First Preliminary Working Plan Report for revision of Working Plan of Deogarh Division & it was submitted to PCCF, Odisha on dt.11.01.2012. The Working Plan Committee approved the First Preliminary Working Plan Report of Deogarh Division on dt.18.06.2013 & it was communicated to the Working Plan Officer, Keonjhar vide memo No.9537 (4) dt.08.07.2013 of Principal Chief Conservator of Forests.

Sri Sankarsan Behera, O.F.S (I), Working Plan Officer, Keonjhar prepared the 2nd Preliminary Working Plan Report for revision of Working Plan of Deogarh Division & it was submitted to PCCF, Odisha vide memo No.206 on dt.24.06.2014. The Conservator of Forests (Central) has objected the 2nd PWPR as the same has not been completed in all respect vide office memo No.13-FCWP/OS-DHK dated 30.12.2014, which was communicated to this office vide memo No.613/11F(SFM) 2/2014 dated 12.01.2015 of PCCF Odisha. Accordingly Working Plan of Deogarh is submitted.

Sri Mathur authrod had prepared the first Working Plan for the Deogarh & Bamara Forest. The period of the Plan was from 1933 to 1943. The Plan provided for two selection coupes and six coppice coupes. All most half the forest were excluded from any work. It has been explained that the Working Plan was formed when there was a world-wide deprecation during the year 1930, which had also hit the timber trade. The Plan, therefore, prescribed Working in such areas which were within easy

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reach of the market and Working of such species which has a ready demand. Mathur's Plan prescribed the following Working Circles.

1. The High Forest Working Circle.
2. The Coppice Working Circle.
3. The Unregulated Working Circle.
4. The Bamboo Working Circle.

Sri H.F Mooney, Forest Adviser, Eastern States, had revised the Working Plan of Deogarh State for the period from 1950 to 1970 and prescribed six Working circles covering all the Reserve Forest. The first Plan expired in the year 1943 when the 2nd world war was still rigging. That Plan was extended for 05 years and revision work taken up subsequently. A new Plan would have been force from the year 1948 but administrative changes consequent to merger of the princely states with the province of Odisha from first January 1948 resulted in dislocation of the work. Moony's Plan enforced from the year 1950. The following Working Circles had been constituted.

1. The Sal Conversion Working Circle.
2. The Selection Working Circle.
3. The Coppice Working Circle.
4. The Soft-Wood Working Circle.
5. The Protection Working Circle.
6. The Bamboo Working Circle.

Sri S.S. Panigrahi, Prepared the Plan of Forest Bamara & Deogarh Division which came into force from 1970 to 1990. The main object of management was to improve the present irregular crop by means of long Range Scientific management combined with sound silvicultural practices so as to bring about conditions approaching a normal forest where from the maximum annual sustained yield can be obtained. Keeping this in view Sri Panigrahi had prescribe the following 05 Working Circle.

1. The Sal Conversion Working Circle.
2. The Selection- Cum- improvement Working Circle.
3. The Coppice Working Circle.
4. The Rehabilitation Working Circle.
5. The Bamboo (over lapping) Working Circle.

Sri S.N Bohidar's Scheme was from 1971-72 to 190-91. The Working Scheme for management of demarcated protected forest of Deogarh Division was prepared having the object mainly to improve the condition of the economic species of the forest by natural as well as by artificial regeneration. The prescribed Working Circles were given below.

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1. The Selection- Cum- improvement Working Circle.
2. The Coppice with standard Working Circle.
3. The Rehabilitation Working Circle.

The first Working Plan for the forest of Pallraha under Darbar administration was prepared by Sri G.N. Mathur for the period from 1947-57, which was extended for a period from another 10 years. Prior to this Plan the forest has been exploited to the maximum extent for sleepers and middle aged crop left needed removal of the congestion. The Working Circle prescribed by Sri Mathur were given below.

1. Improvement felling Working Circle.
2. The Coppice Working Circle.
3. Protection Working Circle.

Sri B. Routray, Asst. Working Plans Officer, Sambalpur had prepared a Plan for the period from 1968-69 to 1987-88 and prescribe the following Working Circles.

1. The Selection Working Circle.
2. The Coppices Working Circle.
3. Improvement felling Working Circle.
4. The Soil Conversion Working Circle.
5. The Bamboo Working Circle.

Sri Bhagirathi Behera's Plan is for the period for 1995-96 to 2014-15. The prescribed Working Circles were as follows.

1. The Selection Working Circle.
2. The Rehabilitation-cum-plantation Working Circle.
3. Protection Working Circle.
4. Wildlife (overlapping) Working Circle.
5. Minor Forest Produce (over lapping) Working Circle.
6. Bamboo (overlapping) Working Circle.
7. Miscellaneous Regulations.

The Forest Department of Odisha was re-organized on dt.01.10.2003. The total area of 16177.182 ha, which includes part of 02 Reserve Forest & six Proposed Reserve Forests were transferred from Bamra Wild life Division to Deogarh Division. All transferred blocks have been included in this revision.

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After re-organization, Deogarh Forest Division is situated between longitude E 84^0 29' 51.8" to E 85^0 15' 37.1" & latitude N 21^0 17' 44.8" to N 21^0 40' 17.5". The total geographical area is 4106.98 Sq. KM. RF (30 no's) area is 100731.382 ha, PRF (41 nos) area is 31938.232 ha, PF (01 no's) area is 149.0094 ha, VF area is 686.49 ha, other forest area is 85,523.972 ha, Un-classed forest area is 06.179 ha, area mutated in favour of Forest Departments is 2298.9494 ha (out of which 149.0094 ha has been notified as PF).

Area de-reserved is 357.4822 ha. (Malyagiri RF = 34.164, Rambhadevi RF = 12.03, Gogua RF = 3.71, Panguli RF = 8.02, Nuaguon PRF = 7.72, Kundheigola PRF = 3.224 & KF =288.6142). Area diverted for ST & OTFD Act-2006 is 1829.040 ha (RF = 153.98 & KF = 1675.06). Pre-80 encroachment is 45.3869 ha.

Boundary clearance, Pillar repairing, Pillar's GPS reading, Tree enumeration, Bamboo enumeration and Regeneration survey of all blocks and plantation survey of all plantations have been done. As per the decision of the Working Plan Committee, the Revised Working Plan has been prepared for management of 72 forest blocks, which cover total Deogarh Division. This includes 30 blocks (RF), 41 blocks (PRF) and 01 block (PF).

Area statement of category of Forest					
Sl. No	Status	Area in ha	Notified area in ha	Area de-reserved	Balance area to be managed
1	RF	100731.382	100731.382	211.904	100519.478
2	PRF	31949.176	31949.176	10.944	31938.232
3	PF	149.0094	149.0094	00	149.0094
4	VF	686.490	00	00	00
5	KF	85563.972	00	2009.0611	00
6	UF	06.179	00	00	00
7	Area mutated in favour of FD	2298.9494	149.0094	00	00
	Total	221385.1578 (Except 149.0094 ha)	132978.5768 (Except 149.0094 ha)	222.848 (Except KF)	132606.7194

Area statement of de-reserved and Encroachment					
Sl. No.	Status	Area in RF	Area in PRF	Area in KF	Total area in ha
1	Area de-reserved	57.924	10.944	288.6142	357.4822
2	Pre-80 encroachment	00	00	45.3869	45.3869
3	Area diverted to ST and OTFD	153.98	00	1675.06	1829.040
	Total	211.904	10.944	2009.0611	2231.9091

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Abstract of Area Statement		
Sl. No.	Status	Area in ha.
1	Total geographical area	410698.00
2	Total forest area	221236.1484
3	Total non forest area	189461.8516
4	Total Forest area diverted and encroached	2231.9091
5	Total area to be included in this revision	132606.7194
6	Percentage of forest	53.86
7	Percentage of forest to be managed	32.28

Area statement in Behera's Plan		
Status	Number of Forest block	Total area in ha.
RF	29	90189.600
PRF	33	25512.166
Total	62	115701.766

Area statement of this Working Plan.				
Status	Number of Forest block	Total area in ha.	Area diverted in ha	Balance area in ha
RF	30	100731.382	211.904	100519.478
PRF	41	31949.176	10.944	31938.232
PF	01	149.0094	00	149.0094
Total	72	132829.5674	222.848	132606.7194

Government of Odisha Forest & Environment Department has notified Balibahal forest block as protected Forest vide Notification No.10F (Div)-37/2011/ 4775 / F & E dt.16.03.2011. The area is extended over 149.0094 ha (368.210 acre). Balibahal PF is included in this Plan.

I have completed this revised Working Plan as per the guideline given in the National Working Plan Code, June 2004, Government of India, Ministry of Environment & Forest, New Delhi.

I am greatly indebted to Sri Lingaraj Otta, I.F.S, Regional Chief Conservator of Forest, Rourkela Circle for his constant guidance & help during the time of writing this Working Plan & subsequently, reading through the entire final draft & improving it substantially.

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Thanks are also due to Sri Subash Chandra Swain, I.F.S. Ex Regional Chief Conservator of Forest, Rourkela Circle for his valuable help & co-operation during the preparation of this revised Working Plan.

The writer gratefully acknowledges the important guidance given by Sri J. D. Sharma, I.F.S. Principal Chief Conservator of Forest during his Working Plan's meeting.

The writer equally grateful to Sri S.S. Shrivastav, I.F.S. Principal Chief Conservator of Forest (Wild Life) for his valuable suggestions & help in writing the Plan as well as for reading through the chapter on Wild Life Management.

The writer owes a debt of gratitude to Sri Pravakar Sethy, I.F.S. Conservator of Forest, Working Plan under whose guidance most of the field works had been done. He has taken keen interest in directing & supervising preparation & writing of the Plan.

Thanks are also due to Sri Narendra Sethi, I.F.S. Additional PCCF (Protection & sustainable Management), Bhubaneswar for his valuable help & co-operation during the preparation of this revised Working Plan.

I would like to thank all Office & field staff of Working Plan Officer, Working Plan Division, Keonjhar for their assistance & timely completion of field works for the preparation of this Working Plan of Deogarh Forest Division.

Sri Sankarsan Behera, O.F.S – I
Working Plans Officer,
Working Plans Division, Keonjhar.

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5	Glossary of Odia, English & Latin name of animals, birds, snakes, lizards, turtles & fishes	x	X
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VOLUME - I

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GLOSSARY OF ORIYA & BOTANICAL NAMES OF TREES, SHRUBS, HERBS, CLIMBERS & GRASSES AVAILABLE IN DEOGARH DIVISION

I - TREE.

Table-I

List of trees

Sl. No.	Oriya Name	Classifications	Botanical Name	Family
1	Amba	Large tree	Mangifera indica	Anacardiaceae
2	Ambada	Medium tree	Spondias mangifera	-do-
3	Achhu	Small tree	Morinda tinctoria	Rubiaceae
4	Ankula	-do-	Alangium salvifolium	Alangiaceae
5	Amla	-do-	Emblica officinalis	Euphorbiaceae
6	Arjuna	Large tree	Terminalia arjuna	combretaceae
7	Asan / Saluja	-do-	Terminalia tomentosa	-do-
8	Aswastha	-do-	Ficus religiosa	Moraceae
9	Ata / Ramphal	Small tree	Annona reticulata	Anonaceae
10	Agasti	-do-	Sesbania grandiflora	Papilionaceae
11	Ambthi	-do-	Bauhinia malabarica	Caesalpiniaceae
12	Baula	Medium tree	Mimusops elengi	Sapotaceae
13	Bija / Piasal	Large tree	Pterocarpus marsupium	Fabaceae
14	Badhial/ Sitaphal	Small tree	Annona squamosa	Anonaceae
15	Bandhan	Medium tree	Ougenia oojeinensis	Fabaceae
16	Bara	Large tree	Ficus benghalensis	Moraceae
17	Babul	Small tree	Acacia nilotica	Mimosaceae
18	Bahada	Large tree	Terminalia belerica	Combretaceae
19	Barabakulia	-do-	Dalbergia paniculata	Fabaceae
20	Buro	Small tree	Zizyphus mauritiana	Rhamnaceae
21	Barun	Medium tree	Crataeva religiosa	Capparidaceae
22	Bela	Small tree	Aegle marmelos	Rutaceae
23	Bhalia	Medium tree	Semicarpus anacardium	Anacardiaceae
24	Bheru	Small tree	Chloroxylon swietenia	Meliaceae
25	Butra	-do-	Melia composita	-do-
26	Bhersunga	Small tree	Murraya koenigi	Rutaceae
27	Badam (Deshi)	Large tree	Terminalia catappa	Combretaceae
28	Chadeigudi	Medium tree	Vitex peduncularis	Verbenaceae
29	Chakundi	Large tree	Cassia siamea	Ceasalpiniaceae
30	Char	Small tree	Buchanania lanzan	Anacardiaceae
31	Chauli	-do-	Elaeodendron glaucum	Celastraceae
32	Chatian	Large tree	Alstonia scholaris	Apocynaceae
33	Chosri	Medium tree	Bauhinia retusa	Caesalpiniaceae
34	Champa	Large tree	Michelia champaca	Magnoliaceae
35	Chaladhua	Small tree	Erythrina suberosa	Papilionaceae
36	Damkurudu	-do-	Gardenia latifolia	Rubiaceae

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37	Dhaman	Large tree	Grewia tiliaefolia	Tiliaceae
38	Dhaura	-do-	Anogeissus latifolia	Combretaceae
39	Dimri	Small tree	Ficus glomerata	Moraceae
40	Eucalyptus	Large tree	Eucalyptus species	Myrtaceae
41	Gamhari	Medium tree	Gmelina arborea	Verbenaceae
42	Ghanta	Small tree	Zizyphus xylopyra	Rhamnaceae
43	Ghodalanja	Large tree	Albizzia stipulata	Mimosaceae
44	Genduli	-do-	Sterculia urens	Sterculiaceae
45	Gohira	-do-	Acacia leucophloea	Mimosaceae
46	Giringa	-do-	Pterospermum heyneanum	Sterculiaceae
47	Gua	Small tree	Areca catechu	Palmaceae
48	Harida	Large tree	Terminalia chebula	Combretaceae
49	Hinjal	Medium tree	Barington ia acutangula	Lecythidaceae
50	Haldu (kurum)	Large tree	Adina cordifolia	Rubiaceae
51	Jamu	-do-	Syzigium cumini	Myrtaceae
52	Jari	-do-	Ficus retusa	Moraceae
53	Kadamba	Large tree	Anthocephalus cadamba	Rutaceae
54	Kaitha	-do-	Feronia elephantum	Rutaceae
55	Kamalagundi	Small tree	Mallotus philipinensis	Euphorbiaceae
56	Karada	-do-	Cleistanthus collinus	Euphorbiaceae
57	Karanj	Medium tree	Pongamia pinnata	Fabaceae
58	Kasi	Large tree	Bridelia retusa	Euphorbiaceae
59	Kendu	-do-	Diospyros melanoxylon	Ebenaceae
60	Khair	Small tree	Acacia catechu	Mimosaceae
61	Khajuri	Medium tre	Phoenix sylvastris	Palmaceae
62	Kochila	Large tree	Strychnos nuxvomica	Longaniaceae
63	Kangada	-do-	Xylia xylocarpa	Mimosaceae
64	Kodala	-do-	Sterculia villosa	Sterculiaceae
65	Kumbhi	Medium tree	Careya arborea	Lecythidaceae
66	Kusum	Large tree	Scheichera oleosa	Sapindaceae
67	Lankavalia	Small tree	Anacardium occidentale	Anacardiaceae
68	Lodha	Large tree	Symplocus racemosa	Symplocaceae
69	Mahanimba	-do-	Ailanthus excelsa	Simarubaceae
70	Mahula	-do-	Madhuca indica	Sapotaceae
71	Mankada kendu	-do-	Diospyros embryopteris	Ebenaceae
72	Mai	-do-	Lannea coromandelica	Anacardiaceae
73	Mundi	-do-	Mitragyna parvifolia	Rubiaceae
74	Neem	-do-	Azadirachta indica	Meliaceae
75	Nadia	-do-	Cocos nucifera	Palmaceae
76	Nageswar	-do-	Messua ferrea	Guttiferaceae
77	Paldhua	Small tree	Erythrina indica	Fabaceae
78	Palas	Small tree	Butea monosperma	-do-
79	Panasa	Medium tree	Artocarpus intigrifolia	Moraceae
80	Panigamhar	-do-	Trewia nudiflora	Euphorbiaceae
81	Patuli	-do-	Lagerstroemia speciosa	Lythraceae
82	Phasi	Large tree	Anogeissus acuminata	Combretaceae

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83	Rai	-do-	Dillenia pentagyna	Dilleniaceae
84	Rajmohi	-do-	Bursera serrata	Burseraceae
85	Ritha	Medium tree	Sapindus emerginatus	Sapindaceae
86	Rohini	Large tree	Soymida febrifuga	Meliaceae
87	Sal	Large tree	Shorea robusta	Dipterocarpaceae
88	Salai	-do-	Boswellia serrata	Burseraceae
89	Salapa	-do-	Caryota urens	Palmaceae
90	Sagunn	-do-	Tectona grandis	Verbenaceae
91	Semal	-do-	Bombax ceiba	Bombacaceae
92	Sidha	-do-	Lagerstroemia parviflora	Lythraceae
93	Siris	-do-	Albizzia lebbek	Mimosaceae
94	Sisoo	-do-	Dalbergia latifolia	Fabaceae
95	Sunari	Small tree	Cassia fistula	Caesalpiniaceae
96	Sajana	-do-	Moringa oleifera	Moringaceae
97	Sahada	Small tree	Streblus asper	Moraceae
98	Simakayan	-do-	Pithecolobium dulce	Mimosaceae
99	Tala	Large tree	Borassus flabellifer	Palmaceae
100	Tentuli	-do-	Tamarindus indica	Caesalpinaceae
101	Tangini	Small tree	Xylia dolabriformis	Mimosaceae
102	Telko	-do-	Randia uliginosa	Rubiaceae

2 - SHRUBS

Table-2

List of shrubs

Sl. No	Oriya Name	Botanical Name	Family
1	Arakha	Calotropis procera	Asclepidaceae
2	Amari	Ipomea fistulosa	Convolvulaceae
3	Aswagandha	Withania somnifera	Solanaceae
4	Baincha	Flocourtia sepiaria	Flocourtiaceae
5	Baramasi	Agave american	Amaryllidaceae
6	Basanga	Adhatoda vasica	Acanthaceae
7	Bhanga	Cannabis sativa	Cannabinaceae
8	Gila	Caesalpinia decapetala	Ceasalpiniaceae
9	Girili	Indigofera pulchella	Fabaceae
10	Karabir	Nerium indicum	Apocynaceae
11	Kanteikoli	Ziziphus oenoplia	Rhamnaceae
12	Ghurudu	Gardenia gumifera	Rubiaceae
13	Mamuri	Antidesma diandrum	Euphorbiaceae
14	Nagairi	Lantana camara	Verbenaceae
15	Ranidantakathi	Flemingia chappar	Fabaceae
16	Siju	Euphorbia nivulia	Euphorbiaceae
17	Telkoruan	Ixora parviflora	Rubiaceae
18	Jajangi	Phyllanthus collinus	Euphorbiaceae

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3- HERBS

Table-3			
List of herbs			
Sl. No.	Oriya Name	Botanical Name	Family
1	Ankaranti	Solanum xanthocarpum	Solanaceae
2	Anantamula	Hemidesmus indicus	Asclepidaceae
3	Ada (Ambakasi)	Curcuma amada	Zingiberaceae
4	Apamaranga	Achyranthes aspera	Amarantaceae
5	Baghanakhi	Martynia diandra	Pedaliaceae
6	Bhuinimba	Andrographis paniculata	Acanthaceae
7	Bhumgaraj	Wedelia calendulacea	Compositae
8	Chitaparu	Plumbago zeylanica	Plumbaginaceae
9	Dudura	Datura stramonium	Solanaceae
10	Ganjei	Cannabis sativa	Cannabinaceae
11	Ghikuari	Aloe vera	Liliaceae
12	Haladi	Curcuma longa	Zingiberaceae
13	Hatisundha	Heliotropicum indicum	Boraginaceae
14	Patalagaruda	Rauwolfia serpentina	Apocynaceae
15	Palua	Curcuma aromatica	Zingiberaceae
16	Salaparni	Desmodium gangeticum	Fabaceae
17	Saptapheni	Opuntia dillenii	Cactaceae
18	Tulasi (dhala)	Ocimum basilicum	Labiatae
19	Tulasi (kala)	Ocimum sanctum	-do-
20	Nagapheni	Opuntia vulgaris	Cactaceae

4– GRASSES

Table-4			
List of grasses			
Sl. No.	Oriya Name	Botanical Name	Family
1	Baunsa (salia)	Dendrocalamus strictus	Gramineae
2	-do- (daba)	Bambusa arundinacea	Gramineae
3	-do- (dungi)	Cephalostachyum pergracile	Poaceae
4	Babuli	Pollinidium angustifolium	Gramineae
5	Bena	Vitiveria zizanoides	-do-
6	Broom	Thysalolaena maxima	-do-
7	Duba	Cynodon dactylon	-do-
8	Kasatandi	Saccharum spontaneum	-do-
9	Sabai	Pollinidium angustifolium	-do-
10	Sinkula	Hetropogon contortus	-do-

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5 – CLIMBER

Table-5

List of climber

Sl. No.	Oriya Name	Botanical Name	Family
1	Atundi	Combretum decandrum	Combretaceae
2	Ambalata	Bauhinia racemosa	Caesalpiniaceae
3	Asadhua	Capparis zeylanica	Capparidaceae
4	Anantamuli	Hemidesmus indicus	Asclepiadaceae
5	Arsi / Gila	Entada scandens	Mimosaceae
6	Baidank	Mucuna pruriens	Fabaceae
7	Banamali	Jasminum arborescens	Oleaceae
8	Beta	Calamus tenuis	Palmaceae
9	Dantari	Acacia pennata	Mimosaceae
10	Desialu	Dioscorea alata	Dioscoreaceae
11	Dhudhiali	Cryptolepis buchanani	Euphorbiaceae
12	Gudmari	Gymnema sylvestre	Asclepiadaceae
13	Gulichi	Tinospora cordifolia	Menispermaceae
14	Kaincha	Abrus precatorius	Fabaceae
15	Kalama	Ipomea aquatica	Convolvulaceae
16	Karaba	Dioscorea pentaphylla	Dioscoreaceae
17	Kankada	Momordica dioica	Cucurbitaceae
18	Lata palas	Butea superba	Fabaceae
19	Malati	Aganosma caryophyllata	Apocynaceae
20	Mardalai	Milletia auriculata	Fabaceae
21	Muturi	Smilax macrophylla	Liliaceae
22	Modanga	Loranthus longiflorus	Loranthaceae
23	Satabari	Asparagus racemosus	Liliaceae
24	Siali	Bauhinia vahlii	Caesalpiniaceae
25	Hadabhanga	Cissus quadrangularis	Ampelidaceae

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GLOSSARY OF ORIYA, ENGLISH & LATIN NAME OF ANIMALS, BIRDS, SNAKES, LIZARDS, TURTLES & FISHES FOUND IN DEOGARH DIVISION

I – ANIMALS (Mammals)

Table-6

List of animals

Sl. No.	Oriya Name	English Name	Latin Name	Family	Sched. No.
1	Bajra kapta	Pangolin	Manis crassicaudata	Manidae	I
2	Badudi	Bat	Rouseltute schenaulti	Pteropodidae	V
3	Banabiradi	Wild cat	Felis chaus affinis	Felidae	I
4	Barah	Wild boar	Sus crefa cristatus	Suidae	III
5	Bilua	Jackal	Canis latranus	Canidae	V
6	Bhalu	Black bear	Selenarctos tibetana	Ursidae	II
7	Chital	Spotted deer	Axis axis	Cervidae	III
8	Chemani	House bat	Cynopterus sphinx	Pteropodidae	V
9	Chhichhunsa	Squirrel	Funambulus penanti	Sciuridae	V
10	Gurandi	Mouse deer	Trangulus meinna	Tragulidae	I
11	Hati	Elephant	Elephas maximus	Elephantidae	I
12	Heta	Hyena	Hyaena striata	Hyaenidae	I
13	Jinka	Porcupine	Hystrix leucura	Hystricidae	IV
14	Kalarapatriya	Leopard	Panthera pardus fusca	Felidae	I
15	Katasa	Big wild cat	Paradoxurus hermaphrodit	Felidae	II
16	Khurant	Musk deer	Moschila menina	Tragulidae	I
17	Kokisiali	Fox	Vulpes bengalensis	Canidae	II
18	Kutura	Barking deer	Cerrulus muntjac	Cervidae	III
19	Mankada (hanu)	Black-faced monkey	Semnopithecus entellus	Cercopithecidae	II
20	-do- (pati)	Red-faced monkey	Macaca mulatta	Cercopithecidae	II
21	Musa	Mouse	Rattus rattus	Muridae	V
22	-do- (nepali)	Flying squirrel	Petauristaphili pinensis	Muridae	V
23	Nilgai	Blue bull	Boselaphus tragocamelus	Bovidae	III
24	Neula	Mongoose	Herpestes bengalensis	Viverridae	IV
25	Odha	Otter	Lutra lutra	Mustelidae	III
26	Samber	Deer	Cervulus unicolor	Cervidae	I
27	Saliapatini	Civet	Vivericula indica	Viverridae	II
28	Thekua	Hare	Lepus ruficaudatus	Leporidae	III

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Table-7

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 phillipinus	Ploceidae	IV
3	Bajapakhi	Hawk	Astur badius	Accipitridae	I
4	Banakukuda	Jungle fowl	Gallus gallus	Phadianidae	IV
5	Baja	Falcon	Ergetta garzette	Accipitridae	I
6	Bhadabhadalia	Blue jay bird	Coracas benga lensis	Muscicapidae	I
7	Bahadakhai	Grey hornbill	Tikos birostris	Bucerotidae	I
8	Bhrungaraj	Black bee	Dissomurus paradisens	Dicruridae	IV
9	Gunduri	Bastard gull	Turnix buscitotor	Turnicidae	IV
10	Chatak	Swifty	Micropus affinis	Apodidae	IV
11	Chila	Kite	Mylvus migrans		IV
12	Dahuka	Water hen	Metopidius indicus	Jacanidae	IV
13	Gendalia	Grey crane	Anastromis oseitens	Ciconidae	IV
14	Gharchatia	Sparrow	Passer domesticus	Ploceidae	IV
15	Ghukalika	Raven myna	Acridathares ginginianus	Sturnidae	IV
16	Haldibasant	Golden oriole	Oriolus xanthernus	Oridídae	IV
17	Hansa	Gander	Anas poacierhancha	Podicipedidae	IV
18	Koeli	Cuckoo	Cuculus caronus	Cuculidae	IV
19	Kajalapati	King crow	Dicrurus macocerus	Dicruridae	IV
20	Kau	Crow	Corvus splendens	Corvidae	V
21	Kochilakhai	Hornbill	Anthroceceros coromatus	Bucerotidae	I
22	Kumbhatua	Red crow	Centropus sinensis	Cuculidae	IV
23	Mayura	Peacock	Pavo cristatus	Phadianidae	I
24	Macharanka	King-fisher	Caryle rudis	Alcedinidae	IV
25	Panikua	Little cormorant	Phalacrocorax nigar	Anatidae	IV
26	Pecha	Owl	Athena brama	Strigidae	IV
27	Para	Pigeon	Columba livia	Columbidae	IV
28	Sua	Parrot	Pistacula krameríi	Sturnidae	IV

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29	Saguna	King vulture	Sacrogyps calvus	Muscicapidae	IV
30	Sankachila	Brahmin kite	Haliastur Indus	Muscicapidae	I
31	Kapota	Dove	Streptopelichin opensis	Columbidae	IV
32	Bulbul	Persian / Nightingale	Pycnonotus luteolus	Pycnonotidae	IV
33	Baga (kanti)	Pond heron	Ardeola grayii	Ardeidae	IV
34	Baga (rani)	Cattle egret	Bubulcus ibis coromandus	Ardeidae	IV
35	Baga (rati)	Night heron	Nycticorax nydticorax	Ardeidae	IV
36	Kathshana	Ceylon hoopoe	Upupa ceylonensis	Upupidae	IV

3 – SNAKES

Table-8

List of snakes

Sl.No.	Oriya Name	English Name	Latin Name	Family	Schedule No
1	Ahiraj	King cobra	Naja hannah	Elapidae	II
2	Ajagarh	Indian python	Python molurus	Boidae	I
3	chiti	Painted krait	Bungarus coeruleus	Elapidae	IV
4	Dhamana	Rat snake	Ptyas mucosus	Colubridae	II
5	Boda	Rusell's viper	Vipera russelli	Viperidae	II
6	Dhulia naga	Sand viper	Echis carinatus	-do-	IV
7	Domundia	John's sandboda	Eryx conicus	Boidae	IV
8	Gokhar	Cobra	Naja naja	Elapidae	II
9	Kananoli	Grass snake	Ahetulla species	Colubridae	IV
10	Laudankia	Arboreal adder	Dryophis nasutus	Elapidae	IV
11	Dhanda	Water snake	Natrix piscator	Colubridae	IV
12	Rara	Banded krait	Bungarus fasciatus	Elapidae	II
13	Tampa	Monocellate cobra	Naja naja kuothia	-do-	II
14	Telia	Blind snake	Typhlops braminus	Typhlopidae	IV

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4 – LIZARDS

Table-9					
List of lizards					
Sl. No.	Oriya Name	English Name	Latin Name	Family	Scheduled No.
1	Baharupi	Indian chamleon	Chameleon zeylanicus	Chmaeleonidae	IV
2	Champeineoli	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

5 – TURTLES

Table-10					
List of Turtles					
Sl. No.	Oriya Name	English Name	Latin Name	Family	Scheduled No.
1	Pathuria kaincha	Land tortoise	Testudo elongute	Trionychidae	IV
2	Pani kaincha	Water turtle	Lissemys punctau granosa	Emydidae	IV

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6 – FISHES

Table-11

List of fishes

Sl. No.	Oriya Name	English Name	Latin Name	Family
1	Balia	Trout / Wallago	Wallago attu	Siluridae
2	Baligarada	Sandeel	Glossogabius giziris	Gobidae
3	Bhakur	Carp	Catla catla	Cyprinidae
4	Chenga	Gilt head	Ophiocaphalus gachus	Channidae
5	Chitala	Flat fish	Notopterus chitala	Notopteridae
6	Dandikiri	Grig	Esomus dandrica	Cyprinidae
7	Gadisa	Gudgeon	Ophiocephalus punctatus	Channidae
8	Jalanga	Ground fish	Panga sius	Pangasidae
9	Jahlla	Floating fish	Chela argentea	Cyprinidae
10	Kantia	Nail fish	Mystus cavasitus	Bagridae
11	Karandi	Minnow	Barbus ambasis	Cyprinidae
12	Magura	Cat fish	Clarius batrachus	Claridae
13	Mirkali	Mrigal	Cirrihana mrigal	Cyprinidae
14	Neuli	Small sand fish	Gobiopterus ohund	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 serana	Cyprinidae
20	Seula	Big gudgeon	Ophiocephalus striatus	Channidae
21	Singi	Scorpion fish	Hetero pneusstes fossilis	Pneustidae
22	Todi	Eel	Mastocembelus armatus	Cembelidae
23	Chungudi	Shrimp / Prawn	Palaemon malcolmsonii	

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PART – I

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CHAPTER-1

THE TRACT DEALT WITH

1.1. Name and Situation:

1.1.1. Forest Department of Odisha has been re-organized vide Notification No.13228 / F & E dt.08.8.2003 with effect from dt.1.10.2003. After re-organization the entire area of Deogarh Division is situated between Longitude E- 84° 29' 51.8"to E- 85° 15' 37.1" & latitude N- 21° 17' 44.8"to N- 21° 40' 17.5". It extends from North by Bonai Division, on the South Rairakhol & Angul Division, on the East Angul Division & Keonjhar Division & on the west Bamara (WL) Division.

1.1.2. Deogarh Division shares its boundary with five divisions in the following manner.

North - Bonai Division

South - Rairakhol & Angul Division

East - Angul Division & Keonjhar Division.

West - Bamra Wild Life Division.

1.1.3. Boundary of Deogarh Division: - The total boundary length of Deogarh Division is 535.95 KM. The details of common boundary length with adjoining divisions are given in the table below.

Table No. 12		
Division boundary		
Sl. No	Name of Divisions	Length of common boundary in km.
1	Bonai Division	116.20
2	Bamra Wild Life Division	129.00
3	Rairakhol Division	32.00
4	Angul Division	146.30
5	Keonjhar Division	112.45
	Total	535.95

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1.1.4. Administrative Unit: - After re-organization, some changes have been made in the administrative unit of Deogarh Division. The changes made in the numbers of Ranges, Sections and Beats are given in the table below.

Table No. 13

Administrative unit

Sl. No.	Name of administrative unit	Number before reorganization	Number after reorganization
1	Range	3	5
2	Section	16	20
3	Beat	71	90
4	Forest Check gates	4	4

Sources - Divisional Forest Officer, Deogarh.

1.1.5. Other Offices: - Other offices, towns, villages etc, which exist within the geographical jurisdiction of this division, have been displayed in the table below.

Table No. 14

Other Offices

Sl. No.	Name of office	Deogarh District	Angul District	Total No.
1	Collector	1	1(Part)	2
2	Sub-Collector	1	1	2
3	Tahasil	3	1	4
4	R.I Circle	20	7	27
5	C. D Block	3	1	4
6	Police Station	3	2	5
7	Gram Panchayat	60	26	86
8	Revenue Village	774	289	1063
9	N.A.C	1(Municipality)	-	1
10	M.L.A	1	1	2
11	M.P	1(Part)	1(Part)	2
12	SP	1	1(Part)	2

Sources - Divisional Forest Officer, Deogarh.

1.1.6. Forest Land Diverted: - The area dealt with in this revision of Working Plan comprise of 30 RF, 41 PRF and 01 PF. The total area of the above RF, PRF and PF are 100731.382 ha, 32098.1854 ha and 149.0094 ha respectively as per notification. The said area has been analyzed for future scientific management. The details of forestland diverted for non-forestry purposes have been displayed in the table below.

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Table No. 15

Forestland Diverted

Sl. No.	Name of Block	Name of Agency / Project	Notification No.	Diverted area in ha
1	Rambhadevi RF-3.45+ KF-38.01	33 KV line from Deogarh to Tarang & 11 KV line from Rengalbeda to Gohira	Letter No. 8-407/83-FRY Dt.3.1.84.	41.46
2	Malyagiri RF-34.164 + Nuagaon PRF-7.72	400 K.V Line from Rengali to Kolaghat	. Letter No. 8-245/86-FRY Dt. 16.2.88	41.884
3	Kundheigola PRF-3.224 + KF-13.156	400 K.V Line from Jeypore to Rengali	Letter No. 8-122/85-FC Dt. 3.12.87	16.38
4	Gogua RF -3.71 * Rambhadevi RF-8.58 * KF-150.48	400 K.V (Transmission) D/C Line from Talcher to Rourkela	No. 8-137/92-FC Dt.17.1.94	162.77
5	Panguli RF-8.02 * KF-35.6	Construction of divisional road from Barkote to Darjing-S.H 10(A)	Letter No. 8-449/82-FRY (Cons) Dt. 22.12.82 (Ministry of Agriculture)	43.62
6	KF-2.75	Construction of NH-23 in Mardang KF from 0/0km to 8/0 km	Letter No. 8- 144/84-FRY (Cons) Dt. 19.5.84	2.75
7	KF-10.313	Construction of missing link to NH-23 and approach road to bridge over river Samakoi	Letter No. 8-281/87-88 FC DT. 16.11.89	10.313
8	KF-4.6107	Construction & improvement of NH-23 (Approach road to Andherinallah & Nudeinallah)	Letter No. 8-141/FCE/71 Dt. 8.1.99	4.6107
9	KF-4.0468	Construction of Malyagiri College at Pallahara	Letter No. 8-136/ FCE Dt. 23.10.2003	4.0468
10	KF-20.02	Construction of Earth Electrode Transmission line for kaniha (NTPC) to Rohila	F.No.8-15/02-FC Dt.15.5.2002	20.02
11	KF-2.446	Construction of 220 KV Line & 33 KV Line at Barkote	No. 8(25) 3/2001-FCE dt.13.2.02	2.446
12	KF-6.1917	Construction of approach road to HL bridge over Netanala	No. 8 (26) 5/2002 FCE dt.7.1.2003	6.1917
13	KF-0.99	Construction of Police departmental buildings	5-ORB-072/2008-BHU dt.20.02.09	0.99
	Total	57.924 +(10.944 +288.6142		357.4822

Sources - Divisional Forest Officer, Deogarh.

1.1.7. Proposal for Diversion : - There are 8 nos. of proposal covering an area of 452.0087 ha pending at different levels for diversion. The details of pending proposals are given in the table below.

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Table No. 16				
Proposal for diversion of forest land				
Sl. No.	Name of Project	Area in ha	Date of receipt	Pending with
1	Samakoi Irrigation Project	245.49	19.7.07	User Agency
2	Construction of NH-23 (From 59/300 to 69/800)	17.1792	18.5.08	User Agency
3)	Construction of Police building	21.391	9.6.2011	User Agency
4	Upgradating to 2lane/ 2lane of Bhojpur to Chhatabar Section of NH 200	10.9629	20.04.2013	User Agency
5	4 laning of existing 2 lanes NH- 6 from Baharagora to Sambalpur.	111.246	02.09.2013	User Agency
6	Rehabilitation & Upgradation of Barkote to Biramitrapur Section of NH 23	40.864	11.03.2014	User Agency
7	Laying of slurry pipe line	3.439	9.6.2014	User Agency
8	Construction of Right Canal of Tusula MIP	1.4366	21.5.2014	User Agency
Sources - Divisional Forest Officer, Deogarh.				

1.2. Configuration of the Ground:

1.2.1. The tract covered under this plan has no sharp features to divide it into different physiographical zones. The whole tract is generally hilly and interspersed with winding strips of valleys. The valleys are namely Deogarh, Laimura, Tusula, Barkote, Reamal, Brahmani, Pallahara and Khamar. Deogarh is situated at mid-East and runs East-West. Laimura and Tusula are in the mid-North. Barkote is in the East and Reamal is the South-East. These valleys are thickly populated owing to rich agricultural fields.

1.2.2. The hilly country can be broadly divided into three groups ; one in the south – West consisting of Kansar block; one in the center consisting of Khajuria, Prabhasuni, Pradhanpat, Rambhabevi, Badtaila; one in the North-East consisting of Pauri, Thianal, Panguli, Malyagiri, Mankarchua, Dunda, Kuladera, Kansar'A', Kansar'B' etc. The Gogua is another hill in the Brahmani valley running North-South

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1.2.3. The central hill group straddles the region in the shape of a horse-shoe, one arm extending to Rambhadevi in the south and the other extending into Pradhanpat in the North thus enclosing partly Deogarh valley. The general direction of the hills in this group runs from North-East to South-West. The Northern hills rise abruptly from the plains and have very steep Southern slopes. Both Pravasuni and Pradhanpat have extensive table lands locally known as 'Dalak'. The highest peak in the region is Kaidanta in Pradhanpat of 801 meters high. The general height of the region is about 270.0 meters above the mean sea level. There are quite a few perennial steams in this region of which the one near Deogarh is famed for its water-fall and the other at Kurudkote famed as being the source of a pioneer hydro-electric project. This region carried a good sal forest and in the valleys and on the Dalak's sal attains fine quality.

1.2.4. Altitude of Hills : - The altitude of different hills lying with in the geographical jurisdiction of different forest blocks above mean sea level have been given in the table below.

Table No. 17

Altitude of hills

Sl. No.	Name of the blocks	Name of the hills	Altitude in mt.
1	Pradhanpat RF	Kaidanta	802
2	Pravasuni RF	x	701
3	Rambhadevi RF	x	410
4	Gogua RF	x	542
5	Kansar RF	x	713
6	Jhadeswar PRF	x	632
7	Hadmunda PRF	x	407
8	Kankarkhol PRF	x	339
9	Kundheigola PRF	Mankarchua paharh	402
10	Ghodapaka PRF	Bhaliapal Paharh	300
11	Tarang PRF	Danda	389
12	Rajamunda PRF	x	354
13	Kalkath PRF	Ukchuni	246
14	Naikul PRF	x	335
15	Pauri RF	Romal Paharh	676
16	Badtaila RF	x	609
17	Panguli RF	Asurkol Paharh	638
18	Mandasila RF	Mandiapura	653
19	Thianal RF	Ratab Paharh	460
20	Banbira PRF	x	208
21	Malyagiri RF	x	1186

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22	Maakarchua RF	Mankarchua Parbat	438
23	Soida RF	x	200
24	Tamkia RF	x	378
25	Old Pauri RF	Sanni Paharh	643
26	Dunda RF	x	352
27	Kuladera RF	x	580
28	Biripal RF	Machhakhani	351
29	Jambua RF	x	172
30	Kansar -A RF	x	582
31	Kunjam RF	x	240
32	Karadapal PRF	Kundia Paharh	205
33	Jolonda- Jankpani PRF	x	359
Sources - Field Staff.			

1.3. Drainage:

1.3.1. The general system of drainage in Pallahara region is East to West except on the Eastern portion of Malyagiri which drains towards East. The Deogarh valley as also the Southern slopes of Pradhanpat, the Northern slopes of portion of Pravasuni lying South of Pradhanpat and Northern slopes of Rambhadevi drain in to the Gohira, a tributary of Brahmani. The Northern slopes and central portion of Pradhanpat together with Tusula valley and Mandasila and Badtaila drain into the Matuali which joins the Gohira. The Northern portion of Ushakothi, Kansar, the Reamal valley and the Southern portion of Pravasuni and Rambhadevi drain to the Gohira. Thus the Eastern portion of the tracks drains mostly to Gohira which is an important tributary of the Brahmani.

1.3.2. The details of drainage system of different forest blocks managed under this Plan have been given in the table below.

Table No. 18

Drainage system of forest blocks

Sl. No.	Name of the river	Name of its tributary	Name of sub-tributary	Name of forest blocks
1	Brahmani	Jharaikela	Madhuali nala	Bartaila RF
			Kalajira nala	Pradhanpat RF
			Dalak nala	Pravasuni RF
				Jhadeswar PRF
		Rangiamunda	Jamadhara nala	Kansar A
			Bamini nala	Kansar B
		Brahmani		Biripal
				Naikul

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				Ghodapaka
				Tirib
				Banbira
				Danda
		Mankaraha nadi	Nurhei nala	Nizgarh A, Nizgarh B
		Jautuk nala	Kanjia nala	Thianal, Mankarchua
		Mankaraha nadi	Kakharua	Tamkia
		Kala nala	Jautuk nala	Pauri Old, Pauri New
			Bar nala	Pauri
		Tikra nala	Bamajura nala	Tarang
			Madelia nala	Kankarkhol
			Arkhai nala	Kansar A, Kansar B
			Panchama nala	Kundheigola
		Gohira nadi	Regrha nala	Rambhadevi
			Purunapani nala	Hadamunda
			Balam nala	Kalikath
			Kamar nala	Kaunsibahal
			Jharaikela nadi	Rajamunda
		Kakharua nadi	Gitakara nala	Julunda-Jakapani
			Mekra nala	Sarbeda, Saida
				Atalanka
		Somakoi nadi	Guhurghuria nala	Malyagiri
			Somakoi	Kuladera
		Koraba nala	Canal	Chungamatia.
Sources - Field Staff.				

1.4. Geology, Rock, Mineral and Soil:

1.4.1. Geology: - Geologically the area is divided into two main groups. (i) Archean group (ii) Lower Gondwana group. The rock system of pallahara mostly belong to Archean era. The rocks of the Malyagiri hills are largely of quartzite, Quartz-schist and lateritic stones. The iron ore occurring frequently are of low grade having no economic importantance. Mica occurs similarly with no economic importantance Kyanites occurs in the Kuladera hills. The rocks of the pauri hills concise of granites gneiss with seals, Phyllites and Quartz-schist.

1.4.2. The formation of different rocks from the geological groups is given in the table below.

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Table No. 19		
Formation of rock		
Sl. No.	Name of Geo'l group	Name of Rock
1	Archean	Khondalite, Charnockite, Porphyritic granite gneiss, Pyroxene granulites schist, Garnetiferous, granite gneiss, Quartzite, Quartz schist etc.
2	Gondwana	Feldspathic, Gritty sandstone, Green shale, Barkar, Carbonaceous shale, Talchirs, Panchets etc
3	Intrusive	Pegmatite, Quartz veins, Dolerite etc.
4	Recent	Alluvium, Laterite etc
Sources - Director of Mines, Sambalpur.		

1.4.3. Description of Rocks: - The description of different rocks and its availabilities in the forest blocks have been discussed briefly as follows.

Table No. 20			
Description of rock			
Sl. No.	Name of rocks	Description	Name of blocks
1	Khon-dalite	Khondalite is the common rock made up of metamorphosed sediments in the series. This is an oldest and prevalent rock formation in this zone. It contains varying proportions of Quartz, Feldspar, Garnet and Sillimanite. In some patches it contains Graphite and Biotite. They are medium to very coarse-grained containing large crystals of pink garnet. It exhibits schistose to gneissose texture. Quartzites are hard, compact and dirty white to light gray in colour.	Malyagiri, Timi, Tamkia, Makarchua, Bhaluhuli, Pauri old, Pauri New.
2	Charn-ockite	The Carnockite rocks are noticed in high rugged hills due to their resistance to weathering and erosion. The rocks are medium to fine grained and compact. The rocks have waxy appearance and are found to consist mostly of gray feldspar and pink garnets. It is characterized by granulites texture and presence of hypersthenes. Its constituents are Quartz, Orthoclase, Plagioclase and Augite. The Quartz -muscovite schist make of the long chain of east-west hill ranges of Nadia reserve forest. Being less resistant to weathering and erosion it is found as mounds in low laying area along nalas.	Pravasuni, Jhadeswar, Kansar, Pradhanpat, Hadamunda, Sanda.
3	Quartz Veins	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 biotic and hornblende. It is quite big in size and contains Quartz. It is marked along the foliation plains.	Khajuria, Pravasuni, Salohi-Loimura, Sargidehi, Telikusum

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4	Pegm-atite	The pegmatite is found as intrusion into the country rock. It is acidic in nature and occurs as zoned or simple small bodies. At the intermediate zone the pegmatite shows development of distinct Quartz core and mineralisation of muscovite mica. The pegmatite contains gem quality beryl crystal of transparent variety. Its colour varies from light blue to greenish.	Malyagiri, Pauri, Khajuria, Pradhanpat, Rambhadevi, Jhadeswar, Badtaila, Panguli.
5	Sand-stone	The youngest group of rocks belonging to the Gondwana group of sediment is found to occur as isolated low hill of typical hunch shape in the eastern part of this Division. The lower group of Gondwana rocks are marked as greenish laminated shale inter bedded with dirty gray sandstone. It contains undecomposed feldspar suggestive of prevalent cold condition during the period of deposition.	Pauri, Pravasuni, Pradhanpat, Gogua, Jhadeswar, Rambhadevi, Naikul, Kundheigola.
6	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.	Malyagiri, Pauri, Balibahal Khajuria, Kuladera, Kunjam, Biripal
7	Barkar	It is the group of rocks consisting of white to fawn colour feldspatchic sandstone and gritty with occasional informational conglomerate beds and shale. The sandstone often contains decomposed feldspar in course angular grains of Quartz. Gradation of medium grained sandstone to pebbly stone through grit is observed at different places, which may be grouped under Barkar.	Khajuria, Karadapal, Gogua, Rengalmunda, Tamkia Rajamunda, Banbira.
8	Iron-stone	A group of rocks represented by alternate beds of purple red shale and micaceous sandstone occur at places. It corresponds to the upper Gondwana formation.	Pauri old, Khajuria, Badtaila, Mandasila, Paburi, Thianal, Tusula, Panguli

1.4.4. Minerals: - The area under this 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 Minerals deposit of this zone is not highly significant for commercial exploitation.

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

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Table No. 21

Sl. No.	Name of Minerals	Description of minerals Description	Name of blocks
1	Graphite	Crystalline flaky Graphite is sparsely disseminated as streaks and lenticels along the foliation of the gneiss. The gneissic rack is superficially almost rotten and crumbling. Separation of the Graphite from the associated components of the gneiss is not very difficult. The local concentration of Graphite has been noticed in limited places. The percentage of Graphite is nowhere high enough for the occurrence to be commercially exploited.	Gurusulei, Danda, Bhulaka, Rangiapal Telikusum.
2	Coal	Thin bed of carbonaceous shale has been noticed in the bed of Champali nala. It occurs as a flat lens in the gritty formation. The thickness of the formation varies from 0.5 mt to 1.5 mt at a minimum depth of 1 mt. During winter and summer season local people are extracting the Coal for burning bricks.	Kuladera, Jambua, Kundheigola, Kansar, Naikul, Tamkia.
3	White Clay	The result of disintegration and decomposition of the feldspathic 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 in an elevated area between two tributaries of Khalbala Jor.	Pradhanpat, Jhadeswar, Hadamuna, Pravasuni.
4	Iron-ore	The gritty formation in the Gondwana system often shows fairly rich hematite and limonitic materials in them. The accumulation of ferruginous materials is also very common in this zone. In the past, the local smelters used the ferruginous concentration in their charcoal furnaces worked for extraction of pig iron. This is evidenced by the huge accumulation of slag in many villages of this area.	Malyagiri, Pauri, Khajuria, Tusula, Panguli, Chilantikhol, kandarp Lamdura.
5	Mica	The pegmatite is composed of muscovite transparent Quartz and plagioclase feldspar. Muscovite bearing pegmatite dykes have been found intrusive into the garnetiferous gneissic formation. Mica bearing pegmatite of cream colours are fairly numerous in rocky tracts. The materials as judged from the surface indication are not of commercial important.	Malyagiri, Pauri old, Pauri new Khajuria, Tamkia, Timi.
6	Rock crystal	Coarsely crystallized Quartz occurring in a highly fractured Quartz dyke has been seen in this zone. The crystals aggregate occur as nest crowding the cracks and crevices of the dyke. The crystals attain a considerable size but they are not perfect for manufacturing.	Karadapal, Bankhol, Khulandikudar, Telikusum.

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7	Manga-nese	It resembles iron in its behavior and usually occurs as an oxide. Its availability is reduced by bad drainage and organic matter content and deficiency may occur in soil, which are rich in organic matter or bad drained and with a high water table or are calcareous in nature. Oxidizing bacteria also render it unavailable to plant.	Timi, Old Pauri, New Pauri, Makarchua, Balibahal.

1.4.6. Soil: - A large part of the area under this division has quite rugged surface. Soil and Alluvial tracts are very much limited to narrow flat plain along the valleys between the hills. This soil capping is generally found over Khondalitic plains. But Charnockitic hilly terrains are mostly devoid of any soil mantle. Alluvial tracts are restricted to the bank of rivers and nalas. In general the soil is apparently derived from the underlying country rocks. Re-working by natural agencies have brought about sorting to a certain extent, carrying the finer particles into the low laying areas along drainage lines, leaving the upland somewhat sandy. The different types of soil noticed in this tract have been discussed below.

Table No. 22

Analysis of soil

Sl. No.	Name of soil	Description and Analysis of Soil	Distribution into blocks	Suitable to trees
1	Black	This is derived from the alteration of Basaltic rock (Igneous Volcanic), Deccan Trap, Dharwar Schists, Lime Stone and Granites. It is predominately seen at number of places as patchy occurrences. This is heavy and clayey 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.	Chargochia, Kalamjuangasahi, Karadapal, Badasada, Kunjam, Jambua, Priyambadapur, Danda.	Babul, Palas, Ashan, Gohira, Teak, Khair

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2	Saline alkaline	The soil derived from Khondalite rocks of the Eastern ghat group and the Quartzites of the Dharwar group are coarse and sandy. It contains more silica and has less moisture retaining capacity. The soil is poor in nutrients and all alkaline in nature. The P^H value varies from 9.1 to 9.5. It extends up to a depth of 75 cm.	Jambua, Ludhar-Deopani, Talabahali, Kalkath, Banbira, Kakharua, Atolanka, Julundajakpani	Khair Neem Sisoo Karanja Jamun
3	Brown	The soil originated from charnockite, Khodalite, 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 P^H value varies from 4.0 to 5.8. The depth varies up to 183 cm.	Sarbeda, Saida, Kakharua, Atolanka, Bangalimunda, Injidi, Gurusulei, Kundheigola.	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 power of loamy sandy soils are quite good. This result, stream and nalas passing through the talchir formation are perennial and semi-perennial. The P^H value varies from 5.2 to 5.9.	Kansar, Kuladera, Bhulaka, Kundheigola, Tamkia, Gogua, Naikul, Ghodapaka.	Sal, Asan, Neem, Bela, Gambhari
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 P^H varies from 4.9 to 7.2. The depth is up to 165 cm.	Kansar A, Kansar B, Nizigarh A, Nizigarh B, Priyambadapur, Injidi, Saida, Sarbeda, Ranja.	Sal, Bija, Asan, Dhaura, Sisoo

Sources - Deputy Director Mines and Outgoing Plan

1.4.7. 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.

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Table No. 23		
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

1.4.8. Soil Classes: - Soil is being a dynamic weathered layer of the Earth's crust and its composition varies in different soil classes. The percentage limits of mixture in the different soil classes found in this zone of vegetation have been displayed in the table below.

Table No. 24					
Soil class and its mixture					
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	Contain 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 khondanitic rocks of the Eastern Ghat Group are sandy clay. It has medium water retaining capacity.
8	Clayey Loam	20-50	20-50	20-30	Contain 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.

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1.4.9. P^H 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 is being the neutral body, when it percolates through soil, it dissolves salts immediately and forms a very dilute solution. The extremely low concentration of ions is expressed by P^H 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. P^H 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 P^H ranges have been given in the table below.

Table No. 25

Growth of trees in different P^H value

Sl. No.	P^H 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

1.5. Climate and Rain fall:

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

Table No. 26

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 42^{0}c. Occasionally showers with thunderstorms are a common feature experienced in this locality.
SSS 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

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			shower occur during February and March. It has been observed that unusual heavy precipitation occurs some time causing floods in the river systems of this Division.
3	Post Monsoon	October to November	Medium to heavy shower occurs in places, which impart 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 for a longer period.

1.5.2. Rain fall: - The statement showing the extent of rainfall in Deogarh District displayed in the table below.

Table No. 27

Year	Monthly Rainfall Data of Deogarh District in mm.												
	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	Total
2008	37.37	9.97	0	14.9	23.93	371.97	342.3	322.13	213.77	9.17	0.73	0	3426.51
2009	0	0	0	0	40.8	62.97	436.33	345.77	72.6	92.97	21.93	0	3002.17
2010	2.57	1.17	4.33	0	72	147.37	255.43	288.23	120.07	38.23	0.53	22.9	2909.43
2011	0	4.37	2.93	40.43	54.97	133.6	249.37	312.8	513.47	42.07	-	-	2345.91
2012	120.73	2.63	0	18.77	6.37	128.03	280.93	474.27	235.1	96.27	24.27	1.43	3400.84
2013	7.53	7.67	0.73	21.8	12.37	190.37	399.73	208.83	Up to 18 August 2013				4891.33
Avg	28.07	4.30	1.30	15.98	35.07	172.39	330.65	308.67	231.00	35.14	23.95	4.87	

Source - Divisional Forest Officer, Deogarh.

1.5.3. Analysis of Rainfall: - As per the data, the rainfall in this tract is irregular. Due to change of rainfall pattern, the condition and composition of the vegetation differ.

1.5.4. Temperature: - January is the coldest month of the year with the minimum temperature of 6.5 degree Celsius as recorded during the year 1986 and 1989. April/May are the hottest month with the maximum temperature going up to of 49.5 degree Celsius (as recorded during the year 1986). The month wise minimum and maximum temperature of this division from 2003 to 2007 are given in the table below.

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Table No. 28

Year	Temperature of Deogarh Sub-Division in Celsius												
	Min/ max	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2003	Min	4.4	10.2	8.8	19.0	18.9	19.9	19.9	19.0	19.3	16.5	8.8	6.6
	Max	33.3	37.0	39.4	49.9	46.7	47.0	35.4	34.0	35.3	34.7	31.7	28.0
2004	Min	6.2	9.0	13.7	20.0	24.6	19.6	22.6	19.2	21.4	-	11.8	7.0
	Max	30.0	35.0	39.5	42.7	43.8	42.4	34.8	35.6	34.4	-	32.2	30.5
2005	Min	8.5	10.0	16.8	18.5	20.0	42.2	21.9	21.8	22.2	20.2	10.5	6.8
	Max	30.6	34.8	37.8	40.2	45.8	46.0	34.4	35.7	35.2	35.0	32.0	30.1
2006	Min	7.7	9.9	14.2	16.1	21.0	20.4	20.2	21.2	21.6	17.1	12.6	8.8
	Max	32.6	37.2	38.2	40.2	41.8	42.2	34.9	32.6	34.2	35.4	31.9	31.6
2007	Min	7.4	10.6	12.9	16.8	21.8	24.2	24.4	23.3	22.3	16.3	22.8	9.8
	Max	32.2	34.2	38.5	42.0	43.4	45.0	34.1	34.2	34.2	33.2	33.4	30.8

Sources - Director Metrological Center, Bhubaneswar.

1.5.5. Humidity: - The volume of air contains maximum amount of water during the month of August and minimum during the month of April. In general minimum Humidity is observed from the month of March to May and maximum from the month of July to October. The month wise relative humidity of this area has been displayed in the table given below.

Table No. 29

Year	Average relative humidity of Deogarh from 1980-1989.											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1980	51	37	41	31	27	65	82	82	70	70	63	56
1981	61	51	46	31	29	57	80	83	83	71	61	58
1982	56	46	51	29	31	51	67	86	68	53	49	47
1983	44	46	27	38	36	44	76	76	81	66	50	50
1984	61	48	22	31	32	65	78	80	69	65	49	42
1985	58	36	25	24	28	51	78	86	81	65	50	50
1986	60	53	49	36	39	58	82	80	70	69	68	56
1987	60	39	41	26	31	51	75	84	78	62	62	57
1988	45	44	49	32	35	60	80	84	82	59	59	41
1989	37	51	48	21	47	65	76	72	76	69	64	54

Sources - Director Meteorological Center, Bhubaneswar, Observation at 17.30 hours

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

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1.5.7. Winds: - It is light to moderate but slightly increases during summer and monsoon season. Winds usually blow in the southwest and northeast directions during the monsoon but in summer it does not have any fixed direction.

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

1.5.9. Natural Calamities:

1.5.9.1. Flood: - Minor floods are common phenomenon in the tributaries and sub-tributaries of Gohira, Mankada and Brahmani. Due to heavy rain in the year 2006-07 so many people were affected and houses are damaged. The damage caused on the riverbank and it's after effect has been displayed in the table below.

Table No. 30

Flood and its affects

Calamities	Year	No of Persons involved	No. of Human being		No. of Animals lost	No. of Houses/ Institutions damaged	Estimated value of crop loss (Rs.in lakhs)	Value of Properties Lost/ damaged (Rs. in lakhs)
			Lost	Injured				
Flood	2006 2007	-	-	-	-	-	-	-
Heavy Rain	2006 2007	1455	-	-	1	276	4.8	-

Sources - Emergency Officer, Deogarh.

1.5.9.2. Draught: - Drought poses a serious problem in this tract. Cultivation mainly depends on rain and failure of rain brings disaster to the farmers. The drought during the year 1954, 1955, 1974, 1980, 1982 and 1984 were quite severe and they hit the forest and non-forest area badly. The drought of 1980 caused large-scale death of trees, poles, saplings and seedlings in patches. People have to obtain drinking water from riverbed by digging temporary wells. Wild Life became easy prey as they came out from the forest in search of water.

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1.5.9.3. Cyclone: - No severe damage by cyclone was noticed. But every year some trees are uprooted by high velocity wind. Low scale damaged was noticed to the thatched houses in different villages.

1.6. Water Resources and Supply:

1.6.1. There is no water Supply system for any of the forests existing in the tract. Deogarh town gets supply of water by gravity flow from a perennial stream of Pradhanpat. Similarly purunagarh gets water supply from kurudkut stream Kharla nullah.

1.6.2. Makra Samakoi, Andhri and there tributaries are the main souses of water supply to Pallahara area there so many perennial and seasonal hill stream inside Malyagiri and Paudi hills. Besides a few more perennial brooks flow in Pradhanpat and Khajuria Block.

1.6.3. Drinking Water: - There are 1063 number inhabited villages in the jurisdiction of this division. All villages have some sources of drinking water facilities. The pipe water facility is present only at Deogarh, Barkote & Reamal. The community development block wise details of drinking water facilities are displayed in the table below.

Table No. 31

Availability of Drinking Water Facilities in Deogarh District.

Year	No. of villages Hamlets having no source of safe drinking water	No. of working Tube Wells	No. of villages/ hamlets covered	No. of working sanitary Wells	No. of villages covered	No. of Piped water Project	No. o villages/h amlets covered
2005-06	498	2797	86	123	-	09	10
2006-07	439	2916	33	128	15	02	02

Sources - Executive Engineer R.W.S.R.S, Deogarh.

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Table No. 32

Availability of Drinking Water Facilities in different Blocks of Deogarh District.

Year/ Block 2006-07	No. of villages Hamlets having no source of safe drinking water	No. of working Tube Wells	No. of villages/hamlets covered	No. of working sanitary Wells	No. of villages covered	No. of Piped water Project	No. of villages/hamlets covered
Barkote	90	1042	02	38	-	01	01
Reamal	158	970	13	66	12	01	01
Tileibani	161	904	18	24	03	-	-

Sources - Executive Engineer R.W.S.R.S, Deogarh.

1.6.4. Ground Water: - The water table in most of the areas goes down as low as 12 mt from the ground level. Scarcity of water is acutely felt all over the division during summer season. The depth of water level in the wells in different places during summer have been measured by the staff and reflected in the table given below.

Table No. 33

Ground water level

Sl. No.	Name of Range	Name of place	Depth of water level in mt. during summer
1	Deogarh	Deogarh	05.00 mt.
2	Pallahara	Pallahara	10.5 mt.
3	Barkote	Barkote	05.00 mt
4	Khamar	Khamar	10.5 mt.
5	Reamal	Reamal	11.50 mt

Sources - Revised Working Plan From 1995-96 to 2014-15

1.7. Health:

1.7.1. Malaria is prevalent in its acute form in the entire area of this Division. The medical facilities available in the interiors are very inadequate due to communication difficulties. The local people are used to the herbal medicines for cure from Malaria and other diseases. The children suffer from mal-nutrition and family planning is rarely observed in the remote villages. However the list of Hospital exists within the Division has been displayed in the table below.

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Table No. 34		
List of dispensaries		
Sl.No	Name of range	Type of Dispensary
1	Deogarh, Barkote, Reamal	Hospital-1 no CHC-2 nos. PHC-2 nos. PHC-(new)-7 nos Ayurbedic Dispensary-1 no Homeopathic Dispensary-1 no
2	Pallahara	Sub-Divisional Hospital-1 no CHC-1 no PHC-4 nos
3	Khamar	CHC-1 no PHC-2 nos
Sources - Divisional Forest Officer, Deogarh.		

1.7.2. Domestic and Wild animals are distributed in all over the division. Animals are suffering in different diseases due to improper treatment. At present six numbers of Veterinary Dispensary exist in the division. The details are given in the table below.

Table No. 35		
List of veterinary dispensary		
Sl.No.	Name of the Range	Type of the Dispensary
1	Deogarh, Barkote, Reamal	Veterinary Dispensery-4 nos Live stock aid center-18 nos Artificial immunization center-6 nos
2	Pallahara	Veterinary Dispensery-1 nos Live stock aid center-5 nos
3	Khamar	Veterinary Dispensery-1 nos Live stock aid center-3 nos
Sources - Divisional Forest Officer, Deogarh.		

1.8. Distribution of Forest and Area:

1.8.1. Reserved Forest (R.F) : - The revised Working Plan was prescribe for 29 number of Reserve Forest. The area was 90,189.600 ha. During October 2003 that is after reorganization of forest department Laimura section of Bamra WL Division

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mixed with Deogarh Division. Accordingly part of Khajuria RF with an area of 5008.092 ha and part of Pravasuni RF with an area of 5533.69 ha comes under the management of Deogarh Division. The Plan covers 30 RF covering an area of 100731.382 ha out of which 211.904 ha is de-reserved. The details of RF are given below.

Table No. 36

List of Reserve Forests

Sl. No.	Block and Class.	Area in ha., Notified	Notification No / Date / Year
01	Pradhanpat	10386.063	No. 2934 dt. 19.05.1954
02	Kansar (P)	12198.600	1945-46 No.1921, dt.28-5-46
03	Pravasuni (P)	11080.449	No. 2934 dt. 19.05.1954
04	Rambhadevi (P)	4267.186	2934, dt.19-5-54
05	Panguli	3220.681	No. 2934 dt. 19.05.1954
06	Thianal	831.870	No. 2934 dt. 19.05.1954
07	Mandasila	2856.465	1935-36/dt.27-5-1935
08	Pauri	8215.425	No. 2934 dt. 19.05.1954
09	Badtaila	10154.803	No. 2934 dt. 19.05.1954
10	Gogua	3599.235	1932-33 No.504, dt.30-6-32 of Superintendent, P.A &C
11	Malyagri	11500.170	Declared as R.F in 1906 D.C Memo No 752W, dt.6-7-1906 Government order No.445-P.D dated 14-5.1906,Memo No.440-P.W & S Superintendent Tributory mahal dated 14-6-1906
12	Nizgarh (A)	287.198	In 1924 P.A &Commissioner's Memo No.136, F dt.11-9-1924
13	Nizgarh (B)	93.00	In 1924 P.A & Commissioner's Memo No.136, F dt.11-9-1924
14	Old Pauri	6783.750	No. 2934 dt. 19.05.1954
15	New Pauri	1296.000	No. 2934 dt. 19.05.1954
16	Tamkia	513.540	No. 2934 dt. 19.05.1954
17	Saida	397.710	No. 2934 dt. 19.05.1954
18	Gurusulei	388.800	No. 2934 dt. 19.05.1954
19	Kansar (A)	162.000	No. 2934 dt. 19.05.1954
20	Kansar (B)	107.325	No. 2934 dt. 19.05.1954
21	Biripal	437.400	No. 2934 dt. 19.05.1954
22	Chargochia	529.199	No. 2934 dt. 19.05.1954
23	Danda	1458.000	No. 2934 dt. 19.05.1954
24	Makarchua	1314.225	Declared as R.F in 1906D.C Memo No.752 W, dt. 6-7-1906 Government order No.445 P.D dated 14-5-1906 Memo No.440-P.W & Superintendent Tributory mahal dated14-6-1906.

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25	Kuladera	2236.815	Declared as R.F in 1906D.C Memo No.752 W, dt. 6-7-1906 Government order No.445 P.D dated 14-5-1906 Memo No.440-P.W & Superintendent Tributory mahal dated14-6-1906
26	Rengalmunda	86.670	No. 2934 dt. 19.05.1954
27	Kunjam	1047.553	No. 2934 dt. 19.05.1954
28	Jambua	257.580	No. 2934 dt. 19.05.1954
29	Chungmatia RF	15.578	Declared as R.F in 1906D.C Memo No.752 W, dt. 6-7-1906 Government order No.445 P.D dated 14-5-1906 Memo No.440-P.W & Superintendent Tributory mahal dated14-6-1906
30	Khajuria	5008.092	2934/R, dt.19-6-54
	Totnl	100731.382	
Sources - Divisional Forest Officer, Deogarh.			

1.8.2. Proposed Reserve Forest (PRF) & Protected Forest: - The revised Working Plan included 33 numbers of Proposed Reserve Forest extended over an area of 25512.166 ha. During October 2003 that is after reorganization of forest department Laimura section of Bamra Division mixed with Deogarh Division. Therefore 06 number of PRF with an area 5635.39 ha comes under the management of Deogarh Division. There are 02 numbers of PRFs which were not included in the plan are to be included in future management plan. The area of this 02 PRF is 801.61 ha. There is 01newly reformed PF namely Balibahal having area 149.0094 is also to be included. The details of these PRF & PF are given in the table below.

Table No. 37

List of Proposed Reserve Forest

Sl. No.	Name of the Forest Block	Area in ha. as per Working Plan	Area transferred from Bamra WL. Division in ha.	Total Area in ha.	Notification No. & date
01	Jhadwswar PRF	2768.499	x	2768.499	No. FS. 70/77 85016/R dt. 3.12.1977
02	Hadamunda	566.19	x	566.19	No. FS. 63/77.80102/R dt. 15.11.1977
03	Rajamunda	249.642	x	249.642	No. FS. 69/77.84992/R dt. 3.12.1977

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04	Kalkath	251.343	x	251.343	No. FS. 71/77.86402/R dt. 8.12.1977
05	Tirib	85.698	x	85.698	No. FS. 62/77-80106R dt. 15.11.1977
06	Tarang	981.477	x	981.477	No. FS. /77-5227/R dt. 14.01.1978
07	Kankarkhol	5770.44	x	5770.44	No. FS. 240/78-72655/R dt. 04.11.1978
08	Kundheigola	3537.715	x	3537.715	No. FS. 211/7874591/R dt. 13.11.1978
09	Ghodapaka	162.68	x	162.68	x
10	Naikul	1945.39	x	1945.39	No. FS. 241/78-72642/R dt. 04.11.1978
11	Banbira	1192.32	x	1192.32	S.R.O. No. 49/ 78 dt. 12.1.1978
12	Kulundikudar	472.068	x	472.068	No. FS. 61/77-79211/R dt. 08.11.1977
13	Tusula	1675.45	x	1675.45	x
14	Kaunsibahal	593.892	x	593.892	S.R.O. No. 50/78 dt. 31.1.1978
15	Talabahali	63.99	x	63.99	No. FS. 66/77-86435/R dt. 08.12.1977
16	Kakharua	166.536	x	166.536	x
17	Kalamjuangsahi	150.66	x	150.66	x
18	Kardapal	527.391	x	527.391	x
19	Ranjo	221.697	x	221.697	SRO No. 490/82 dt. 26/03/1979
20	Atolanka	161.87	x	161.87	x
21	Jolonda-Jankpani	291.438	x	291.438	x
22	Sarbeda	277.02	x	277.02	x
23	Timi	422.658	x	422.658	x
24	Jharakhaman	65.934	x	65.934	SRO No. 490/82 dt. 26.03.1979
25	Priyambadapur	50.139	x	50.139	x
26	Rangiapal	410.346	x	410.346	x
27	Bhaluhuli	140.94	x	140.94	No. FS. 135/79-62782/R dt. 29.08.1979
28	Bhulka	233.118	x	233.118	No. FS-135/79. 62782/R, dt.29.8.1979
29	Sanda	446.067	x	446.067	x

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30	Bankhol	1222.452	x	1222.452	x
31	Badasada	196.992	x	196.992	No. FS. 126/81-19515/R dt. 25.03.1981
32	Nuagaon	136.404	x	136.404	x
33	Injidi	73.71	x	73.71	x
34	Tamkia	00	x	502.83	No. FS. 68/77-86406/R dt. 08.12.1977
35	Bangalimunda	00	x	298.78	No. FS. 130/78-53867/R dt. 19.08.1978
	Deogarh Division	25512.166	x	26313.776	x
36	Chilantikhol		2316.61	2316.61	No. FS. 489/79-6709/R dt. 30.01.1980
37	Kandarpa-lambdura		1666.4	1666.4	No. FS. 487/7210/R dt. 03.01.1980
38	Ludhar-Deopani		854.54	854.54	No. FS. 105/78-86086/R dt. 29.08.1988
39	Salohi-Loimura		295.65	295.65	No. FS. 476/79-6692/R dt. 30.01.1980
40	Sargidihi		93.15	93.15	No. FS. 32/77-589/R dt. 12.01.1978
41	Telikusum		409.05	409.05	No. FS. 27/79-40738/R dt. 28.05.1979
	Bamra WL Divn.		5635.4	5635.4	
	G. Total	x	x	31949.176	
Sources - Divisional Forest Officer, Deogarh.					

Table No. 38

List of Protected Forest

Sl. No.	Name of the Forest Block	Aren in ha. as per Working Plan	Area transferred from Bamra WL. Division in ha.	Total Area in ha.	Notification No. & date
01	Balibahal	00	00	149.0094	No. 10F(Div)-37/2011/4775/F&E dated 16-03-2011
	Total			149.0094	

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1.8.3. Village Forest (VF): - The Notification No. of all village forest covering an area of 686.49 ha is not available.

1.8.4. The abstract of forest blocks: - The abstract of legal status of forest block included in the Plan is furnished below.

Table No. 39

Abstract of forest blocks

Sl. No.	Category	Total blocks	Area in ha
01	Reserve Forest	30	100731.382
02	Proposed Reserve Forest	41	31949.176
03	Protected Forest	01	149.0094
	Total	72	132829.5674

Sources - Divisional Forest Officer, Deogarh.

1.8.5. The Range wise distributions of managed forest area of Deogarh Division included in the revision have been furnished in the table below.

Table No. 40

Range wise distribution of forest blocks

Range	Forest block	Legal status	Notified area in ha
Deogarh	Pradhanpat (P)	RF	6321.726
	Pravasuni	RF	11080.449
	Kansar (P)	RF	9758.88
	Rambhadevi (P)	RF	2316.979
	Khajuria	RF	5008.092
	Jhadeswar	PRF	2768.499
	Hadamunda (P)	PRF	169.857
	Rajamunda	PRF	249.642
	Kalkath	PRF	251.343
	Tirib	PRF	85.698
	Tarang	PRF	981.477
	Bangalimunda	PRF	298.78
	Chilantikhol	PRF	2316.61
	Kandarpa-lambdura	PRF	1666.40
	Ludhar-Deopani	PRF	854.54
	Salohi-Laimura	PRF	295.65
	Sargidihi	PRF	93.15
	Telikusum	PRF	409.05
Reamal	Kansar (P)	RF	2439.72
	Rambhadevi (P)	RF	1950.207
	Gogua	RF	3599.235
	Hadamunda (P)	PRF	396.333

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	Kankarkhol	PRF	5779.44
	Kundheigola	PRF	3537.715
	Ghodajaka	PRF	162.68
	Naikul	PRF	1945.39
	Tamkia (PRF)	PRF	900.83
Barkote	Pradhanpat (P)	RF	4064.337
	Panguli	RF	3220.681
	Thjanal	RF	831.870
	Mandasila	RF	2856.465
	Pauri	RF	8215.425
	Badtaila	RF	10154.805
	Kansar (A)	RF	162.90
	Kansar (B)	RF	107.325
	Banbira	PRF	1192.32
	Kulundikudar	PRF	472.968
	Tusula	PRF	1675.45
	Kaunsibahal	PRF	593.892
	Talabahali	PRF	63.99
Pallahara	Malyagiri (P)	RF	5857.13
	Nizgarh (A)	RF	287.198
	Nizgarh (B)	RF	93.09
	Old Pauri	RF	6783.750
	New Pauri	RF	1296.000
	Tamkia	RF	513.540
	Saida	RF	397.710
	Mankarchua	RF	1314.225
	Kakharua	PRF	166.536
	Atolanka	PRF	161.87
	Jolanda-Jankpani	PRF	291.438
	Sarbeda	PRF	277.02
	Timi	PRF	422.658
	Jharakhaman	PRF	65.934
	Bhaluhuli	PRF	140.94
	Balibahal	PF	149.0094
Khamar	Malyagiri (P)	RF	5643.04
	Gurusulei	RF	388.800
	Biripal	RF	437.400
	Charigochia	RF	529.199
	Danda	RF	1458.000
	Kuladera	RF	2236.815
	Rengalmunda	RF	86.670
	Kunjam	RF	1047.553
	Jambua	RF	257.580
	Chungamatia	RF	15.578
	Kalamjuangasahi	PRF	150.66
	Kardapal	PRF	527.391
	Ranjo	PRF	221.697

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১	Priyambadapur	PRF	50.139
২	Rangiapal	PRF	410.346
৩	Bhulaka	PRF	233.118
৪	Sanda	PRF	446.067
৫	Bankhol	PRF	1222.452
৬	Badasada	PRF	196.992
৭	Nuagaon	PRF	136.404
৮	Injidi	PRF	73.71
		Total	132829.5674
Sources - Field Staff.			

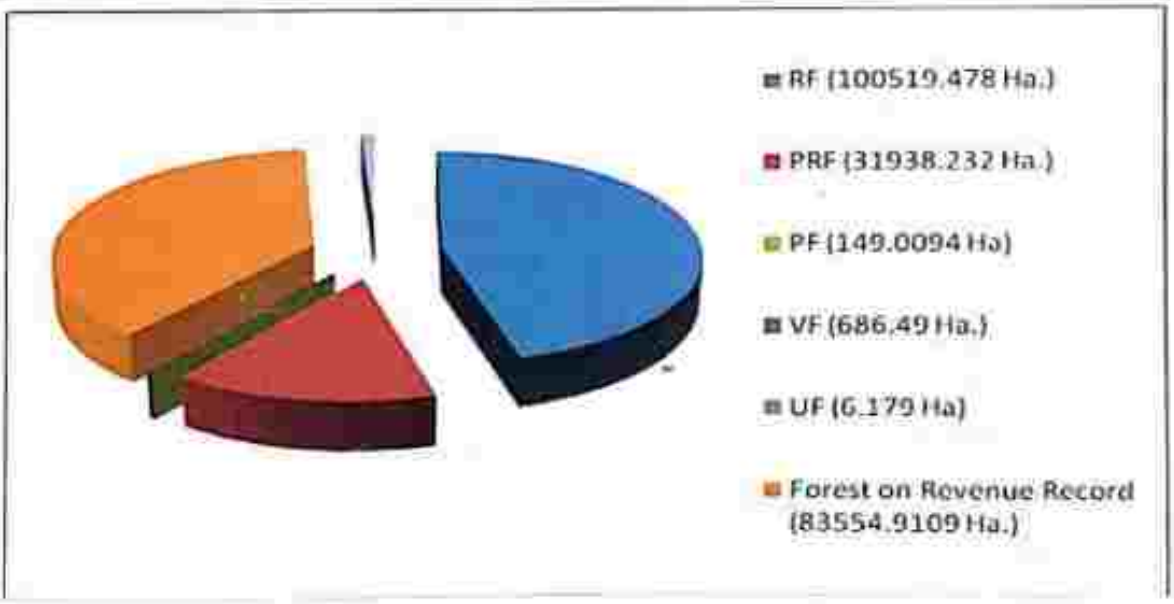
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1.8.6. Therefore the abstract of forest area distributed in Deogarh Division, which is included in the Plan has been furnished in the table below.

Table No. 41

Abstract of forest blocks in Deogarh Division

Status	Number of Forest block	Notified area in ha.	Area diverted in ha	Balance area in ha
RF	30	100731.382	211.904	100519.478
PRF	41	31949.176	10.944	31938.232
PF	01	149.0094	00	149.0094
Total	72	132829.5674	222.848	132606.7194



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1.8.7. Analysis and Valuation of Crop: - The present condition of the crop has been shown in the topo sheet of scale 1 ~ 50000. The total area has been divided in to six part and the details of crop condition along with their distribution are shown in the stock map. The area containing 80 % or more sal trees has been classified as Sal area. The area containing average 05 clumps per 0.1 hector along with other miscellaneous trees has been classified as Bamboo mixed area. All planted area has been classified as 'planting area'. The area having grasses, weeds and exposed rocks has been classified as blank area. The balance area has been classified as miscellaneous forest. Eroded areas are not shown separately but it overlaps other areas. The detail classification of area as per crop condition is given below.

Table No. 42		
Classification of forest area as per crop condition		
Sl. No.	Name of crop area	Total area in ha
1	Sal crop	35725.9608
2	Miscellaneous crop	71194.7821
3	Bamboo mixed	108250.800 (over lapping)
4	Plantation	25431.7894
5	Blanks	00
6	Eroded	254.1871
	Total	132606.7194
Sources - Field observation and record		

1.9. State of Boundary:

1.9.1. Boundary of Reserve Forests: - Boundary line of all Reserve Forests had been surveyed by Survey of India during 1978-79 to 1980-81 and printed in 1:25000 scale maps. The common boundary line with adjoining District has been cleared to a width of 12.00 mt. The boundary of (A) class Reserve Forests has been cleared to a width of 10.00 mt. But in case of (B) class Reserve Forests to a width of 8.00 mt. Boundary of all Reserve Forest has been shown in the topo sheets by Survey of India. The details of boundary lengths and total pillars number of individual Reserve Forests have been given in the table below.

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Table No. 43

Boundary length and pillars of Reserve Forests

S. No.	Name of Forest block	Boundary Length in Km.	Boundary pillars			
		Total	Notified	Good	Dag'ed	Missing
1	Pradhanpat	84.860	383	234	149	0
2	Kansar (P)	56.000	476	293	183	0
3	Pravasuni (P)	113.880	547	221	326	0
4	Rambhadevi	94.305	596	357	239	0
5	Panguli	71.790	365	65	300	0
6	Thianal	20.889	140	30	110	0
7	Mandasila	67.660	138	38	100	0
8	Pauri	63.493	448	77	371	0
9	Badtaila	110.985	768	142	626	0
10	Gogoa	63.534	381	279	102	0
11	Malyagiri	104.100	588	201	327	60
12	Nizgarh (A)	12.100	86	0	16	70
13	Nizgarh (B)	4.762	25	25	0	0
14	Old Pauri	73.440	236	120	116	0
15	New Pauri	26.000	89	50	39	0
16	Tamkia	26.280	56	40	16	0
17	Saida	16.750	75	65	10	0
18	Gurusulei	12.065	86	0	86	0
19	Kansar (A)	6.540	32	10	22	0
20	Kansar (B)	6.740	41	16	25	0
21	Biripal	25.625	170	80	76	14
22	Chargochia	12.875	56	34	22	0
23	Danda	30.000	102	40	62	0
24	Mankarchua	34.000	154	115	39	0
25	Kuladera	41.820	303	53	250	0
26	Rengalmunda	8.000	56	18	38	0
27	Kunjam	50.450	151	30	110	11
28	Jambua	18.750	38	15	23	0
29	Chungamatia	1.260	96	NIL	NIL	96
30	Khajuria	32.895	514	343	171	0
	Total	1291.848				

Sources - Divisional Forest Officer, Deogarh.

1.9.2. Boundary of Proposed Reserve Forests: - Boundary line of all Proposed Reserve Forests have been surveyed by field staffs and checked by the Forest Settlement Officer. The boundaries have been 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 and pillars are shown in the table below.

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Table No. 44

Boundary length and pillars of Proposed Reserve Forests

Sl No	Name of block	Boundary length in km	Number of pillars			
		Total	Notified	Good	Dam'd	Missing
1	Jhadewswar	30.780	220	140	80	0
2	Hadamunda	14.740	116	82	34	0
3	Rajamunda	8.480	83	0	83	0
4	Kalkath	7.200	52	42	10	
5	Tirib	6.160	x	x	x	x
6	Tarang	39.800	166	98	66	2
7	Kankarkhol	69.180	490	157	333	0
8	Kundheigola	8.300	220	19	201	0
9	Ghodapaka	6.951	68	47	21	0
10	Naikul	23.875	218	169	49	0
11	Banbira	33.014	97	32	65	0
12	Kulundikudar	15.556	42	24	18	0
13	Tusula	23.010	72	40	32	0
14	Kaunsibahal	29.230	x	x	x	x
15	Talabahali	3.484	44	18	26	0
16	Kakharua	7.591	67	60	7	0
17	Kalamjuangsahi	8.168	64	10	36	18
18	Kardapal	22.000	168	20	58	90
19	Ranja	13.797	91	85	6	0
20	Atolanka	3.700	x	x	x	x
21	Jolanda-Jankpani	12.196	63	50	13	0
22	Sarbeda	14.160	136	60	60	16
23	Timi	12.172	49			49
24	Jharakhaman	4.363	42			42
25	Priyambadapur	3.945	28	-	28	0
26	Rangiapal	10.600	35	-	35	0
27	Bhaluhuli	2.912	39	33	6	0
28	Bhulaka	10.140	97	46	32	19
29	Sanda	9.580	106	-	106	0
30	Bankhol	21.937	98	-	98	0
31	Badasada	8.344	69	-	69	0
32	Nuagaon	9.016	58	-		58
33	Injidi	4.371	30		30	0
34	Tamkia	26.280	128	93	35	0
35	Bangalimunda	14.252	32	15	17	0
36	Chilantikhol	39.769	220	76	144	0
37	Kandarpa-lambdura	33.949	146	56	90	0
38	Ludhar-Deopani	30.840	172	60	112	0
39	Salohi-Laimura	9.785	56	22	34	0
40	Sargidihi	3.240	28	10	18	0
41	Telikusum	10.320	53	22	31	0
	Total	667.187				

Sources - Divisional Forest Officer, Deogarh.

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Table No. 45

Boundary length and pillars of Protected Forests

Sl No	Name of block	Boundary length in km	Number of pillars			
		Total	Notified	Good	Dam'd	Missing
1	Balibahal	5.100	53	53	0	0

1.10. Encroachment:

1.10.1. Due to the indistinguishable boundary line from neighboring in many forest block, the encroachment inside RF is not very much ruled out. Most of the villages inside the Reserved forest have been delimited by cleared ring lines of 4.5 M wide but some villages like Chimgudijharan in Pradhanpat have not yet been ringed out. Resurvey of such encroached block and Demarcation with permanent boundary pillars according to provision of rules 168 & 169 of OFD Code are absolutely necessary.

1.10.2. Offence cases have been initiated against the encroachers and the cases are pending in the court of law. The details of field survey on encroachment have been given in the table below.

Table No. 46

Area encroached in different forest blocks

Year of encroachment	Name of Range	Name of Block	Area encroached in ha			No. of encroachers
			RF	PRF	KF	
2002-03	Barkote	Badtaila	0.04	0	0	01
-do-	Reamal	Kankarkhol	0	1.50	0	05

Sources - Divisional Forest Officer, Deogarh.

1.11. Survey: - The local forest Officer carried out boundary survey of all reserve forest during DARBAR time. Survey of India surveyed Deogarh Division and prepared Top Sheets in 1:25000 and 1:50000 Scale.

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1.12. Map.

1.12.1. Topo sheets in 1:50000 scales have been used for stock mapping. There are 15 Topo sheets covering the revised Plan. Their individual number and arrangement is given below.

Table No. 47				
Position of Topo sheets in Scale - 1: 50000				
	F45M9			
F45M6	F45M10	F45M14	F45N2	F45N6
F45M7	F45M11	F45M15	F45N3	F45N7
	F45M12	F45M16	F45N4	F45N8

1.13. Legal Position:

1.13.1. The Reserved Forests & Proposed Reserve Protected Forests dealt with in this plan are notified U/S 21 & U/S 4 of Odisha Forest Act.1972 respectively. The protection of forest and wildlife of this division are being regulated by the prevailing Act and wildlife (protection) Act. The forest (conservation) Act, 1980 and National Forest Policy 1988 have also come into force over the years. These Acts, Rules and the new National Forest Policy have bearing on working of these forests. The scheduled tribes and other traditional forest dwellers (Recognition of Forest Rights) Act, 2006 has also been promulgated during the ongoing plan period. Under this act Total 1829.040 ha. Forest Land has been allotted to 5016 Nos of Tribal Family out of which 153.98 ha is in Reserved Forest and 1675.06 ha is in Revenue Forest. The Forest area under Revenue Department as per DLC Report of Deogarh District is 56120.532 ha & Pallahara Tahasil is 29443.44 ha the total Forest area under revenue department as per DLC report under this division is 85563.972 ha.

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1.13.2. The forest area of Deogarh Division as per DLC report is given in the table below :-

Table No. 48		
Forest area as per DLC report		
Sl. No.	Status	Area as per DLC report in ha
1	KF of Deogarh District	56120.532
2	KF of Pallahara Tehsil	29443.44
3	RF of Deogarh Divn	100731.382
4	PRF of Deogarh Divn	31949.176
5	PF of Deogarh Divn	149.0094
6	VF of Deogarh Divn	686.49
	Total	219080.0294

1.14. Right and concession:

1.14.1. The following rights and concession have been granted to the public in the challenge contest of wide gap between demand and supply of forest materials.

1.14.2. Fuel Wood: - In each Range there will be one depot for fuel wood to meet the demand of local people. Each household will be supplied 2 (two) cart loads of fuel wood per annum from these depots on "first come first serve" basis subject to availability. The rate of firewood will be decided by OFDC, ltd. One bullock cartload will be equivalent to 5 (five) Quintals and one buffalo cart load about 7.5 Quintal of fuel wood.

1.14.3. Matured Eucalyptus, Acacia and other fuel wood plantations, which have reached harvestable age and are ripe for exploitation, should be worked according to coupe system as per approved working plan. Social forestry plantations can be put to harvest and the fuel wood there from will be available to the concerned villages participating in the scheme thereby lessening the burden on natural forest.

1.14.4. Bamboos: - In the existing depot at Deogarh, the Odisha Forest Development Corporation Limited will sale salia bamboo to the local people as per the prescribed rate. This rate is inclusive of the royalty applicable to the district. Each

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tenant will be supplied 50 bamboos per annum 'on first come first serve' basis subject to availability.

1.14.5. Fire accident: - In case of fire accidents forest materials namely, bamboo and timber will be supplied by the Orissa Forest Development Corporation Ltd. at the cost inclusive of transportation charge, on requisition from the Tahasildar as per prevailing rules.

1.14.6. House building materials: - These will be supplied from the corporation depots at rates fixed from time to time.

1.14.7. The Orissa Forest Development Corporation Limited supply forest materials for agricultural implements at their respective depots including coupe depots.

1.14.8. All the above supply / sales will be on first come first serve basis subject to availability of forest materials.

1.14.9. Whenever necessary, coal, coke and briquettes will be kept in the depots as supplementary reserve for sale to local people by the Corporation.

1.14.10. All the timbers will not be sold by Orissa Forest Development Corporation Ltd. in round logs by auction. A part of it will be converted in to sized timbers and sold from the corporation depots to the local people for their bonafide use.

1.14.11. The domestic requirements for fuel wood, timber and bamboos by the local people will be considered first. Supply of such forest produces to industrial units will however be considered only in case of surplus availability.

1.14.12. The tenants may collect edible roots, fruits, leaves, creepers for their personal consumption without permission and free of charges.

1.14.13. The concessions granted are an obligation on the part of tenants to protect the forests and assist the forest staff in different developmental works on payment of wages to enrich the degraded forests. The Divisional Forest Officer may

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cancel such right and concessions for an indefinite period against an individual or group of tenants, when noticed failure to fill their obligation. They are permitted to graze their domestic animals in the unrestricted area on payment of prescribed rates.

1.15. Usufructuary Benefits to Vana Samrakshana Samiti:

1.15.1. The Vana Samrakshana Samiti will enjoy usufructuary benefits provided it discharges its duties and responsibilities as laid down in the Scheme. Further duties and responsibilities in the task of regeneration and protection of the forests may also be cast on the Samiti / Committee from time to time. The executive committee 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.

1.15.2. Usufruct like leaves, fodder, grasses, thatch grasses, broom grasses, thorny fencing materials, brush wood and fallen lops and tops and twigs used as fuel-wood shall be available to the members free of cost. Other usufructs like leased out minor forest produce, kendu leaves etc. 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.

1.15.3. All intermediate yield in shape of small wood, poles, fire wood etc. as may be obtained in silvicultural operations will be equitably distributed among the members by the executive committee.

1.15.4. Timber and poles as may be obtained from a major harvest or final felling shall be shared between the Forest Department and the Vana Samrakshana 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 in cash among the members.

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CHAPTER - II

THE FOREST

FLORA and FAUNA

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CHAPTER – II A

THE FOREST FLORA

2A.1. Composition and Condition of the Crop:

2A.1.1. The tract dealt with this revision lies in the Northern tropical Zone. Based primarily on temperature, tropical zone has been characterised as having mean annual temperature over 24^0 C and mean January temperature over 18^0 C and with no frost. It has all these characteristics & has vegetation typical of tropical zone. The tract is situated partly in the moist deciduous & partly in the dry deciduous zones of Indian vegetation as per diagrammatic representation of Indian Forest Types in "the Forest Types of India" by Champion & Seth. Varying with the configuration of the ground constitution of the soil influencing its water retaining capacity, past & present biotic influence composition as also the quality of vegetation exhibit marked local variations. Consequently, a drier type of vegetation is met with locally in the moist deciduous zone as also the vice versa is locally found. Irrespective of the type changes, Sal is the predominant species all over the forest except over Bamboo brakes and small patches of moist mixed deciduous type; at places forming almost a pure crop and at others forming but a small percentage of the forest as in the mixed deciduous type.

2A.1.2. Usual monsoon type of climate like that of Northern hemisphere is found on this tract. There are three distinct seasons experienced in Deogarh Division. The winter season starts from mid – November and continues till the middle of February, but in the higher altitude cold winter is felt till the middle of March. The rainy season starts from the end of June, when the South-West monsoon usually breaks and continues till the end of September. The summer season is more pronounced from mid-March to nearly end of June. Pre-monsoon rains are experienced towards the end of April or early part of May.

2A.1.3. Pure Bamboo Forest is found mostly in Kansar & Gogua blocks. The only species of Bamboo in this type is Salia Bamboo, i.e. Dendrocalamus strictus. Ground fire damages the culms to great extent during summer.

2A.1.4. The forest is under heavy pressure of biotic interference, annual fire, grazing, invasion of weeds, encroachments and demand on forest produces for the local communities.

2A.1.5. Floristic composition – Verities of large woody perennial plant having a single well defined stem and more than 6 mt height are sporadically distributed in all forest blocks, which are included in this revision. The present condition and floristic composition of the principal species available in the area have been discussed in the table below.

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Table No. 49

Floristic composition of R.F

Name of R.F	Name of principal trees	Floristic composition	Condition		
			Age	Health	Quality
Pradhanpat	Sal, Asan, Bija, Bandhan, Sishu	Bamboo, Karda, Siali, Khkada	70	Good	III
Kansar (P)	Sal, Asan, Rohini, Arjun	Veru, Valia, Ainla, Atundi, Bamboo	60	Good	IV
Pravasuni (P)	Sal, Asan Dhaura	Khkada, Karda, Bamboo	55	Good	IV
Rambhadevi (P)	Khair, Rohini, Sal	Khakada, Atundi , Bamboo	60	Good	IV
Panguli	Khair, Salai, Asan	Ainla, Karda, Mai, Khakada, Bamboo	60	Good	IV
Thianal	Sal, Bija, Asan, Mahul	Siali, Kasi, Ainla, Harida, Mai, Bamboo	85	Good	II
Mandasila	Sal, Asan, Bija, Bandhan, Sisso,	Ainla Khakada, Atundi, Bamboo	80	Good	II
Pauri	Bija, Asan, Mahul	Siali, Kasi, Ainla, Siali, Bamboo.	60	Poor	IV
Badtaila	Sal,Bija,Sishu, Asan	Siali, Kasi, Ainla, Bamboo	65	Good	IV
Gogun	Sal, Bija, Mundi, Asan, Bahada, Harida	Bamboo, Ainla Khakada, Atundi, Siali	75	Good	III and IV
Malyagri	Sal, Asan, Bija, Bahada, Mahul, Harida, Haldu, Bandhan, Sisoo,	Ainla Khakada, Atundi, Siali, Gurudu, Mai , Bamboo	80	Good	III
Nizgarh (A)	Sal,Asan, Haldu, Mahul	Ainla Khakada, Atundi, Siali	80		IV
Nizgarh (B)	Sal, Bija, Asana, Mahul, Rai, Daura, Bahada, Harida	Ainla Khakada, Atundi, Siali, Bhalia, Chara, Gurudu,	75	Good	III and IV
Old Pauri	Sal, Asan, Bija, Bandhan, Sishoo	Bamboo, Karada, Siali, Veru.	80	Good	II
New Pauri	Sal, Asan, Bija, Bandhan, Sishoo	Karada, Siali, Veru	55	Poor	IV
Tamkia	Sal, Asan, Bija, Bandhan, Kendu, Arjun	Ainla, Chara, Karada, Mai, Bamboo	85	Good	II
Saida	Sal, Asan, Bija, Bandhan, Haldu Mahul, Kendu	Ainla, Chara, Karada, Mai. Atundi, Harida.	60	Good	III & IV
Gurusulei	Sal, Asan, Mundi, Mahul, Kendu	Ainla, Chara, Karada, Mai.	60	Good	IV

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		Atundi, Harida			
Kansar (A)	Sal, Asan, Bija, Bandhan, Haldu Mahul, Kendu	Bamboo, Karada, Siali, Veru	70	Good	III
Kansar (B)	Sal, Asan, Bija, Bandhan, Haldu Mahul, Kendu	Karada, Siali, Veru	70	Good	III
Biripal	Sal, Asan, Mundi, Mahul, Kendu	Kasi, Chara, Karada, Sidha,	60	Poor	IV
Chargochia	Sal, Asan, Bija, Bandhan, Mahul, Kendu	Karada, Veru, Atundi	60	Poor	IV
Danda	Sal, Asan, Bija, Mahul, Kendu	Chara, Sunari, Guhira, Atundi, Bamboo	60	Good	III & IV
Mankarchua	Sal, Asan, Bija, Mahul, Kendu	Bamboo, Ainla, Chara,Shidha, Atundi	70	Good	II
Kuladera	Sal, Asan, Kendu, Mahul	Chara, Ainla, Atundi, Mai	60	Poor	IV
Rengalmunda	Sal,Bija, Asan, Kendu, Mahul	Chara, Sunari, Bhalia	70	Good	IV
Kunjam	Sal, Bija, Asan, Kendu, Mahul	Harida, Karada, Veru, Atundi	75	Good	III
Jambua	Sal, Asan, Kendu, Mahul	Chara, Sail, Veru, Karada, Atundi	80	Good	II
Chungmatia	Sal, Asan, Kendu, Mahul, Dhaura	Harida, Chara, Mai, Atundi	70	Good	III
Khajuria	Sal, Bija, Dhaura, Asan, Kendu, Mahul	Bamboo, Ainla, Chara, Shidha, Atundi	75	Good	IV

Table No. 50

Floristic composition of P.R.F

Name of P.R.F	Com't Important trees	Floristic composition	Condition		
			Age	Health	Quality
Jhadeswar	Sal, Bija, Bandhan, Sishu	Siali, Bhalia, Chara, Harida	50	Good	III
Hadamunda	Sal, Asan, Bija, Arjun, Khasi	Khakada, Siali, Bhalia, Chara,	60	Good	IV
Rajamunda	Sal, Bandhan, Asana, Bia	Khakada, Siali, Bhalia, Chara,	50	Good	IV
Kalkath	Sal, Asan, Mahula, Mai	Khakada, Siali, Bhalia, Chara,	55	Good	IV
Tirib	Sal, Bandhan, Asana, Bia	Ainla, Atundi, Siali, Bhalia,	60	Good	IV
Tarang	SalBija, Asan, Mahul	Siali, Bhalia, Chara, Harida	75	Good	III

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Kankarkhol	Sal, Asan, Bija, Bandhan, Sisso, Mahula	Khakada, Siali, Bhalia, Chara, Harida, Mai	80	Good	II
Kundheigola	Bija, Asha, Mahul	Siali, Bhalia, Chara, Harida	65	Good	III
Ghodapaka	Bija, Sishu, Asan	Ainla, Atundi, Siali, Bhalia,	65	Good	III
Naikul	Sal,Bija, Mahul, Asan	Siali, Bhalia, Chara, Harida	55	Good	IV
Banbira	Sal, Asan, Mahul, Sisoo, Haldu,	Bahada, Siali, Bhalia, Chara,	75	Good	III
Kulundikudar	Sal,Asan, Haldu, Mahul	Ainla, Atundi, Siali, Bhalia,	60	Good	IV
Tusula	Sal, Bija, Asana, Mahul	Khakada, Siali, Bhalia, Chara, Bamboo	55	Good	IV
Kaunsibahal	Sal, Haldu, Asana, Bija, Kasi, Khair	Ainla, Atundi, Siali, Bhalia,	60	Good	III
Talabahali	Sal, Bandhan, Khair, Asana, Bia	Khakada, Siali, Bhalia, Chara,	75	Good	III
Kakharua	Bija, Asha, Mahul	Siali, Bhalia, Chara, Harida	45	Good	III
Kalamjuangsahi	Bija, Sishu, Asan	Ainla, Atundi, Siali, Bhalia,	65	Good	III
Kardapal	Sal,Bija, Mahul, Asan	Siali, Bhalia, Chara, Harida	55	Good	IV
Ranja	Sal, Asan, Mahul, Sisoo, Haldu,	Bahada, Siali, Bhalia, Chara,	75	Good	III
Atolanka	Sal,Bija, Mahul, Asan	Siali, Bhalia, Chara, Harida	55	Good	IV
Jolanda-Jankpani	Sal, Asan, Mahul, Sisoo, Haldu,	Bahada, Siali, Bhalia, Chara,	75	Good	III
Sarbeda	Sal,Asan, Haldu, Mahul	Ainla, Atundi, Siali, Bhalia,	60	Good	IV
Tini	Sal, Bija, Asana, Mahul	Khakada, Siali, Bhalia, Chara,	55	Good	IV
Jharakhaman	Sal, Haldu, Asana, Bija, Kasi, Khair	Ainla, Atundi, Siali, Bhalia,	60	Good	III
Priyambadapur	Sal, Bandhan, Khair, Asana, Bia	Khakada, Siali, Bhalia, Chara,	75	Good	III
Rangiapal	Sal, Bija, Bandhan, Sishu	Siali, Bhalia, Chara, Harida	50	Good	III
Bhaluhuli	Sal, Asan, Bija, Atjun, Khasi	Khakada, Siali, Bhalia, Chara,	60	Good	IV
Bhulaka	Sal, Bandhan, Asana, Bia	Khakada, Siali, Bhalia, Chara,	50	Good	IV
Sanda	Sal, Asan, Mahula, Mai	Khakada, Siali,	55	Good	IV

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		Bhalia, Chara,			
Bankhol	Sal, Bandhan, Asana, Bia	Ainla, Atundi, Siali, Bhalia,	60	Good	IV
Badasada	SalBija, Asan, Mahul	Siali, Bhalia, Chara, Harida	75	Good	III
Nuagaon	Sal,Bija, Mahul, Asan	Siali, Bhalia, Chara, Harida	55	Good	IV
Injidi	Sal, Asan, Mahul, Sisoo, Haldu,	Bahada, Siali, Bhalia, Chara,	75	Good	III
Tamkia	Sal,Bija, Mahul, Asan	Siali, Bhalia, Chara, Harida	55	Good	IV
Bangalimunda	Sal, Asan, Mahul, Sisoo, Haldu,	Bahada, Siali, Bhalia, Chara,	75	Good	III
Chilantikhol	Sal, Bija, Bandhan, Sisha	Siali, Bhalia, Chara, Harida	50	Good	III
Kandarpa-lamdura	Sal, Asan, Bija, Arjun, Khasi	Khakada, Siali, Bhalia, Chara, Bamboo	60	Good	IV
Ludhar-Deopani	Sal, Bandhan, Asana, Bia	Khakada, Siali, Bhalia, Chara	50	Good	IV
Salobi-Loimura	Sal, Asan, Mahula, Mai	Khakada, Siali, Bhalia, Chara,	55	Good	IV
Sargidihi	Sal, Bandhan, Asana, Bia	Ainla, Atundi, Siali, Bhalia,	60	Good	IV
Telikusum	SalBija, Asan, Mahul	Siali, Bhalia, Chara, Harida	75	Good	III

2A.2. General Description of the Growing Stock:

2A.2.1. Classification of Forests - The forest of this tract can be classified under the following categories as per Mathur's Plan in to three types.

Forest types and sub-type:

Type	-	I	-	Sal forest	:	Where Sal formed atleast 70% of the crop.
Type	-	II	-	Mixed forests	:	In which the percentage of the sal is less than seventy percent
Type	-	III	-	Bamboo forest	:	This had practically no separate identify except in Kansar block.

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Dr. Money's Plan adopted the same broad classification but further sub-devided the type as follows:-

Type	-	I	-	(a) Dry (Hill) type forests (b) Nesophytic (Half Valley) type Sal forests (c) Valley Sal forests
Type	-	II	-	(a) Damp mixed forests (b) Dry mixed forests
Type	-	III	-	(a) Mixed Bamboo forests (b) Pure Bamboo forests

Table No. 51

Classification of Forests

Name of Major Group – Tropical Forest

Name of Group	Name of Sub-group	Name of Type	Name of Sub-type	Name of Varieties
Tropical moist deciduous Forest - 3	North Indian tropical moist deciduous Forest – 3C	Moist sal-bearing forest – 3C / C_2	Moist peninsular sal – 3C / C_{2e}	Moist peninsular high level sal – 3C / $C_{2e(1)}$
				Moist peninsular low level sal – 3C / $C_{2e(2)}$
				Moist peninsular valley sal – 3C / $C_{2e(3)}$
Dry deciduous forest – 5	Northern tropical dry deciduous forest – 5B	Dry sal-bearing forest – 5B / C_1	Dry peninsular sal – 5B /C_{1e}	
		Northern dry mixed deciduous forest – 5B / C_2		
		Dry bamboo brakes – 5B / E_9		

2A.2.2. The forest of Deogarh Division comes under the major group Tropical Forest on the basis of "Champion and Seth" revised classification. Three Varieties of sub-type 3C/C_{2e} (Moist peninsular sal) occur in different blocks and compartments. Three Types of sub-group 5B (Northern tropical dry deciduous forest) occur in different blocks and compartment.

2A.2.3. Variety 3C / $C_{2e(1)}$ – Typical example of Moist peninsular high level sal are found in Malyagiri and Paburi blocks, where sal extends right up to the top of hills. Here it is ascending to 400-mt elevation above mean sea level. The quality of crop is generally Q-III to Q-IV. Regeneration of sal is not a problem. The area under this variety is approximately 5052.0 ha. The floristic composition of this variety is given in the table below.

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Table No. 52				
Floristic composition of Variety 3C / $C_{2c(i)}$				
Name of Blocks	Top story	Middle story	Under growth	Climbers / Grasses
Malyagiri & Paburi	Sal, Dhaura, Sahaja, Sidha, Gambhari, Haldu, Semal, Bija	Salai, Kumbhi, Bandhan, Rai, Kasi,	Girdi, Petamuri, Kumti	Mardalai, Siali, Themeda and Imperecta

2A.2.4. Variety 3C / $C_{2c(ii)}$ – Moist peninsular low level sal is fairly extensive in the middle and lower slope of Pravasuni, Khajuria, Malyagiri and Tamkia blocks. In this area, sal ascends to an elevation of 400 mt above mean sea level and occurs as almost pure crop. The quality of the sal varies from Q-III to Q-II. The area is free from frost and regeneration is adequate. Bamboo occurs mostly to the higher hill slopes except in certain lower area of Makarchua blocks. The floristic composition of this variety is given in the table below.

Table No. 53				
Floristic composition of Variety 3C / $C_{2c(ii)}$				
Name of block	Tope story	Middle story	Under growth	Climber / Grass
Pravasuni	Sal, Asan, Bahada, Bija, Kasi, Haldu, Dhaura, Senha, Mundi, Dhuben, Semal, Gambhari	Kumbhi, Salai, Jamu, Rai, Kendu, Sisoo, Karada, Kamalagundi, Ainla, Bamboo	Petmuri, Mohana, Girdi, Ranikathi	Latapalas, Atundi, Siali,Duba, Mardalai, Muturi, Sinecula
Khajuria				
Mankarchua				
Tamkia				
Saida				
Pradhanpat				

2A.2.5. Variety 3C / $C_{2c(iii)}$ – Moist peninsular valley sal is confined to moist sheltered valley of Malyagiri & Paburi blocks and Pravasuni, Pradhanpat blocks either in small or extensive patches providing better soil and moisture regime and at favourable location consists of good quality sal forest. The average quality is II though it improves to quality I at favorable location. The regeneration is satisfactory. The canopy is dense. The area adjoining to both side of the perennial and semi-perennial nala flowing in the division comes under this variety. The alluvial deposits have been formed of good well drain soil of sufficient depth with adequate supply of sub-soil water. The best sal forest of this tract is found in this variety. The floristic composition of this variety is given on the table below.

Table No. 54				
Floristic composition of Variety 3C / $C_{2c(iii)}$				
Name of block	Tope story	Middle story	Under drowth	Climber / Grass
Malyagiri	Sal, Arjun, Asan, Bija, Semal, Haldu, Amba,	Kumbhi, Chadeidudi, Kasi, Bandhan, Senha	Ranikathi, Girili, Salaparni, Palua	Atundi, Mardalai, Muturi, Siali,
Paburi				
Pravasuni				
Pradhanpat				

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2A.2.6. Type 3C / $2S_1$ – This type is met with locally in the more moist valleys where the soil is deep and alluvial. Tropical Hill Valley Swamp Forest occurs in the lower reach of nala. The trees are mainly evergreen and low crowned. The streambed is gravelly. The silt and sand in which the trees are rooted are rich in humus contained. The site is wet throughout the year. The floristic composition of this Type is given in the table below.

Table No. 55

Floristic composition of Type 3C / $2S_1$

Name of block	Tope story	Middle story	Under growth	Climbers / Grasses
Pravasuni & Badtaila	Amba, Asan, Jamu, Arjun, Makarkendu, Kendu, Cadamba	Dimiri, Char, Kasi, Mai, Bahada, Harida	Baramasi, Dudura, Fern	Duba, Kalam, Marda, Siali, Atundi, Satabari

2A.2.7. Sub-type 5B / C_{1c} – This Dry peninsular sal forests is found on shallow soil overlying crystalline or metamorphic rocks, where moisture condition is unfavorable for good growth. Sal does not grow well; generally attaining quality IV. Regeneration of sal inadequate & high percentage of unsoundness of trees of all girth classes in higher slopes. This is due to poor soil, continues annual ground fire, uncontrolled selective felling and leaving unsound stem. Sal forms almost a pure corp. The growth is poor stunted and many are found malformed. This may be due to frequent annual fire and drought varying proportion of miscellaneous species and also found with Sal as principal species. The floristic composition of this Sub-type is given in the table below.

Table No. 56

Floristic composition of Sub-type 5B / C_{1c}

Name of block	Tope story	Middle story	Under growth	Climber / Grasses
Thianal Panguli Pauri Mandasila Gogua Rambhadevi Khajuria Pravasuni Kuladera Kunjam Chungamatia Danda Nizagarh A& B Kansar A&B	Sal, Ashan, Arjun, Bija, Bahada, Chatian, Dhaura, Harida, Haldu, Jamu, Kasi, Kochila, Lodha, Rohini, Simal, Sidha, Sisoo, Tetuli Kendu, Mahul,	Achhu, Ankula, Amla, Agasti, Buro, Bela, Bheru, Chara, Bamboo,Dhatuki,Palas	Arakha, Asadhua, Basanga, Gila, Girili, Kantei, Ghurudu, Jajangi	Atundi, Gila, Dantari, Kaincha, Siali, Dungi, Broom, Duba

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2A.2.8. Type 5B / C_2 – Northern Dry Mixed Deciduous Forest is scattered throughout the hill tracts having poor humus contain soil. This Type of forest occurs in all most all blocks exist towards the southern part of the division. The culmination stage of plant succession is noticed in this locality, where the existing sal crop has been replaced by miscellaneous species owing to excess illicit felling, fire and over grazing. The crop is less open and trees are stunted. The trees remain leafless for a longer period and the forests give a desolate look in summer season. Salia bamboo occurs widely in this sub-type. The floristic composition of this type is given in the table below.

Table No. 57

Floristic composition of Type 5B / C_2

Sl. No.	Name of block	Tope story	Middle story	Under growth	Climber / Grasses
1	Kansar	Sal, Gendali, Salai, Kenda, Dhaura, Mahula, Dhuben, Sisoo, Ashan, Gahira	Amla, Chura, Khair,	Kurei, Dhataki, Khurudu	Salia, Dungi, Danturi, Siali, Kaincha
2	Gogua				
3	Danda				
4	Kunjam				
5	Biripal				
6	Jambua				
7	Malyagiri				
8	Mankarchua				

2A.2.9. Type 5B / E_9 – Dry Bamboo Brakes is seen in different blocks in sporadic manner. It occurs in dry soil both on the hills as well as on the alluvium. Mainly three species of bamboo occur in this tract out of which Dendrocalamus strictus (Salia Bamboo) is in abundance. Cephalostachyum pergracile (Dungi) occurs in very small pockets in the bank of nala. Bamboo is seen in Kansar, Gogua, Pradhanpat, Khajuria, Mankarchua, Paburi and Danda blocks of Deogarh Division. Dendrocalamus strictus also occur on the higher hills of malyagii particularly in southerly and Southwesterly aspects, but the occurrence of the clumps is sparse. The quality improves with altitude. The most of the forest now look impoverished due to over falling in the past and heavy pressure from the tenants requirements. The occurrence of bamboos in Danda higher hills of Malyagiri may be due to the drier condensations and shallow soil where as continued shifting cultivation in the past may be attributed to the case of Mankarchua and Paburi hills.

2A.2.10. Abstract of Forest Type – The extent of area in individual block under different forest type of India as described from Para 2A.2.3 to 2A.2.10 is given in the table below.

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Table No.58			
Abstract of forest type			
Sl No.	Name of classification	Area in ha	Name of forest block.
1	3C / $C_{2c(i)}$	13215.425	Malyagiri, Pabur etc.
2	3C / $C_{2c(ii)}$	7233.567	Khajuria, Tamkia, Mankarchua etc.
3	3C / $C_{2c(iii)}$	27966.682	Malyagiri, Pravasuni, Pradhanpat etc.
4	3C / $2S_1$	14802.187	Badtaila, Rambhadevi etc.
5	5B / C_{1c}	51159.309	Thianal, Pangali, Pauri, Mandasila, Jhadeswar etc.
7	5B / C_2	18229.5494	Kansar, Gogua, Danda, Kunjam etc.
8	5B / E_0	99767.596	Kansar, Gogua, Pradhanpat, Khajuria, Pauri, Malyagiri etc.

2A.3. Status of Natural Regeneration:

2A.3.1. Sample point enumeration has been done in all forest blocks, which is included in this revision. Regeneration survey has been taken up in the plot size of 2 mt x 2 mt in the middle of every sample point, while conducted inventory of the sample point. Separate value has been given for each category of regeneration. The sum of regeneration category will give the value for each quadrant. The values of these hundred quadrants when total will give the condition of the regeneration in that area, which is equal to 400 sqm. The regeneration survey has been done for the assessment of established and un-established crops under the following principle, which is given in the table below.

Table No. 59				
Value of regeneration category				
Sl. No.	Category of regeneration	Description	Symbol	Value
1	Established	Height should be 2.5 mt or more and d.b.h 10 cm	E	0.20
2	Woody shoot	It is unestablished but large and vigorous, which can be established early. Its height varies from 1.0 mt to < 2.5 mt.	W	0.16
3	Whippy	Its height varies from 50 cm to < 1.0 mt.	U	0.08
4	Sub-whippy	Its height is less than 50 cm.	S	0.04
5	Recruit	Current year seedling	R	0.02
6	Blank	There is no regeneration in the plot.	O	0.00

2A.3.2. Sample Point – It has been decided to take up enumeration of trees for preparation of 2nd PWPR @ 0.1 % of the total area included in this revision. Accordingly, the plot size of 40 mt x 25 mt has been taken in the field for tree enumeration and in the middle of each plot regeneration survey has been done on the plot size of 2 mt x 2mt. The present regeneration status has been recorded along with

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the inventory of the trees. There are 1148 points has been taken for tree enumeration & regeneration survey. The points are distributed in all forest blocks, which are included in this revision.

2A.3.3. Status of regeneration - The status of repeneration for each block is calculated separately. The tree enumeration & regeneration survey data are given separately. In this paragraph, the calculation for regeneration status of 72 forest block is given in the table below.

Table No. 60

Estimation of regeneration status of R.F.

Block	Total No of Sample points	E	W	U	S	R
Pradhanpart	Total = 50	43	85	132	203	326
	Average	0.86	1.70	2.64	4.06	6.52
	Value	0.17	0.27	0.21	0.16	0.13
	Total Value = E + W + U + S + R = 0.94					
Kansar (P)	Total = 29	24	48	89	122	188
	Average	0.83	1.66	3.07	4.21	6.48
	Value	0.17	0.26	0.25	0.17	0.13
	Total Value = E + W + U + S + R = 0.97					
Pravasuni (P)	Total = 70	59	72	208	260	595
	Average	0.84	1.02	2.97	3.71	8.5
	Value	0.17	0.16	0.24	0.15	0.17
	Total Value = E + W + U + S + R = 0.89					
Rambhadevi (P)	Total = 28	20	31	53	128	150
	Average	0.71	1.11	1.89	4.57	5.36
	Value	0.14	0.18	0.15	0.18	0.11
	Total Value = E + W + U + S + R = 0.76					
Panguli	Total = 32	39	45	97	111	173
	Average	1.22	1.41	3.03	3.47	5.41
	Value	0.24	0.23	0.24	0.14	0.11
	Total Value = E + W + U + S + R = 0.96					
Thianal	Total = 10	7	14	37	40	52
	Average	0.70	1.40	3.70	4.00	5.20
	Value	0.14	0.22	0.30	0.16	0.10
	Total Value = E + W + U + S + R = 0.92					
Mandasila	Total = 31	28	64	81	98	160
	Average	0.90	2.06	2.61	3.16	5.16
	Value	0.18	0.33	0.21	0.13	0.10
	Total Value = E + W + U + S + R = 0.95					
Pauri	Total = 86	91	121	278	395	498
	Average	1.06	1.41	3.23	4.17	5.79
	Value	0.21	0.23	0.26	0.17	0.12
	Total Value = E + W + U + S + R = 0.98					

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Badtaila	Total = 99	105	148	285	355	528
	Average	1.06	1.49	2.88	3.59	5.33
	Value	0.21	0.24	0.23	0.14	0.11
	Total Value = E + W + U + S + R = 0.93					
Gogua	Total = 35	35	64	81	132	195
	Average	1.00	1.83	2.31	3.77	5.57
	Value	0.20	0.29	0.19	0.15	0.11
	Total Value = E + W + U + S + R = 0.94					
Malyagiri	Total = 99	93	141	279	391	964
	Average	0.94	1.42	2.82	3.95	9.74
	Value	0.19	0.23	0.23	0.16	0.19
	Total Value = E + W + U + S + R = 0.99					
Nizgarh (A)	Total = 2	2	3	3	4	6
	Average	1	1.5	1.5	2	3
	Value	0.20	0.24	0.12	0.08	0.06
	Total Value = E + W + U + S + R = 0.70					
Nizgarh (B)	Total = 1	1	2	1	4	7
	Average	1	2	1	4	7
	Value	0.2	0.32	0.08	0.16	0.14
	Total Value = E + W + U + S + R = 0.90					
Old Pauri	Total = 83	47	68	299	598	679
	Average	0.57	0.82	3.60	7.20	8.18
	Value	0.11	0.13	0.29	0.29	0.16
	Total Value = E + W + U + S + R = 0.98					
New Pauri	Total = 15	13	20	38	71	109
	Average	0.87	1.33	2.53	4.73	7.27
	Value	0.17	0.21	0.20	0.19	0.15
	Total Value = E + W + U + S + R = 0.92					
Tamkia	Total = 6	3	5	18	38	58
	Average	0.50	0.83	3.00	6.33	9.67
	Value	0.10	0.13	0.24	0.25	0.19
	Total Value = E + W + U + S + R = 0.92					
Saida	Total = 4	3	5	13	13	22
	Average	0.75	1.25	3.25	3.25	5.5
	Value	0.15	0.2	0.26	0.13	0.11
	Total Value = E + W + U + S + R = 0.85					
Gurusulei	Total = 7	6	9	22	33	54
	Average	0.86	1.29	3.14	4.71	7.71
	Value	0.17	0.21	0.25	0.19	0.15
	Total Value = E + W + U + S + R = 0.97					
Kansar (A)	Total = 4	4	6	7	16	28
	Average	1	1.5	1.75	4	7
	Value	0.2	0.24	0.14	0.16	0.14
	Total Value = E + W + U + S + R = 0.88					
Kansar (B)	Total = 3	2	2	12	14	26
	Average	0.67	0.67	4.00	4.67	8.67
	Value	0.13	0.11	0.32	0.19	0.17

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	Total Value = E + W + U + S + R = 0.92					
Biripal	Total = 4	4	4	13	20	25
	Average	1.00	1.00	3.25	5.00	6.25
	Value	0.20	0.16	0.26	0.20	0.13
	Total Value = E + W + U + S + R = 0.95					
Chargohia	Total = 10	6	16	31	45	85
	Average	0.6	1.6	3.1	4.5	8.5
	Value	0.12	0.26	0.25	0.18	0.17
	Total Value = E + W + U + S + R = 0.97					
Danda	Total = 14	13	18	41	62	129
	Average	0.93	1.29	2.93	4.43	9.21
	Value	0.19	0.21	0.23	4.43	9.21
	Total Value = E + W + U + S + R = 0.99					
Mankarchua	Total = 14	11	18	46	55	101
	Average	0.79	1.29	3.29	3.93	7.21
	Value	0.16	0.21	0.26	0.16	0.14
	Total Value = E + W + U + S + R = 0.93					
Kuladera	Total = 18	17	22	53	75	140
	Average	0.94	1.22	2.94	4.17	7.78
	Value	0.19	0.20	0.24	0.17	0.16
	Total Value = E + W + U + S + R = 0.94					
Rengalmunda	Total = 6	4	6	20	28	51
	Average	0.67	1.00	3.3	4.67	8.50
	Value	0.13	0.16	0.27	0.19	0.17
	Total Value = E + W + U + S + R = 0.92					
Kunjam	Total=11	5	16	39	48	74
	Average	0.45	1.45	3.55	4.36	6.73
	Value	0.09	0.23	0.28	0.17	0.13
	Total Value = E + W + U + S + R =0.90					
Jambua	Total=5	3	7	17	20	44
	Average	0.60	1.40	3.40	4.00	8.80
	Value	0.12	0.22	0.27	0.16	0.18
	Total Value = E + W + U + S + R = 0.95					
Khajuria	Total = 19	18	24	54	81	140
	Average	0.95	1.26	2.84	4.26	7.37
	Value	0.19	0.20	0.23	0.17	0.15
	Total Value = E + W + U + S + R = 0.94					
Chungamatia	Total = 1	0	0	0	03	12
	Average	0	0	0	0.12	0.24
	Value	0	0	0	0.12	0.24
	Total Value = E + W + U + S + R = 0.36					

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Table No. 61						
Estimation of regeneration status of P.R.F.						
Block	Total No of Sample points	E	W	U	S	R
Jhadeswar	Total = 12	11	13	49	41	89
	Average	0.92	1.08	4.08	3.42	7.42
	Value	0.18	0.17	0.33	0.14	0.15
	Total Value = E + W + U + S + R = 0.97					
Hadamunda	Total = 14	12	21	39	57	105
	Average	0.86	1.5	2.79	4.07	7.5
	Value	0.17	0.24	0.22	0.16	0.15
	Total Value = E + W + U + S + R = 0.95					
Rajamunda	Total = 3	1	3	10	16	25
	Average	0.33	1.00	3.33	5.33	8.33
	Value	0.07	0.16	00.27	0.21	0.17
	Total Value = E + W + U + S + R = 0.87					
Kalkath	Total = 3	2	4	10	9	16
	Average	0.67	1.33	3.33	3.00	5.33
	Value	0.13	0.21	0.27	0.12	0.11
	Total Value = E + W + U + S + R = 0.84					
Tirib	Total = 2	2	4	5	7	11
	Average	1.00	2.00	2.50	3.50	5.50
	Value	0.20	0.32	0.20	0.14	0.11
	Total Value = E + W + U + S + R = 0.97					
Tarang	Total = 11	9	17	32	45	65
	Average	0.82	1.55	2.91	4.09	5.91
	Value	0.16	0.16	0.30	0.21	0.11
	Total Value = E + W + U + S + R = 0.94					
Kankarkhol	Total = 54	49	95	163	217	305
	Average	0.91	1.76	3.02	4.02	5.65
	Value	0.18	0.28	0.24	0.16	0.11
	Total Value = E + W + U + S + R = 0.98					
Kundheigola	Total = 35	29	52	108	151	212
	Average	0.83	1.49	3.09	4.31	6.06
	Value	0.17	0.24	0.25	0.17	0.12
	Total Value = E + W + U + S + R = 0.94					
Ghodapaka	Total = 2	1	2	7	7	11
	Average	0.50	1.00	3.50	3.50	5.50
	Value	0.10	0.16	0.28	0.14	0.11
	Total Value = E + W + U + S + R = 0.79					
Naikul	Total = 21	21	25	53	72	153
	Average	1.00	1.19	2.52	3.43	7.29
	Value	0.20	0.19	0.20	0.14	0.15
	Total Value = E + W + U + S + R = 0.88					
Banbira	Total = 8	9	13	23	26	40
	Average	1.12	1.62	2.87	3.25	5
	Value	0.23	0.26	0.23	0.13	0.1
	Total Value = E + W + U + S + R = 0.95					
Kulundikudar	Total = 7	7	8	23	29	46
	Average	1.00	1.14	3.29	4.14	6.57
	Value	0.20	0.18	0.26	0.17	0.13

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	Total Value = E + W + U + S + R = 0.94					
Tusula	Total = 20	19	32	54	78	110
	Average	0.95	1.60	2.70	3.90	5.50
	Value	0.19	0.26	0.22	0.16	0.11
	Total Value = E + W + U + S + R = 0.93					
Kaunsibahal	Total = 6	3	6	24	30	45
	Average	0.50	1.00	4.00	5.00	7.50
	Value	0.10	0.16	0.32	0.20	0.15
	Total Value = E + W + U + S + R = 0.93					
Talabahali	Total = 2	3	3	3	5	9
	Average	1.5	1.5	1.5	2.5	4.5
	Value	0.30	0.24	0.12	0.10	0.09
	Total Value = E + W + U + S + R = 0.85					
Kakharua	Total = 2	0	2	6	14	29
	Average	0	1	3	7	14.5
	Value	0	0.16	0.24	0.28	0.29
	Total Value = E + W + U + S + R = 0.97					
Kalamjuang Sahi	Total = 2	2	3	2	11	14
	Average	1	1.5	1	5.5	7
	Value	0.2	0.24	0.08	0.22	0.14
	Total Value = E + W + U + S + R = 0.88					
Kardapal	Total = 3	2	5	8	16	23
	Average	0.67	1.67	2.67	5.33	7.67
	Value	0.13	0.27	0.21	0.21	0.15
	Total Value = E + W + U + S + R = 0.98					
Ranjo	Total = 3	1	4	9	15	19
	Average	0.33	1.33	3.00	5.00	6.33
	Value	0.07	0.21	0.24	0.20	0.13
	Total Value = E + W + U + S + R = 0.85					
Atolanka	Total = 2	0	1	6	12	23
	Average	0	0.5	3	6	11.5
	Value	0	0.08	0.24	0.24	0.23
	Total Value = E + W + U + S + R = 0.79					
Jolonda-Jankpani	Total = 4	4	5	5	12	34
	Average	1	1.25	1.25	3	8.5
	Value	0.2	0.2	0.1	0.12	0.17
	Total Value = E + W + U + S + R = 0.79					
Sarbeda	Total = 5	4	9	6	15	56
	Average	0.8	1.8	1.2	3	11.2
	Value	0.16	0.29	0.10	0.12	0.22
	Total Value = E + W + U + S + R = 0.89					
Timi	Total = 5	4	5	19	26	28
	Average	0.80	1.00	3.80	5.20	5.60
	Value	0.16	0.16	0.30	0.21	0.11
	Total Value = E + W + U + S + R = 0.94					
Jharkhaman	Total = 2	1	3	6	7	13
	Average	0.50	1.50	3.00	3.50	6.50
	Value	0.10	0.24	0.24	0.14	0.13
	Total Value = E + W + U + S + R = 0.85					
Priyambadapur	Total = 3	3	3	7	16	19
	Average	1.00	1.00	2.33	5.33	6.33

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	Value	0.20	0.16	0.19	0.21	0.13
	Total Value = E + W + U + S + R = 0.89					
Rangiapal	Total = 4	3	8	10	14	23
	Average	0.75	2.00	2.50	3.50	5.75
	Value	0.15	0.32	0.20	0.14	0.12
	Total Value = E + W + U + S + R = 0.93					
Bhaluhuli	Total = 2	1	3	5	13	13
	Average	0.50	1.50	2.50	6.50	6.50
	Value	0.10	0.24	0.20	0.26	0.13
	Total Value = E + W + U + S + R = 0.93					
Bhulaka	Total = 3	2	6	7	10	7
	Average	0.67	2	2.33	3.33	2.33
	Value	0.13	0.32	0.19	0.13	0.05
	Total Value = E + W + U + S + R = 0.82					
Sanda	Total = 2	3	1	4	8	6
	Average	1.5	0.5	2	4	3
	Value	0.3	0.08	0.16	0.16	0.06
	Total Value = E + W + U + S + R = 0.76					
Bankhol	Total = 12	12	19	30	51	72
	Average	1	1.58	2.5	4.25	6
	Value	0.2	0.25	0.2	0.17	0.12
	Total Value = E + W + U + S + R = 0.94					
Badasada	Total = 3	2	5	10	10	19
	Average	0.67	1.67	3.33	3.33	6.33
	Value					
	Total Value = E + W + U + S + R = 0.93					
Nuagaon	Total = 2	1	2	7	9	12
	Average	0.50	1.00	3.50	4.50	6.00
	Value	0.10	0.16	0.28	0.18	0.12
	Total Value = E + W + U + S + R = 0.84					
Injidi	Total = 2	2	3	4	4	8
	Average	1	1.5	2	2	4
	Value	0.4	0.24	0.16	0.08	0.08
	Total Value = E + W + U + S + R = 0.96					
Tamkia	Total = 6	3	7	17	39	58
	Average	0.5	1.16	2.83	6.5	9.66
	Value	0.10	0.19	0.23	0.26	0.19
	Total Value = E + W + U + S + R = 0.97					
Bangalimunda	Total = 3	2	3	12	8	30
	Average	0.67	1.00	4	2.67	10
	Value	0.13	0.16	0.32	0.11	0.2
	Total Value = E + W + U + S + R = 0.92					
Chilantikhol	Total = 20	20	28	55	77	135
	Average	1.00	1.40	2.75	3.85	6.75
	Value	0.20	0.22	0.22	0.15	0.14
	Total Value = E + W + U + S + R = 0.93					
Kandarpa-Lambdura	Total = 9	6	15	22	33	50
	Average	0.67	1.67	2.44	3.67	5.56
	Value	0.13	0.27	0.20	0.15	0.11
	Total Value = E + W + U + S + R = 0.85					

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Ludhar-deopani	Total = 18	18	28	47	78	128
	Average	1.00	1.56	2.61	4.33	7.11
	Value	0.20	0.25	0.21	0.17	0.14
	Total Value = E + W + U + S + R = 0.97					
Salobi-Jarmura	Total = 3	2	3	10	12	24
	Average	0.67	1.00	3.33	4.00	8.00
	Value	0.13	0.16	0.27	0.16	0.16
	Total Value = E + W + U + S + R = 0.88					
Sargidihi	Total = 2	1	2	7	9	10
	Average	0.50	1.00	3.50	4.50	5.00
	Value	0.10	0.16	0.28	0.18	0.10
	Total Value = E + W + U + S + R = 0.82					
Telikunum	Total = 4	3	6	13	16	28
	Average	0.75	1.50	3.25	4.00	7.00
	Value	0.15	0.24	0.26	0.16	0.14
	Total Value = E + W + U + S + R = 0.95					

Table No. 62

Estimation of regeneration status of P.F.

Block	Total No of Sample points	E	W	U	S	R
Balibahal	Total = 1	1	0	0	4	3
	Average	.2	0	0	.16	.06
	Value	.2	0	0	.16	.06
	Total Value = E + W + U + S + R = 0.42					

2A.3.4. Condition of Regeneration - The value calculated for these rectangles for each block is shown on the regeneration stock map. The condition of regeneration and corresponding colour, which is given in the map, is given in the table bellow.

Table No. 63

Colour for Regeneration status

Sl. No.	Value of regeneration categories in the rectangles	Description of the condition of regeneration	Colour in the map
1	80 to 100	Excellent	Green
2	61 to 79	Good	Blue
3	41 to 60	Moderate	Yellow
4	21 to 40	Fair	Red
5	0 to 20	Deficiant	Blank (no colour)

2A.3.4. The condition of regeneration for each block basing in the enumeration data and value given for the revision of this Working Plan has been given in the table bellow.

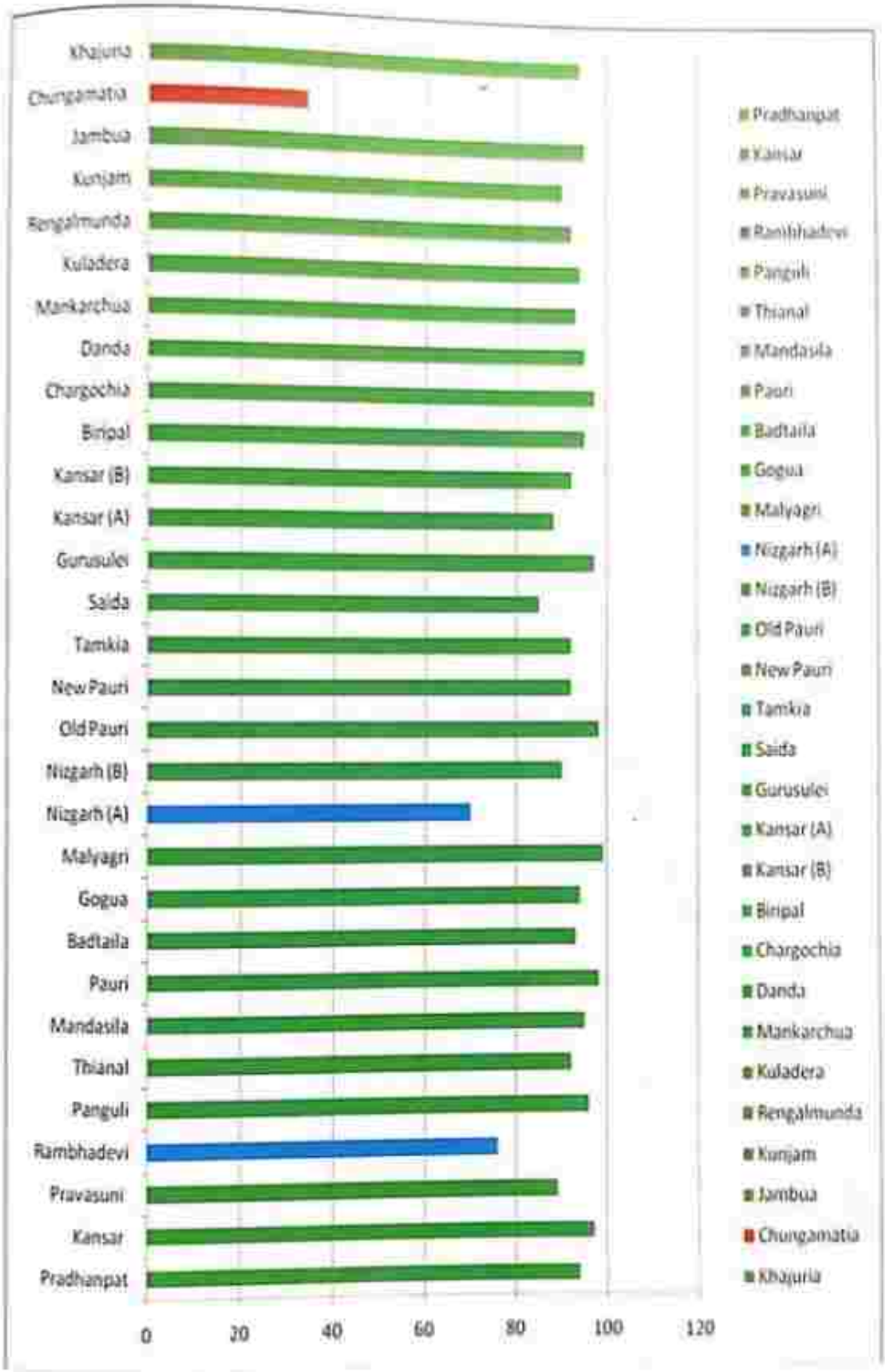
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Table No. 64

Regeneration status of Reserved forest blocks

Sl. No.	Name of the Block	Average value for E, W, U, S and R for each quadrant	Total value for 100 quadrant	Condition of regeneration
01	Pradhanpat	0.94	94.0	Excellent
02	Kansar	0.97	97.0	Excellent
03	Pravasani	0.89	89.0	Excellent
04	Rambhadevi	0.76	76.0	Good
05	Panguli	0.96	96.0	Excellent
06	Thianal	0.92	92.0	Excellent
07	Mandasila	0.95	95.0	Excellent
08	Pauri	0.98	98.0	Excellent
09	Badtaila	0.93	93.0	Excellent
10	Gogua	0.94	94.0	Excellent
11	Malyagri	0.99	99.0	Excellent
12	Nizgarh (A)	0.70	70.0	Good
13	Nizgarh (B)	0.90	90.0	Excellent
14	Old Pauri	0.98	98.0	Excellent
15	New Pauri	0.92	92.0	Excellent
16	Tamkia	0.92	92.0	Excellent
17	Saida	0.85	85.0	Excellent
18	Gurusulei	0.97	97.0	Excellent
19	Kansar (A)	0.88	88.0	Excellent
20	Kansar (B)	0.92	92.0	Excellent
21	Biripal	0.95	95.0	Excellent
22	Chargochia	0.97	97.0	Excellent
23	Danda	0.95	95.0	Excellent
24	Mankarchua	0.93	93.0	Excellent
25	Kuladera	0.94	94.0	Excellent
26	Rengalmunda	0.92	92.0	Excellent
27	Kunjam	0.90	90.0	Excellent
28	Jambua	0.95	95.0	Excellent
29	Chungamatia	0.34	34	Fair
30	Khajuria	0.94	94.0	Excellent

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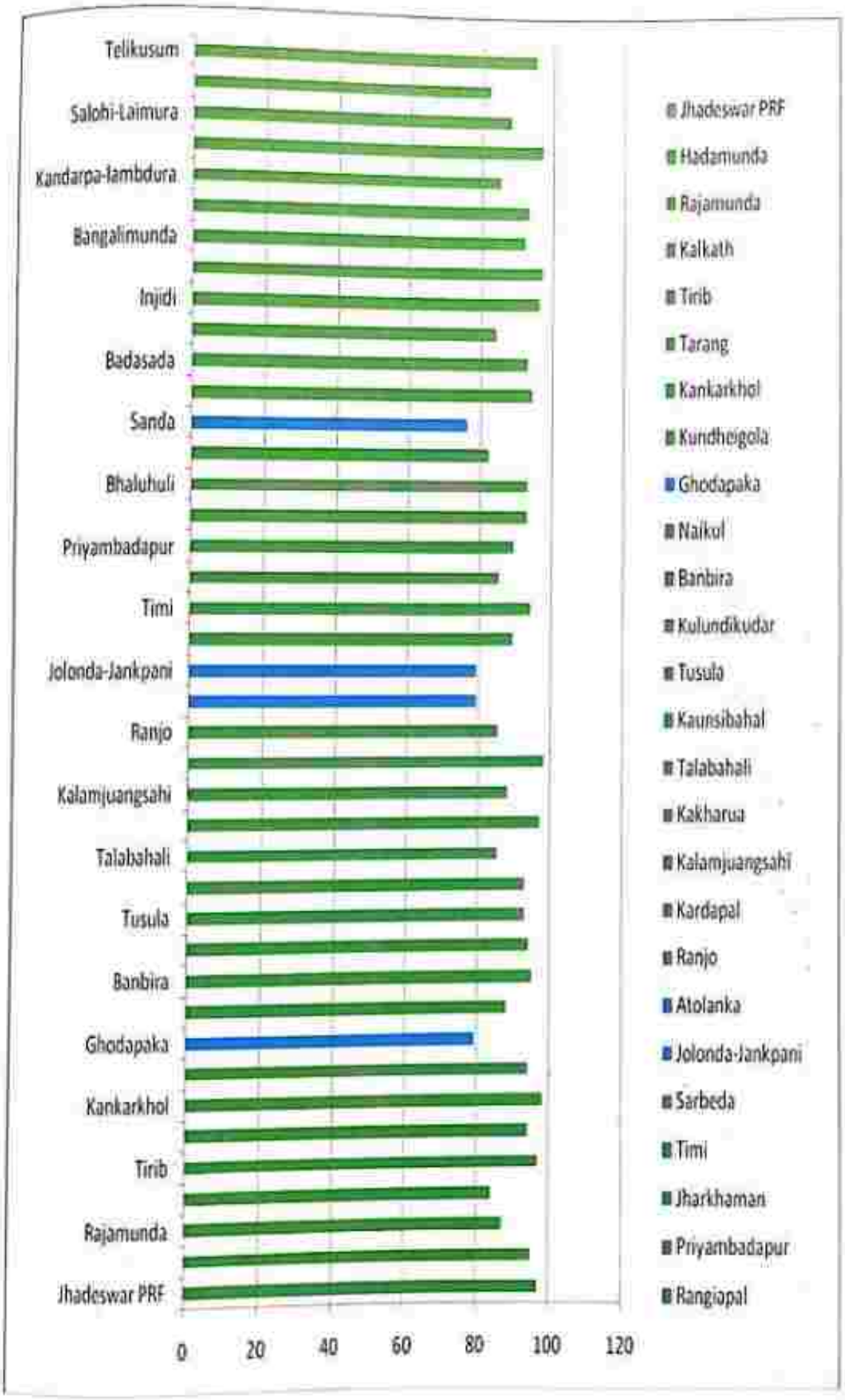
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Table No. 65

Regeneration status of Proposed Reserved forest blocks

Sl. No.	Name of the Block	Average value for E, W, U, S and R for each quadrant	Total value for 100 quadrant	Condition of regeneration
01	Jhadeswar PRF	0.97	97.0	Excellent
02	Hadamunda	0.95	95.0	Excellent
03	Rajamunda	0.87	87.0	Excellent
04	Kalkath	0.84	84.0	Excellent
05	Tirib	0.97	97.0	Excellent
06	Tarang	0.94	94.0	Excellent
07	Kankarkhol	0.98	98.0	Excellent
08	Kundheigola	0.94	94.0	Excellent
09	Ghodapaka	0.79	79.0	Good
10	Naikul	0.88	88.0	Excellent
11	Banbira	0.95	95.0	Excellent
12	Kulundikudar	0.94	94.0	Excellent
13	Tusula	0.93	93.0	Excellent
14	Kaunsibahal	0.93	93.0	Excellent
15	Talabahali	0.85	85.0	Excellent
16	Kakharua	0.97	97.0	Excellent
17	Kalamjuangsahi	0.88	88.0	Excellent
18	Kardapal	0.98	98.0	Excellent
19	Ranjo	0.85	85.0	Excellent
20	Atolanka	0.79	79.0	Good
21	Jolonda-Jankpani	0.79	79.0	Good
22	Sarbeda	0.89	89.0	Excellent
23	Timi	0.94	94.0	Excellent
24	Jharkhaman	0.85	85.0	Excellent
25	Priyambadapur	0.89	89.0	Excellent
26	Rangiapal	0.93	93.0	Excellent
27	Bhaluhuli	0.93	93.0	Excellent
28	Bhulaka	0.82	82.0	Excellent
29	Sanda	0.76	76.0	Good
30	Bankhol	0.94	94.0	Excellent
31	Badasada	0.93	93.0	Excellent
32	Nuagaon	0.84	84.0	Excellent
33	Injidi	0.96	96.0	Excellent
34	Tamkia	0.97	97.0	Excellent
35	Bangalimunda	0.92	92.0	Excellent
36	Chilantikhol	0.93	93.0	Excellent
37	Kandarpa-lambdura	0.85	85.0	Excellent
38	Ludhar-Deopani	0.97	97.0	Excellent
39	Salohi-Laimura	0.88	88.0	Excellent
40	Sargidihi	0.82	82.0	Excellent
41	Telikusum	0.95	95.0	Excellent

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Table No. 66				
Regeneration status of PF				
Sl. No.	Name of the Block	Average value for E, W, U, S and R for each quadrant	Total value for 100 quadrant	Condition of regeneration
01	Balibahal PF	0.42	42	Moderate

2A.4. Man Made Forests:

2A.4.1. Old Plantation – Artificial forest has been raised either by replacing original tree cover by valuable species or in degraded area in different years. The total Old Plantation area is 2039.10 ha. As per record, the forest blocks wise plantation information before the outgoing Plan period is given in the table below.

Table No. 67			
List of old plantation Of Deogarh Division			
Sl. No.	Location of plantation	Year of plantation	Area planted in Ha.
1	Kansar R.F.	1961-62	47.75
2	Kansar R.F.	1962-63	73.65
3	Kansar R.F.	1963-64	80.94
4	Kansar R.F.	1964-65	40.47
5	Kunjam R.F.	1964-65	40.47
6	Kansar R.F.	1965-66	52.61
7	Kansar (Pudapada)	1965-66	15.38
8	Kansar R.F.	1966-67	40.47
9	Badtaila R.F.	1966-67	40.47
10	Danda R.F.	1967-68	14.16
11	Kansar R.F.	1967-68	78.00
12	Kansar R.F.	1968-69	32.38
13	Badtaila R.F.	1968-69	20.23
14	Kansar R.F.	1970-71	20.23
15	Badtaila R.F.	1970-71	8.09
16	Asurkhol (Pravasuni) R.F.	1970-71	4.05
17	Bhaluhuli R.F.	1970-71	10.12
18	Pauri R.F.	1970-71	6.07
19	Kansar R.F.	1971-72	20.23
20	Badtaila R.F.	1971-72	10.12
21	Pauri R.F.	1971-72	20.23
22	Bhaluhuli P.R.F.	1971-72	10.12
23	Danda R.F.	1972-73	10.12
24	Kansar R.F.	1972-73	18.62
25	Pradhanpat R.F.	1972-73	10.12

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26	Bhaluhuli R.F.	1972-73	10.12
27	Pauri R.F.	1972-73	20.23
28	Kansar R.F.	1973-74	18.62
29	Pauri R.F.	1973-74	30.35
30	Pauri R.F.	1974 -75	12.14
31	Kansar R.F.	1975-76	12.14
32	Pauri R.F.	1975-76	8.09
33	Pradhanpat R.F.	1976-77	2.02
34	Pradhanpat R.F.	1977-78	6.88
35	Ranja P.R.F.	1977-78	8.09
36	Banbira PRF	1977-78	8.09
37	Kansar R.F.	1980-81	20.23
38	Kansar R.F.	1980-81	20
39	Kaunsibahal DPF	1980-81	20
40	Kakharua DPF	1980-81	50
41	Kaunsibahal DPF	1981-82	40
42	Ranjo DPF	1981-82	4
43	Kakharua DPF	1981-82	6
44	Rambhadevi R.F.	1982-83	34
45	Kakharua PRF	1982-83	8
46	Ranjo PRF	1982-83	8
47	Ranjo PRF	1983-84	10
48	Ranjo PRF	1984-85	10
49	Pradhanpat (Kurudkote)	1986-87	20
50	Kansar (Goimadu)	1986-87	25
51	Badtaila RF	1986-87	15
52	Badtaila RF	1987-88	50
53	Nlzgarh RF	1987-88	25
54	Badtaila RF	1988-89	50
55	Nlzgarh RF	1988-89	25
56	Badtaila RF (Baghamunda)	1989-90	30
57	Kansar RF (Pudapada)	1989-90	40
58	Kunjam RF	1989-90	30
59	Badtaila RF	1990-91	20
60	Kankarkhol DPF (Burbuda)	1990-91	20
61	Kunjam RF	1990-91	20
62	Kankarkhol DPF	1991-92	7
63	Badtoila RF	1991-92	6

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64	Kunjam RF	1991-92	7
65	Kankarkhol DPF	1991-92	280
66	Badtaila RF	1991-92	24
67	Kunjam RF	1991-92	28
68	Kansar RF	1992-93	25
69	Rambhadevi RF	1992-93	25
70	Badtaila RF	1992-93	50
71	Malyagiri RF	1992-93	50
72	Kansar RF	1993-94	7
73	Badtaila RF	1993-94	6
74	Kansar RF(A)	1993-94	7
75	Kansar RF (A)	1994-95	20
76	Badtaila RF	1994-95	20
77	Nizgarh RF (B)	1994-95	15
		Total	2039.10

2A.4.2. New Plantation – During the Plan period, plantation in different scheme has been taken up by replacing original trees cover or in the gap of degraded patches in this division. The total area planted during the plan period is 28671.37 ha and Avenu plantation is 18.5 RKM.

Therefore area covered under plantation is 30710.47 ha (Block Plantation = 3409.37 ha, Bamboo Plantation 745.00 ha, & RDF = 24517.00 ha) & the Avenu Plantation is 18.5 RKM.

The list of new plantation is given in the table below.

Table No. 68

PLANTATION PROGRAMME OF DEOGARH DIVISION

UNDER DIFFERENT SCHEME FROM 1995-96 TO 2011-12

Year of Plantation	Name of the Scheme	Name of the District	Name of the Range	Location of the Plantation	Area Planted in Ha.	Name of VSS if Involved
1995-96	Economic Plantation RDF = 170 Ha.	Deogarh	Barkote	Badtoila RF	80	Departmentally
		Angul	Pallahara	Malyagiri RF	20	Departmentally
		Angul	Pallahara	Badsada DPF	20	Departmentally
		Angul	Pallahara	Gurusulei RF	50	Departmentally
	Compensatory	Deogarh	Deogarh	Kadopada	56	Departmentally
	Compensatory	Deogarh	Deogarh	Kadopada	69.28	Departmentally
1996-97	1- b. Economic Plantation	Angul	Pallahara	Gurusulei RF RDF	25	Departmentally
		Angul	Pallahara	Ranja DPF RDF	25	Departmentally
		Angul	Pallahara	Nizgarh RF Block		Departmentally
		Deogarh	Deogarh	Kansar RF Block	15	Departmentally

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		Deogarh	Barkote	Badtoila RF RDF	30	Departmentally
		Deogarh	Barkote	Panguli RF RDF	20	Departmentally
		Deogarh	Barkote	Badtoila RF Block	5	Departmentally
1997-98	1- b. Economic Plantation	Deogarh	Deogarh	Rajamunda DPF Block	7	Departmentally
1998-99	--	--		--	00	
1999-2000	1- b-Economic Plantation	Angul	Pallahara	Malyagiri RF Block	50	Departmentally
		Deogarh	Barkote	Pradhanpat RF Block	20	Departmentally
		Deogarh	Barkote	Paudi RF Block	10	Departmentally
	2- EAS (Avenue Pltn.5 RKM)	Angul	Pallahara	Khamar to Kantiaposi	5	Departmentally
2000-2001	1-Central Plan(Bamboo N.T.F.P Plantation) = 350 Ha.	Deogarh	Deogarh	Majhipali	20	Departmentally
		Deogarh	Deogarh	Similiguda	20	Departmentally
		Deogarh	Deogarh	Palunipada	20	Departmentally
		Deogarh	Deogarh	Naulipada	30	Departmentally
		Deogarh	Deogarh	Hariharpur Khandamunda	30	Departmentally
		Deogarh	Barkote	Golabandha	20	Departmentally
		Deogarh	Barkote	Kisan Gayalmora	40	Departmentally
		Deogarh	Barkote	Dandasingha	30	Departmentally
		Deogarh	Barkote	Purkunda	20	Departmentally
		Angul	Pallahara	Jhimiripali	61	Departmentally
		Angul	Pallahara	Dimiria	8	Departmentally
		Angul	Pallahara	Sreerampur	22	Departmentally
		Angul	Pallahara	Namposi	13	Departmentally
		Angul	Pallahara	Kalanda	16	Departmentally
2000-01	2- E.A.S (Avenue plantation 3.5 RKM)	Deogarh	Barkote	Barkote to Jhumpra	3.5	Departmentally
	3- E.A.S (Avenue plantation 10 RKM)	Angul	Pallahara	Khamar to Kunjam	10	Departmentally
2001-02	1-2245-RANC (CRF) Block Plantation	Deogarh	Deogarh	Gohira	20	Departmentally
			Deogarh	Satkiari	20	Departmentally
			Deogarh	Kamarpal	25	Departmentally
			Deogarh	Basantpur-Begunianali	10.	Departmentally
			Barkote	Mardang	15	Departmentally
			Barkote	Badtoila	20	Departmentally
			Barkote	Markandpur	20	Departmentally
			Barkote	Madhyapur	20.	Departmentally
2002-03	1-SGRY Block Plantation (100 Ha.)	Deogarh	Deogarh	Kankarkhol	15	Departmentally
			Deogarh	Sangaposi	20	Departmentally
			Barkote	Saruali	40	Departmentally
			Barkote	Budhakhaman	25	Departmentally
	2- b- Economic Plantation (Block)	Deogarh	Deogarh	Kansar R.F.	50	Departmentally
	3- Compensatory Plantation	Angul	Pallahara	Kholmunda	4.62	Departmentally
2003-04	--	--		--	00	

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2004-05	National Afforestation Programme-ANR-200, AR-100, Bamboo-100	Angul	Pallahara	Jhimirtipali Badbagdari KF	20	Jhimirtipali Badbagdari
				Dimiria KF	8	Dimiria
				Sree Rampur KF	15	Sree Rampur
				Jharbeda Namposi KF	10	Jharbeda Namposi
				Ranjo Nuasahi KF	10	Ranjo Nuasahi
				Batisuan KF	15	Batisuan
				Ranjana KF	5	Ranjana
			Khamar	Kalanda KF	20	Kalanda
				Odasa KF	15	Odasa
				Barkotia KF	15	Barkotia
		Deogarh	Deogarh	Khalinali KF	15	Khalinali
				Majhipali KF	12	Majhipali
				Similiguda KF	25	Similiguda
				Pallunipada KF	15	Pallunipada
			Reamal	Satkiari KF	15	Satkiari
				Begunianali-Basantapur KF	16	Begunianali-Basantapur
				Naulipara KF	10	Naulipara
				Hariharpur-Khandamunda KF	12	Hariharpur-Khandamunda
				Kankarkhol KF	14	Kankarkhol
				Kamarpal KF	10	Kamarpal
				Sanghapasi KF	10	Sanghapasi
			Barkote	Mardang KF	10	Mardang
				Bhakta badkudar KF	13	Bhakta badkudar
				Markandapur KF	8	Markandapur
				Rengalbahal KF	22	Rengalbahal
				Budhakhaman KF	12	Budhakhaman
				Saruali KF	10	Saruali
				Siarikatei KF	10	Siarikatei
				Kishan gayalmara KF	8	Kishan gayalmara
				Dandasingha KF	10	Dandasingha
				Purukunda KF	10	Purukunda
2005-06	--	--		--	00	
2006-07	Compensatory Plantation = 200 Ha.	Angul	Khamar	Bankhol	60	Departmentally
			Pallahara	Hatimund	7.5	Departmentally
			Pallahara	Vegipada	13.5	Departmentally
			Pallahara	Debahali	7.5	Departmentally
			Pallahara	Ranjo	10	Departmentally
			Pallahara	Ranjana	3.5	Departmentally
			Pallahara	Chandpank	8	Departmentally
			Pallahara	Tirib	10	Departmentally
			Barkote	Gatarsipal	18	Departmentally
			Barkote	Jeypore	24	Departmentally
			Barkote	Susab	6	Departmentally
		Deogarh	Deogarh	Balamjur	12	Departmentally
			Deogarh	Bandheli	20	Departmentally
	Economic Pltn. (Block) 50 Ha.	Deogarh	Reamal	Kansar R.F.	15	Departmentally
			Deogarh	Kalkath D.P.F.	15	Departmentally

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		Angul	Pallahara	Kakharua DPF	20	Departmentally
		Angul	Pallahara	Jhimirtipali Badbagdari KF	130	Jhimirtipali Badbagdari
				Ranjo Nuasahi KF	30	Ranjo Nuasahi
				Batisuan KF	45	Batisuan
				Ranjana KF	25	Ranjana
			Khamar	Kalanda KF	60	Kalanda
				Odasa KF	25	Odasa
				Barkotia KF	45	Barkotia
2006-07	National Afforestation Programme-ANR-600, AR-200, Bamboo-170	Deogarh	Deogarh	Khalinali KF	40	Khalinali
				Majhipali KF	15	Majhipali
				Similiguda KF	9	Similiguda
				Pallunipada KF	25	Pallunipada
			Reamal	Satkiari KF	30	Satkiari
				Begunianali-Basantapur KF	8	Begunianali-Basantapur
				Naulipara KF	18	Naulipara
				Hariharpur-Khandamunda KF	30	Hariharpur-Khandamunda
				Kamarpal KF	20	Kamarpal
				Sanghapasi KF	145	Sanghapasi
			Barkote	Mardang KF	20	Mardang
				Bhakta badkudar KF	57	Bhakta badkudar
				Rengalbahal KF	59	Rengalbahal
				Budhakhaman KF	28	Budhakhaman
				Saruali KF	50	Saruali
				Siarikatei KF	4	Siarikatei
				Dandasingha KF	21	Dandasingha
				Purukunda KF	31	Purukunda
2006-07	River Valley Project	Deogarh	Deogarh	Pradhanpat RF	50	Departmentally
			Deogarh	Pravasuni RF	25	Departmentally
			Reamal	Rambhadevi RF	30	Departmentally
			Reamal	Hadamunda DPF	20	Departmentally
2007-08	Economic Pltn. (Block) 70 Ha.	Deogarh	Deogarh	Kansar R.F.	20	Departmentally
			Reamal	Kansar R.F.	20	Departmentally
			Barkote	Pradhanpat RF	20	Departmentally
			Barkote	Badtoila RF	10	Departmentally
	Economic Pltn. (RDF) 300 Ha.	Deogarh	Deogarh	Kansar RF	20	Departmentally
			Deogarh	Kalkath- DPF	50	Departmentally
			Deogarh	Pradhanpat RF	30	Departmentally
			Reamal	Kansar RF	20	Departmentally
			Reamal	Rambhadevi RF	50	Departmentally
			Barkote	Panguli RF	50	Departmentally
		Angul	Pallahara	Ranjo DPF	30	Departmentally
			Khamar	Kunjam DPF	50	Departmentally
	12th FC Grant-	Angul	Pallahara	Kakharua DPF (P)	30	Departmentally

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	Silviculture Research RWC= 1178 Ha.		Pallahara	Nizgarh A & B (P)	25	Departmentally
			Khamar	Badsada DPF	25	Departmentally
			Khamar	Chargachhia RF (P)	55	Departmentally
			Khamar	Gurusalei RF (P)	30	Departmentally
			Khamar	Rangiapal DPF (P)	30	Departmentally
			Khamar	Sanda DPF (P)	55	Departmentally
		Deogarh	Barkote	Badtoila RF	80	Departmentally
			Barkote	Banbira DPF (P)	60	Departmentally
			Barkote	Kansar B RF (P)	20	Departmentally
			Barkote	Mandasila RF	90	Departmentally
			Barkote	Panguli RF	80	Departmentally
			Barkote	Thianal RF (P)	70	Departmentally
			Reamal	Gogua RF	90	Departmentally
			Reamal	Rambhadevi RF	60	Departmentally
			Reamal	Kansar RF (P)	128	Departmentally
			Reamal	Gogua RF	60	Departmentally
			Reamal	Rambhadevi RF	70	Departmentally
			Reamal	Tarang DPF (P)	70	Departmentally
			Deogarh	Pravasuni RF (P)	50	Departmentally
	PWC = 20 Ha.	Deogarh	Reamal	Kansar RF	20	Departmentally
	Bamboo W.C. = 200 Ha.	Deogarh	Deogarh	Pradhanpat B/C-C	20	Departmentally
			Deogarh	Pravasuni B/C-C	20	Departmentally
			Reamal	Rambhadevi B/C-C	15	Departmentally
			Barkote	Badtoila B/C-C	20	Departmentally
			Barkote	Mandasila B/C-C	15	Departmentally
			Barkote	Panguli B/C-C	15	Departmentally
			Barkote	Pauri B/C-C	15	Departmentally
			Barkote	Tusula B/C-C	15	Departmentally
		Angul	Pallahara	Pallahara B/C-C	15	Departmentally
			Pallahara	Old Pauri B/C-C	20	Departmentally
			Khamar	Danda B/C-C	15	Departmentally
			Khamar	Khamar B/C-C	15	Departmentally
	Compensatory Afforestation 150 Ha.	Angul	Khamar	Sahargurjang	30	Departmentally
			Pallahara	Phapand	10	Departmentally
		Deogarh	Barkote	Dharampur, Kamarnali, Bhadsingh	35	Departmentally
			Barkote	Jarichakundapal	40	Departmentally
			Deogarh	Bandheli, Kalikud, Rangmatia	35	Departmentally
2007-08	National Afforestation	Angul	Pallahara	Tirib KF	45	Tirib
				Raipal KF	10	Raipal

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	Programme-ANR-500, AR-50, Bamboo-20			Laxmipriyapur KF	25	Laxmipriyapur
			Khamar	Purunapani KF	30	Purunapani
				Jharkilinda KF	50	Jharkilinda
				Mundiribeda KF	35	Mundiribeda
		Deogarh	Barkote	Dehurimunda KF	30	Dehurimunda
				Dharampur KF	55	Dharampur
				Bamparada KF	95	Bamparada
			Rusmal	Udaypur KF	20	Udaypur
				Ratanpur Khalinali KF	10	Ratanpur Khalinali
				Rutanali KF	20	Rutanali
			Deogarh	Brahma-Sadhubahali KF	45	Brahma-Sadhubahali
				Barghat KF	70	Barghat
				Ambulpani KF	30	Ambulpani
2008-09	Compensatory Afforestation 200 Ha.	Deogarh	Barkote	Chhuriabahal	40	Departmentally
				Basaloi	14	Departmentally
				Guriapodi	6	Departmentally
				Upper Khandam	20	Departmentally
				Chintamanipur	40	Departmentally
				Sarankote	50	Departmentally
				Khalinali, Kesanpur	30	Departmentally
2008-09	National Afforestation Programme	Deogarh	Deogarh	Kardapal	10	Kaldapal VSS
2008-09	OFSDP (JICA)	Deogarh	Barkote	Pradhanpat RF	65.50	Brahmnimal-
				Pradhanpat RF	78.00	Brundavanpur
				Pradhanpat RF	74.00	Chaitanpali
				Pradhanpat RF	65.50	Nagdihi
				Pradhanpat RF	64.00	Chhuriabahal
				Pradhanpat RF	65.50	Basaloi
				Pradhanpat RF	46.00	Utuniamunda
				Badtaila RF	65.50	Chakadihi
				Badtaila RF	63.50	Gundaripasi
				Badtaila RF	65.50	Baghamunda
				Badtaila RF	65.50	Sihapali
				Badtaila RF	65.50	Sirapali
				Badtaila RF	65.50	Kadopada
				Badtaila RF	65.50	Mamita (kadopada)
				Panguli RF	68.00	Singsal
				Panguli RF	60.50	Akhayasila
				Panguli RF	61.50	Harekrushnapur
				Panguli RF	62.50	Jagannathpur
				Banbira DPF	63.50	Goyalmora
				Banbira DPF	49.00	Laxmipur
				Banbira DPF	10.00	Departmentally
2008-09	OFSDP (JICA)	Angul	Pallahara	Paudi RF (Old)	44.00	Jolunda
				Paudi RF (Old)	64.50	Dudipani

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				Paudi RF (Old)	64.50	Regudidda
				Makarchuan RF	65.50	Makarchuan
				Tamkin RF	65.50	Kardapal
				Malyagiri RF	64.50	Illisuan
				Malyagiri RF	64.50	Tumpiar
				Malyagiri RF	65.50	Jamsura
		Deogarh	Reamal	Kansar RF Part	78.00	Padapada
				Kansar RF Part	71.00	Rampali
				Kansar RF Part	78.00	Andhari
				Kansar RF Part	78.00	Khairandha
				Kansar RF Part	78.00	Malichuan
				Kansar RF Part	74.00	Ghamarunda
				Kansar RF Part	57.00	Iswarpali
				Kansar RF Part	78.00	Badkunarkhol
				Gogua RF	61.00	Phuljhari
				Gogua RF	75.00	Siarimalia
				Gogua RF	77.00	Bhaluchuba
				Gogua RF	78.00	Laxmipur
				Gogua RF	76.00	Brahmanipali
				Gogua RF	75.00	Chirgunikudar
				Gogua RF	78.00	Baradanali
				Kundheigola DPF	76.00	Sadhubahali
				Kundheigola DPF	77.00	Khandadhuan
				Kundheigola DPF	74.00	Poipani
				Kundheigola DPF	78.00	Arkhapal
				Kundheigola DPF	74.00	Rairatanpur
				Kankarkhol DPF	25.00	Departmentally
2008-09	OFSDP (JICA)	Deogarh	Deogarh	Kansar RF	61.50	Kumarapali
				Kansar RF	78.00	Nirgundipali
				Kansar RF	63.50	Kalinkhamar
				Kansar RF	80.00	Mengiribahal
				Kansar RF	61.50	Bijanali
				Rambhadevi part	78.00	Kamamunda
				Rambhadevi part	78.00	Balanda
				Rambhadevi part	78.00	Masinita
				Jhadeswar DPF	76.00	Bhukabeda
				Pravasimi RF	78.00	Kailash
				Pradhanpat RF	78.00	Kharamunda
				Pradhanpat RF	78.00	Tainsar
				Pradhanpat RF	78.00	Badabaliposi
				Pradhanpat RF	78.00	Kureinbahal
				Khajuria RF	78.00	Dimirikuda
				Khajuria RF	74.00	Dudhapasi
				Khajuria RF	78.00	Deopani
				Khajuria RF	78.00	Ludhar
		Angul	Khamar	Gurusulei RF	78.00	Salargurjang
				Malyagiri RF	78.00	Tambur
				Malyagiri RF	78.00	Baludakani
				Malyagiri RF	78.00	Pudapasi

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				Malyagiri RF	67.00	Nuagaon
				Malyagiri RF	66.00	Arjunjhuri
				Malyagiri RF	65.50	Aluri
				Jambua RF	58.00	Jambua
				Jambua RF	78.00	Besalia
				Kuladera RF	55.00	Hansla
				Kuladera RF	65.50	Bankholi
2009-10	Compensatory Afforestation 195.47 Ha.	Deogarh	Deogarh	Subarnapali	19	Departmentally
			Reamal	Chadeimora -	30	Departmentally
				Kainsar -	15	Departmentally
				Laxmipur -	15	Departmentally
			Barkote	Siarimalia -	30.42	Departmentally
				Chandankhunti -	8	Departmentally
				Panchamahala -	10	Departmentally
				Gariaposi -	2	Departmentally
		Angul	Khamar	Sahargurjang -	12	Departmentally
				Gurundiamunda -	5	Departmentally
				Bismupur -	20	Departmentally
				Bankhol -	10	Departmentally
				Damadarpur -	15	Departmentally
			Pallahara	Kulipal KF	4.05	Departmentally
2009-10	National Afforestation Programme	Deogarh	Deogarh	Kutrapori KF	35	Kutrapori
				Kardapal KF	25	Kardapal
				Niktimal KF	45	Niktimal
			Barkote	Bamparada KF	60	Bamparada
				Balinali KF	15	Balinali
				Derapathar KF	30	Derapathar
				Dehurimunda KF	5	Dehurimunda
				Khalinali KF	70	Khalinali
			Reamal	Kuradposi KF	20	Kuradposi
				Akhabuda KF	20	Akhabuda
		Angul	Pallahara	Balim KF	25	Balim
				Vejipada KF	45	Vejipada
			Khamar	Mundiribeda KF	35	Mundiribeda
				Rohila KF	40	Rohila
				Kuchiabeda KF	20	Kuchiabeda
				Parachhat KF	70	Parachhat
2009-10	OFSDP (JICA)	Deogarh	Deogarh	Khajuria RF	88	Bhaluguha
				Khajuria RF	121	Pahalamara
				Hadamunda DPF	61	Hadamunda
				Jhadeswar DPF	103	Jhaliamura
				Pravasuni RF	65	Kanteikuli
				Pravasuni RF	100	Gundeimara

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				Pravasuni RF	81	Baragadia
				Pravasuni RF	84	Pravasuni
				Jhadeswar DPF	93	Jualibhanga
				Pravasuni RF	115	Bilaighati
				Khajuria RF	143	Sahajbahal
				Khajuria RF	88	Purunapani
				Pravasuni RF	103	Amulpani
			Barkote	Badtaila RF	63	Gopalpali
				Badtaila RF	92	Kaunsibahal
				Badtaila RF	105	Kelda
				Mandasila RF	61	Salohi
				Panguli RF	91	Masinita(A)
				Pangali RF	66	Ghantiposi
				Panguli RF	69	Nuakesaala
				Panguli RF	98	Gopapur
				Panguli RF	149	Kaliapal
				Panguli RF	141	Talabahali
				Badtaila RF	116	Jayapichhula
				Paudi RF	130	Netrabahal
				Badtaila RF	84	Brahmanidei
				Badtaila RF	89	Chakrapali
				Pradhanpat RF	53	Barbahal
				Pradhanpat RF	45	Kusumkata
				Panguli RF	62	Kudaguda
			Reamal	Kansar RF	100	Timur
				Kansar RF	105	Medinipur
				Kankarkhol DPF	83	Similta
				Gogua RF	37	Kadalipal
				Kundheigola DPF	97	Deojharan
				Kankarkhol DPF	81	Similihota
				Kankarkhol DPF	106	Sunaripara
				Kankarkhol DPF	83	Kirtanpali
				Kankarkhol DPF	97	Chingurijharan
				Kankarkhol DPF	103	Lulang
				Kankarkhol DPF	75	Burbuda
				Kundheigola DPF	45	Pitasika
				Kundheigola DPF	60	Panchamahala
				Gogua RF	43	Nuadihi
		Angul	Pallahara	Makarchuan RF	125	Krutibaspur
				Malyagiri RF	105	Kerjenga
				Saida RF	64	Kantanali
				Saida RF	125	Sairha
				Saida RF	95	Similipal
				Tamkia RF	55	Kamparkela
				Malyagiri RF	65	Gudapada
				Malyagiri RF	104	Namgaon

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				Malyagiri RF	69	Taptajharan
			Khamar	Malyagiri RF	90	Kurumulta
				Malyagiri RF	62	Bhetia
				Malyagiri RF	115	Rohira
				Malyagiri RF	41	Basudevpur
				Malyagiri RF	95	Khantapasi
				Kunjam RF	63	Dongapala
				Kunjam RF	107	Sandhaurugoth
				Kunjam RF	102	Paunshia
				Chargochhia RF	108	Hatibindha
		Deogarh	Deogarh	Bangalimunda DPF	80	Departmentally
			Barkote	Badtaila RF	25	Departmentally
		Angul	Pallahara	Nizgarh RF	20	Departmentally
			Khamar	Danda RF	75	Departmentally
2009-10	Bamboo Plantation under State Plan	Deogarh	Reamal	Vejikudar KF	10	Departmentally
2009-10	CCF II Project	Deogarh	Barkote	Chhuriabahal	4	Departmentally
2010-11	OFSDP (JICA)	Deogarh	Deogarh	Jhadeswar DPF	80	Belamara
				Pravasuni RF	120	Bhalukhol
				Chilantikhol DPF	90	Chilantikhol
				Pravasuni RF	120	Dangakhol
				Telikusum DPF	90	Desinkuli
				Kansar RF	58	Dharmachandrapur
				Chilantikhol DPF	100	Durijangal
				Pravasuni RF	100	Gailo
				Rambhadevi part	76	Kadamdarh Colony
				Pravasuni RF	120	Karadapal
				Bangalimunda DPF	54	Katanggani
				Kansar RF	80	Palakudar
				Pradhanpat RF	75	Podapada
				Chilantikhol DPF	80	Rukuda
				Chilantikhol DPF	90	Tasarda
				Chilantikhol DPF	120	Tileimal
				Hadamunda part DPF	80	Deojharan
				Jhadeswar DPF	100	Sukhapadan
				Pravasuni RF	67	Asurkhol
				Kansar RF	75	Bangalimunda
				Rambhadevi part	85	Katei
				Pravasuni RF	105	Mandamali
				Chilantikhol DPF	49	Budibahal
			Barkote	Paudi RF	120	Adyapur
				Badtaila RF	59	Chakulia
				Mandasila RF	120	Chapbahal
				Paudi RF	100	Damita

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				Badtaila RF	80	Dungapal
				Pradhanpat RF	118	Dimiripasi
				Badtaila RF	73	Kamchhada
				Kansar RF	120	Kansar
				Pradhanpat RF	69	Baisnabpali
				Paudi RF	80	Pacheripani
				Paudi RF	115	Rugudkudar
				Pradhanpat RF	65	Tosula
				Panguli RF	120	Indranijharan
				Pradhanpat RF	90	Beteijharan
				Badtaila RF	120	Sirgida
				Thiarial RF	95	Mandasila(B)
				Badtaila RF	120	Rambhei
				Pangulli DPF	100	Ramachandra pur
				Mandasila RF	76	Ratanpalli
				Pradhanpat RF	115	Talkholi
2010-11	OFSDP (JICA)	Angul	Reamal	Kankarkhol DPF	70	Kainsar
				Kundheigola DPF	100	Kaunsipal (Hrudapali)
				Kankarkhol DPF	75	Khandiamunda
				Kankarkhol DPF	64	Kurudkhol
				NaikulDPF	52	Kuskulia
				Rambhadevi RF	110	Sulia (Danardanpali)
				Kankarkhol DPF	87	Telimunda
				Kundheigola DPF	95	Haladiakhol
				Hadamunda DPF	77	Jharpara
				Hadamunda DPF	90	Sindurkhol
				Rambhadevi RF	90	Sankarpur
				Kundheigola DPF	70	Jambunali
				Kansar RF	90	Jharjhari
			Pallahara	Old Paudi RF	120	Bhandhabhuin
				Old Paudi RF	90	Bhimakand
				Makarchuan RF	120	Iti
				Malyagiri RF	120	Kadalibari
				Makarchuan RF	120	Kolipali
				Makarchuan RF	120	Naikanipali
				Malyagiri RF	120	Nuguda
				Malyagiri RF	120	Sambala
				Makarchuan RF	80	Timi
				Sarbeda DPF	120	Pecharmundi
			Khamar	Chargochhia RF	105	Balabhadrapur

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				Kuladera RF	120	Burbura
				Kuladera RF	95	Magarmuhan
				Kuladera RF	85	Malarbeda
				Danda RF	120	Pitta
				Malyagiri RF	110	Sapajhara
				Chargochhia RF	120	Sukadevpur
				Kuladera RF	110	Tandiberni
				Kuladera RF	120	Biralamunda
				Chargochhia RF	120	Chakradharpur
				Kuladera RF	90	Madhupur
		Deogarh	Deogarh	Bangalimunda DPF	70	Departmentally
			Reamal	Kansar RF	30	Departmentally
		Angul	Khamar	Kunjam RF	20	Departmentally
2010-11	OFSDP (JICA) Addl. Area for 2008-09 & 2009-10	Deogarh	Deogarh	Nirgunipali KF	5	Nirgunipali
				Kureinbahal KF	5	Kureinbahal
				Tainsar KF	5	Tainsar
				Kharumunda KF	5	Kharumunda
				Dimirikuda KF	5	Dimirikuda
				Dudhaposi KF	5	Dudhaposi
				Amulpani KF	10	Amulpani
				Hadamunda KF	20	Hadamunda
				Bileighati KF	10	Bileighati
				Bargadia KF	5	Bargadia
				Pravasuni KF	10	Pravasuni
				Bhaluguha KF	5	Bhaluguha
			Reamal	Chirgunikudar KF	5	Chirgunikudar
				Bhaluchaba KF	10	Bhaluchaba
				Phuljhari KF	10	Phuljhari
				Similihota KF	10	Similihota
				Nuadihi KF	10	Nuadihi
				Kansar RF	15	Medinipur
				Similita KF	20	Similita
				Panchmahala KF	15	Panchmahala
				Timur KF	10	Timur
			Barkote	Pradhanpat RF	15	Brahmanimal
				Aksharsila KF	25	Aksharsila
				Jagannathpur KF	20	Jagannathpur
				Badtaila RF	10	Kadopada
				Singsal KF	30	Singsal
				Banbira DPF	5	Laxmipur
				Salohi KF	15	Salohi
				Masinita KF	30	Masinita (A)
				Netrabahal KF	5	Netrabahal
		Angul	Pallahara	Jamara KF	15	Jamara

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				Rugudidihi KF	15	Rugudidihi
				Kantanali KF	15	Kantanali
				Namgaon KF	15	Namgaon
			Khamar	Malyagiri RF	10	Padaposi
				Jambua RF	10	Jambua
				Jambua RF	10	Besalia
				Kuladera RF	8	Bankholi
2010-11	CAMPA 2009-10	Deogarh	Deogarh	Pravasuni RF under Gundeimara WS	20	Departmentally
			Deogarh	Pravasuni RF under Gogua WS	50	Departmentally
			Barkote	Paudi RF under Jalisuan WS	30	Departmentally
			Barkote	Paudi RF under Gursang WS	50	Departmentally
			Reamal	Rambhadevi RF under Baisyapada WS	60	Departmentally
			Reamal	Kansar RF & Dasgharia KF under Dasgharia WS	50	Departmentally
		Angul	Pallahara	Malyagiri RF under Barbahali WS	15	Departmentally
			Pallahara	Jharalo KF under Jharalo WS	10	Departmentally
			Pallahara	Rengali KF & Malyagiri RF under Rengali WS	15	Departmentally
			Khamar	Rengalmunda KF under Rengalmunda WS	25	Departmentally
			Khamar	Kholmunda KF under Kholmunda WS	5	Departmentally
			Khamar	Kunjam RF under Satyabandha WS	15	Departmentally
2010-11	Bamboo Plantation under State Plan		Reamal	Pravasuni RF	20	Departmentally
2010-11	National Bamboo Mission	Deogarh	Barkote	Rengalbahal KF	10	Departmentally
			Barkote	Badtoila RF	10	Departmentally
2011-12	OFSDP (JICA)	Deogarh	Deogarh	Bangalimunda DPF	82	Hetkhamar
			Deogarh	Chilantikhol DPF	87	Chandiposi
			Deogarh	Jharmunda KF	107	Jharmunda
			Deogarh	Pravasuni RF	138	Laxmipur
			Deogarh	Pravasuni RF	145	Tikilijharan
			Deogarh	Pradhanpat RF	80	Kalamati
			Deogarh	Jaisandha KF	65	Jaisandha
			Deogarh	Pravasuni RF	150	Jharagogua

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			Deogarh	Pravanuni RF	150	Budhikutuni
			Deogarh	Kadalimunda VF	85	Kadalimunda
			Barkote	Paudi RF	130	Taimsira
			Barkote	Badtoila RF	80	Ragada
			Reamal	Kansar RF	78	Reamal
			Reamal	Kundbeigola DPF	127	Kapagola
			Reamal	Ghodapaka RF	101	Dehuripal
			Reamal	Ghodapaka RF	82	Bhaliapal
			Reamal	Kansar RF	29	Darjimunda
			Reamal	Budido VF	56	Budido
			Reamal	Gogua RF	150	Belamunda
		Angul	Pallahara	Makarchuan & Tabhapal	100	Tabhapal
			Pallahara	Patamund KF	115	Patamund
2011-12	Bamboo Plantation under	Deogarh	Barkote	Badtoila RF	15	Departmentally
			Reamal	Vejikudar KF	10	Departmentally
2011-12	Pltn. Inside WP area under 13th FC Grant.	Deogarh	Deogarh	Badtoila RF	20	Departmentally
		Angul	Khamar	Kunjam RF	20	Departmentally
			Khamar	Biripal RF	10	Departmentally
2011-12	Pltn. outside WP area under 13th FC Grant.	Deogarh	Deogarh	Goeldhuka KF	10	Departmentally
			Reamal	Aonli KF	10	Departmentally
			Barkote	Regeda KF	10	Departmentally
		Angul	Pallahara	Jhariakhaman KF	10	Departmentally
2011-12	National Afforestation Programme	Deogarh	Barkote	Charimancha KF	50	Charimancha
			Barkote	Kantapal KF	40	Kantapal
			Barkote	Bichhakhani KF	28	Bichhakhani
			Reamal	Surangipal KF	50	Surangipal
			Reamal	Jhimpabira KF	30	Jhimpabira
			Reamal	Gudamal KF	25	Gudamal
		Angul	Khamar	Priyambadapur KF	35	Priyambadapur
			Khamar	Chhanchunia KF	50	Chhanchunia
			Khamar	Ranja KF	75	Ranja
			Pallahara	Jhariakhaman Jharabahal KF	25	Jhariakhaman Jharabahal
			Pallahara	Jankapani KF	32	Jankapani
			Pallahara	Susabnali KF	20	Susabnali
		Deogarh	Deogarh	Tilcibani KF	40	Tilcibani
			Deogarh	Kalkath KF	40	Kalkath
			Deogarh	Sradhapur KF	60	Sradhapur
2011-12	Compensatory Afforestation 35	Deogarh	Deogarh	Subarnapali	20	Departmentally
			Reamal	Chadeimara	15	Departmentally
				28671.37 (3409.37 block, Bamboo 745.00 & RDF 24517.00) & 18.5	28671.37 & 18.5 RKM	

2A.5. Injuries to which Croup is Liable:

2A.5.1. The forests of Deogarh Division are vulnerable to injuries due to biotic and natural calamity factors. Plants, Insects, Man, Wild and Domestic animals are the important biotic factors liable to cause injuries to forests. Flood, Drought and Erosion etc are the natural calamities, which cause injuries to the forest of this tract.

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2A.5.2. Biotic Factors – Man and his animals are the most important factors affecting vegetation. Though man has been managing this forests on scientific basis since 1908 and onwards, yet he continues to be the most powerful agent in destroying or otherwise damaging forests in all most all blocks, which are included in this revision. The following are some of the most conspicuous effects of man and his animals on forest vegetation.

2A.5.3. Deforestation and denudation – Deogarh was a wooden division in the past but with the increase of population and the consequent need for bringing greater area under the plough, home state and other improvement works, extensive areas have been deforested. As per record an area of 357.4822 ha has been dereserved and an area of 45.3869 ha is under pre-80 encroachment. Also area diverted for ST & OTFD Act-2006 is 1829.040 ha.

2A.5.4. Fire – The inhabitants of this area are responsible for fire in the forests. Uncontrolled fire results in enormous damage to forests. The area included in the revised Plan has been seriously damaged due to fire since long. The area affected by fire is given below.

Table No. 69

Area affected by fire

Year	Area burnt in ha	Year	Area burnt in ha	Year	Area burnt in ha
2009-10	20	2011-12	15	2013-14	18
2010-11	19	2012-13	20	2014-15	15

Sources - Divisional Forest Officer, Deogarh.

2A.5.4.1. It was observed that the entire forest area except few sheltered patches adjoining to perennial and semi perennial Nala, got burnt by ground fire from February to April 2005. The damage in this account to the young crop and regeneration is inaccessible. Fire maps have not been maintained in the division but local enquiry reveals that ground fire burned all most all forests area in this tract every year.

2A.5.4.2. Forest fires globally are considered as one of the major factors of climate change, biodiversity loss and increase in global temperature due to production of biological carbon and green house gasses. In the tropical deciduous forests of Odisha, fire is a recurrent phenomenon due to higher levels of water stress during summer. Traditionnl Land use practices and changes in weather pattern have resulted in higher fire incidences in the tropical India. Forest Fires in India is mostly anthropogenic in nature. Following are the major causes of fire, which may be intentional as well as unintentional. (i) Burning of forest floor for good growth of grass or mushrooms in the next season. (ii) Hunting. (iii) Un-extinguished campfires, charcoal panniers. (iv) Sparks from railway engines. (v) Un-extinguished cigarettes or bidi buts being thrown in the under bush etc.

2A.5.4.3. Methodology - Coarse resolution satellite data of sensors like MODIS, ASTER, NOAA detect active fire based on brightness temperature levels recorded in short wave and thermal IR wavelength bands. Detection of active fires as

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a function of pixel brightness temperature above that of the background depends on fire temperature and size relative to the background resolution of the sensor, fire and smoldering intensity levels, vegetation type, background land cover and atmospheric interference. MODIS aqua and terra satellite daily active fire location information products over 6 years (2001 to 2006) have been used for assessing the vulnerability. The number of channels or bands in MODIS is 36 and of these bands 20-36 falls under the thermal bands having a resolution of 1.0 km and daily coverage. The fire which have an extent of 1-2 ha or more are only picked up by the satellite. The daily data has been integrated over one year and the annual integrated out put has been prepared. The annual fire occurrence over the last six years has been overlaid in GIS domain with the management layers to give block wise annual fire occurrence data and generating fire vulnerability map based intensity of fire occurrence.

2A.5.4.4. Results - The block wise annual fire occurrence has been tabulated according to the year of occurrence. It may be noted that the data provided refers to fire occurrence over 1.0 km area but not the spread of burnt area. The year wise fire occurrence is as under.

Table No. 70

Annual integrated fire occurrence over 5 years (2009-2013)

Block	Year							% of occurrence
	2009	2010	2011	2012	2013	2014	Total	
Pradhanpat	2.5	2	1.5	2.5	2	1.5	12	11.21
Rambhadevi	1	1.5	1	1	1.5	1	7	6.54
Kansar	2	1.5	1	2	1	1	8.5	7.94
Chilantikhol	.5	0	.5	.5	0	.5	2	1.87
Ludhar Deopani	.25	.5	0	.25	.5	0	1.5	1.40
Pravasuni	.75	1	.5	.75	1	.5	4.5	4.21
Khajuria	1	1.5	1	1	1.5	1	7	6.54
Badtaila	2.5	1	1.5	2.5	1	1.5	10	9.35
Tusula	1	1.5	1	1	1	1	6.5	6.07
Pauri	1	1.5	1	1	1.5	1	7	6.54
Panguli	0.5	1	1	0.5	1	1	5	4.67
Kankarkhol	0	.5	0	0	.5	0	1	0.93
Jhadeswar	1.5	1	1	1.5	1	1	7	6.54
Malyagiri	2.5	2	1.5	2.5	2	1.5	12	11.21
Mankarchuan	2	1	1.5	2	1	1.5	9	8.41
Old Pauri	1	1.5	1	1	1.5	1	7	6.54
Total	2029	2029	2026	2032	2031	15	107	

Sources - Divisional Forest Officer, Deogarh.

2A.5.4.5. Fire occurrence is noticed in almost all 72 blocks of Deogarh Division. The most fire prone blocks in Deogarh Division are Pradhanpat, Malyagiri, Pravasuni, Khajuria, Kansar, Badataila, Danda, Kuladera, Kunjam etc. Also Pradhanpat & Malyagiri R.F have continued high fire occurrence. Among the moderately fire prone blocks are Thianal, Nizgarh, Tamkia, Saida, Birpal. The rest of blocks are under low fire prone blocks.

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2A.5.4.6. Intentional Fire - The reason of forest fire is well known in this locality. The forest fire continued from February to April in every year. The causes of forest fire, which is intentional, are narrated below.

2A.5.4.7. Kendu leaves - Fire induces production of good quality and quantity of kendu leaves in forest area. It therefore the local puckers utilize fire as their tools for production of kendu leaves and develop their economy by easy method. Neither Kendu Leaf wings nor villagers are allowed to take up bush cutting in the notified forests area. Kendu bushes are sporadically distributed inside other forests area. It is not easy both in physically and financially to take up bush cutting in the forest. The villagers set fire to the dry leaves deposited on the ground with a aim to half burnt the old Kendu bushes. The fire spreads by wind to all over the forests and causes large scale damaged to seeding and young crop.

2A.5.4.8. Mahula and Sal Seeds - It is the second source of income of villagers from forests. They need a clean surface for collection of Mahua flower, Tola and Sal seed. They set fire to the dry leaves under the shed of those trees and then fire automatically extend to interior of forest and causes unexpected damages to the vegetations. In some places the ground fire destroy established crop attending 3.0 mt height.

2A.5.4.9. Manure – Ashes are very good manure, which induces more production of paddy. The cultivators set fire in the uphill side peripheral forest of their agricultural field. During pre-monsoon, ashes are deposited on their field along with rainwater. This is a continuous phenomenon in every year to manure their land with ashes.

2A.5.4.10. Hunting – In the forest fringe villages, setting fire to the forests to drive games is a regular feature in the hot months. Also in absence of ground cover the hunters are in a position to identify the animals from a long distance for hunting.

2A.5.4.11. Accidental Fire – As seen during field tour that unintentional forest fire is also taking place in this tract. The reason of such accidental forests fire is mentioned below.

2A.5.4.12. Children set fire to the dry leaves to get pleasure, which subsequently spreads in to interior of the forest.

2A.5.4.13. The grazers cook their food inside the forest. They leave the place without extinguish fire, which then spread by wind and start fire inside the forests.

2A.5.4.14. The travelers use burning stick while passing through forest path in evening time. It is obvious that the small pieces of burning stick fall on the ground, which then spread by wind and causes forest fire.

2A.5.4.15. In few cases landless people used to cultivate small pockets of land inside forest blocks. They set fire to dry cleaning materials on the way of preparation of their land. Also villagers, while roaming inside forests for collecting honey,

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firewood, fruits, edible roots etc, they used to carry smoldering straw torches. They throw burning straw in to the dry leaves and subsequently it starts forests fire.

2A.5.4.16. Cumulative Effect - Forest fire in every year in this tract is a regular phenomenon. The cumulative effect of fire for a long period had an unexpected adverse effect to the crop. It burns seeds, seedling, weeds and also established crop. The burnt surface soil became harden and unfit to provide good condition for regeneration. Fire prevents formation of humus, which reduces the fertility of soil. The tree growth looses resistance and the microbial life of the soil is also destroyed. It causes disease in trees and there by reduces quality of the tree. It also results retrogression and replace the valuable trees and established fire resistant inferior species.

2A.5.4.17. Past Action - Sincere effect have not been made in the past to prevent forest fire. It was noticed that all the forest blocks included in this revision had been affected by forest fire to the maximum extent. I am glad to say that combined efforts of forest staffs and VSS members have brought lightning changes in the forest fire in the VSS area and it adjoining forest area. The annual amount spent for prevention of fire in the forests block of Deogarh Division during the plan period is given the table below.

Table No. 71

Expenditure for prevention of fire

Year	Expenditure in Rs.	Year	Expenditure in Rs.
2009-10	125000	2012-13	1474000
2010-11	427500	2013-14	1785000
2011-12	23000	x	x

Sources - Divisional Forest Officer, Deogarh.

2A.5.5. Frost - Very little is known about the frost in this locality. However the adverse effects of frost are almost nil.

2A.5.6. Drought - The pressure on the forest is gradually developing due to heavy demand of its product. Reduction of crown density as well as gradual disappearance of forest is a common practice in this area. Gradually the rain pattern is changing. Drought hit the area severely causing large-scale mortality of trees in the entire division. Large number of drought sensitive trees has become top dry and lost vigor of growth with effect of drought in the years 1975, 1980 and 2002. It also resulted failure of nature and artificial regeneration.

2A.5.7. Climbers - The common climber found are Sail, Muturi, Latapalas, Atundi, etc. Climbers twine round the desirable species at pole stage and with increasing in diameter it damage the timber. Some time thick climbers completely cover their crown and kill the tree by cutting out light altogether. Its eradication all over the forest area is a problem to this division. The incident of climber can be considerable reduced if those were cut in every year or during marking or at the time of any departmental works as prescribed in the Working Plan. This division is lacking

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of fund for climber cutting during the outgoing Plan period. The requirement of fund for climber cutting is given in cost analysis.

2A.5.8. Wind - The velocity of wind flow is normal in this area. But storms are of local occurrence during summer. But the damage done to the forest is not serious. Very less number of trees is often uprooted. Sometimes high velocity wind causes damaged either to stem or branches. Wind fans to forests fire thereby increasing fire damaged.

2A.5.9. Animals - This division is famous for it's Wild Life due to large and continuous forest belt from north to south and east to west. The herbivorous animals are damaging under growth, seedling, established and pole crops.

2A.5.10. Grazing - Grazing in the peripheral forest adjoining to villages is quite heavy. The incidence of damaged in Reserve Forest is less with comparison to other category of forest. Grazing has not been controlled as per the prescription of the outgoing Plan. Cattle graze seedling of desired species with grass. Seedlings are trampled and crushed and their roots get exposed under the hoofs of the moving cattle. Uncontrolled grazing by heavier cattle compacts the soil and reduces its porosity. The pounding of soil under the hoofs of heavy cattle results in breaking down soil aggregates, which give crumb structure to the surface soil. The sandy soil gets loosened under the hoofs of cattle, which increases soil erosion. Browsing cattle crush the leading shoots of favored species there by arresting their growth.

2A.5.10.1. Cattle Population – Different weeds and fodders are suppressing the growth of desired species in the seedling stage. It is not practically possible to remove all undesirable weeds inside vast tract of forest area. The wild as well as domestic animals damage such weeds, while grazing in the forest area. But heavy grazing in any forest blocks will increase the percentage of damaged of recruits. There are 301840 (178497 Cattle, 11764 Buffalo, 100729 Goat, 5373 Sheep and 5477 Pig) domestic animals in different Gram Panchayat of Deogarh District.

2A.5.10.2. There are 1063 villages with in this division and approximately 301840 domestic animals are grazing in the forests.

2A.5.10.3. It is essential to control the grazing in the regenerated area. The amount of revenue realized from grazers for the period from 1995-96 to 2013-14 is Rs. 280792.00. The year wise amount of revenue collected from grazers during the plan period is given in the format below.

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Table No. 72

Revenue from grazing

Year	Revenue realized in Rs.	Year	Revenue realized in Rs.	Year	Revenue realized in Rs.
1995-1996	16288.00	2002-2003	28575.00	2009-2010	0
1996-1997	16497.00	2003-2004	27597.00	2010-2011	0
1997-1998	28583.00	2004-2005	24559.00	2011-2012	0
1998-1999	27179.00	2005-2006	21422.00	2012-2013	0
1999-2000	30367.00	2006-2007	1132.00	2013-2014	0
2000-2001	29806.00	2007-2008	0	Total	280792.00
2001-2002	28787.00	2008-2009	0		

Sources - Divisional Forest Officer, Deogarh.

2A.5.11. Illicit Felling - Forest is being damaged due to illicit felling. Regular theft is not in practice in this area. However for own consumption the inhabitants are felling the trees and removing some portion of the felled tree as per their requirement and leaving the balance part on the stump site. During summer, the balance part burnt due to forest fire and damage the forest to a great extent. Bija trees are illicitly cut in all over the forest areas of this division. Deogarh sections of Deogarh Division are more prone to illicit felling and biotic interference. However almost in every area this is notice in smaller extent. Illicit Felling of Bamboos continues to be a serious problem all over. Basket and mat makers continue to pose this problem to earn their livelihoods. To tackle this problem, heavy plantation of Bamboos and improvement of the existing crop should be taken up along with allotment of economic assistance for the basket makers. Effective protection measures to be taken up to minimize the problem of timbers smuggling.

2A.5.11.1. All attempts have been made to control illicit felling by the field staffs. Local people are supporting field staffs, while they are detecting forest cases and confidentially intimating about the illegal transportation of forest produces. The details of forest cases booked for last ten years are given in the table below.

Table No. 73

Forest cases and seized produces

Year	Name and No. of cases		Total No. of cases	Name and quantity of seized produced				
	OR	UD		Timber in cum	Fire in CL	No. of poles	No. of Bamboos	KL in quintal
2006-07	2510	113	2623	257.702	242.361	21906	246	211.3241
2007-08	2334	77	2411	62.2853	228.48	17954	216	3.0
2008-09	2441	59	2500	106.409	331.12	20138	253	137.3
2009-10	2546	58	2604	37.369	300.66	20928	128	0
2010-11	2444	71	2515	26.1588	273.525	20753	344	0
2011-12	1904	81	1985	54.096	195.1	17570	45	0
2012-13	1765	80	1845	54.00742	17932	19345	1588	94.17
2013-14	693	12	705	7.7338	62.98	7297	0	0

Sources - Divisional forest Officer, Deogarh.

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2A.5.11.2. Many forest cases have been booked under section 56 Of Orissa Forest Act 1972. The detail present positions of those cases for last ten years are given in the table below.

Table No. 74

Disposal of forest cases

Year	No. of cases booked	No. of cases disposed	Vehicle involved						
			Moto-rized	Cart	Cycle	Rick-shaw	Auto rickshaw	Moto-rcycle	Boa t
1994-95	43	32	0	30	1	0	0	0	0
1995-96	35	24	3	14	1	0	0	0	0
1996-97	43	43	3	43	0	0	0	0	0
1997-98	58	53	9	29	9	0	0	0	0
1998-99	69	64	10	39	2	0	0	0	0
1999-20	89	80	20	32	4	1	0	0	0
2000-01	35	34	3	14	6	0	0	1	0
2001-02	49	44	6	11	4	0	0	0	0
2002-03	49	47	3	22	7	0	0	0	0
2003-04	23	28	4	10	8	0	0	0	0
2004-05	60	57	6	24	8	0	1	0	0
2005-06	72	71	4	37	5	0	0	0	0
2006-07	117	96	14	41	11	0	0	0	0
2007-08	44	43	7	20	0	0	0	1	0
2008-09	59	58	11	16	0	0	0	1	0
2009-10	62	41	9	16	7	0	0	0	0
2010-11	46	32	5	14	4	0	0	1	0
2011-12	29	4	3	0	0	0	0	0	0
2012-13	14	2	2	0	0	0	0	0	0
2013-14	2	0	0	0	0	0	0	0	0

Sources - Divisional forest Officer, Deogarh.

2A.5.12. Encroachment –Due to the indistinguishable boundary line from neighboring areas in many forest blocks, the encroachment inside R.F. is not very much ruled out. Most of the villages inside the reserved forest have been delimited by cleared ring line of 4.5 meter wide but some villages like Chingudijharan in Pradhanpat has not yet been ringed up. Resurvey of such encroached blocks and demarcation with permanent boundary pillar according to provision of Rules 168 and 169 of O.F.D code are necessary. The details of encroachment are furnished in the format given below.

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Table No. 75

Encroachment cases

Year	Forest block	Status	Area encroached in ha	No. of encroachers
2002-03	Badtaila	RF	0.04	1
-do-	Kankarkhol	PRF	0.77 Acrs.	1
-do-	-do-	PRF	1.70 Acrs.	1
-do-	-do-	PRF	0.42 Acrs	1
-do-	-do-	PRF	0.41 Acrs	1
-do-	-do-	PRF	0.46 Acrs	1
2008-09	Sunamunda	KF	0.50 Acrs	5

Sources - Divisional Forest Officer, Deogarh.

2A.5.13. Parasite - Among the total parasites, Cuscuta reflexa and Cassitha filiformis are commonly seen in most of the forest areas. But among the partial parasites Loranthus longiflorus is seen in scattered trees. They penetrate their haustoria's into the host plant and draw moisture and mineral nutrients from them. Its adverse effect is very negligible but they kill the branches of the host.

2A.5.14. Epiphyte - The epiphyte like Ficus bengaiensis, Ficus religiosa and orchids are very rarely seen in this forest. Their adverse effect is very negligible. Some times Ficus species attain huge size, which result killing of the host.

2A.5.15. Fungi – A large number of fungi attack trees and reducing quality of timber. Sometimes it is changing the form and structure of forest communities. Seedling is damaged due to damping effect. Wood rot and root rot in poles and trees, thereby killing them or at least making the timber altogether useless.

2A.5.16. Insect - Insets are an integral part of the environment of forest. Sal bore (Hoplocerambyx spinicornis) is one of the harmful insects. It makes tunnels in the timber. The tree may die due to its heavy attack. About 20 % of sal trees in almost all blocks are found defective due to sal bores attack. Teak defoliator (Hapalia machaeralis) and skeletonizer (Hyblaea puera) are damaging the teak leaves in the month of September and October in plating areas. Other insect's attack is also seen sporadically in this tract such as Batocera rufomaculata in Bombax ceiba, Cytotrachelus longipes and Estigueno chinensis in bamboo nodes. Termites are a menace in plantation and depots.

2A.5.17. Mining – The investigation of Geologists and Mining Officers reveal that the minerals deposit of the area are not that significant for commercial exploitation. Local people are digging stone and collecting boulders for construction of houses, roads and bridges in different pockets of almost all blocks included in this revision.

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CHAPTER–IIB

FOREST FAUNA

2B.1. General History:

2B.1.1. Deogarh Division is a land of rich biodiversity of flora and fauna. During recent years due to the greedy use of the forest resources by the exploding population for timber, fire wood, bamboo and fodder has led to rapid deforestation and endangered the ecosystem and habitat of Wild Life. Besides rampant poaching of Wild Life for meat, skin, teeth, bone etc has posed a great threat to their survival. Opening up of roads to the forests increased speedy vehicular traffic and the mute animals well easy prey to the poachers equipped with fast moving vehicles, powerful search light and deadly accurate weapons.

2B.1.2. The jurisdiction of this division comes under biographical zone of decant peninsular. The existing wild life is classed under the Indian peninsular sub-region that forms a part of the original zoogeographical realm of the world.

2B.2. Distribution and Habitat:

2B.2.1. The forests cover 53.86% of the geographical area of this revision but 32.28 % of land is taken for management. The climatic condition, compactness and composition of the forests are extremely favorable for growth and multiplication of variety of Wild Life.

2B.2.2. Elephants, Leopards, Sambar, Deer, Kutura, Wild Boar, verities of birds and reptiles are surviving in this zone of forest. But tiger is not noticed in this forest. A census of the Elephant population was made in the year 2007. The total number of Elephant enumerated in Deogarh Division was found to be 27 out of which the tusker is 05, Adult Cow is 13, Sub Adult Cow is 02 & Calf is 07. Also a census of the Elephant population was made in the year 2010. The total number of Elephant enumerated in Deogarh Division was found to be 58 out of which the tusker is 10, Adult Cow is 19, Sub Adult Cow is 14 & Calf is 15.

2B.3. Past Wild Life Management:

2B.3.1. The Wild Lives were not managed under any systematic prescription up to 1995, except hunting the Wild animals by constituting shooting blocks in the prescribed Plan. Separate prescription for management and development of Wild Life has been prescribed from 1995-96 to 2014-15. Practically developmental activities were not taken up for the reproduction of Wild Life. Sufficient protection against Wild Life poaching could not be taken up due to shortage of field staffs.

2B.3.2. **Wild Life Cases** - As per record evidence 11 number of Wild Life cases have been booked from 2009-10 to 2013-14. The details of year wise cases are given in the table below.

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Table No. 76

Wild life cases

Sl. No.	Year	Name of Range	O.R. No.	Seized produce	Present position
1	2009-10	Deogarh	5/2009-10	1-½ Kg meat barking deer 2-One country made (Topidar) single barrel gun. 3-One wooden block with Blord strain. 4-One No. of Barsi 5-One set trap (Plastic)	Under trial
			190/2009/10	1.Meat Barking deer -1KG.	Under trial
2	2009-10	Barkote	354/2008-09	1.Wild Barha Meat -1 KG	Under trial
3	2010-11	Khamar	111/2010-11	Wild Tusker dead due to Electrocution	Under trial
		Barkote	261/2010-11	1.Dead body of male elephant 2.Gun, Axe, vechicle-02 Nos ,Mobile-03 Nos & an amount of Rs.59,000/-(cash)	Under trial
4	2011-12	Nil			
5	2012-13	Barkote	628/2010-11	1.-5 Kg spotted deer meat with skin	Under trial
		Deogarh	206/2011-12	1.Wild pig –flesh-1 KG 2.Axe & paniki-1 Nos 3.Barud-L.G patash chhara. 4.Country made gun-1 (Tropica)	Under trial
6	2013-14	Barkote	218/2013-14	1-Dead body of wild pig 2-Axe -1 No. 3-Plastic wire trip-2 set.	Under trial
			220/2013-14	1.-4 KG meat with skin (flesh) Head of barking deer 3-One country made Topidar gun.	2.Under trial
			457/2011-12	1-Head of the spotted deer 2-4 Nos of legs 3-One thigh 4-8 KG meat approximately 5-Untesil (Dikchi, Kadei, Panki,) 6-One country made gun 7- One vespa scooter Regn No-OR-09A-2687	Under trial
			166/2013-14	1-Meat of male barking deer - 1 KG 2-Axe -1 Nos 3- Head of barking deer-1 No	Under trial

Sources - Divisional forest Officer, Deogarh.

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2B.4. Wild life Act and Rules:

2B.4.1. The destruction of Wild animals during the post independence era was so alarming that the naturalist apprehended extinction of some of the rare animals and birds which prompted the Government of India for the enactment of the Wild Life Protection Act, 1972. The Act has been adopted in the State of Orissa with effect from 14.08.1974. The Wild Life Protection (Orissa) Rules, 1974 has also been framed by the State Government under the provision of that Act for effective protection and development of Wild Life.

2B.4.2. **Amendment of Act and Rules** – Rules have been amended and made substantially more stringent in 1991 and 2002. Act has been amended in 2002 and came into force from 20.01.2003. The Act became more stringent with severe punishment, power to evict encroachers.

2B.4.3. **Compassionate** – The compassionate payment for human killed has increased to Rs.200000.00, permanent injury to Rs.75000.00, temporary injury to Rs.5000.00 and crop damaged to Rs.10000.00 per Acre.

2B.5. Mammalian Species:

2B.5.1. **Elephant** – It is the biggest animal found in these forests. It attains height up to 9 ft, length 11 ft and width 4 ft 6 inches. The weight of one male can reach up to 700.00 kg and female up to 550.00 kg. It has two fan-like pinnate, trunk with one sensory projection and four knees. Male has long tusk than female and both can be trained. It uses low frequency sound to communicate among themselves, when cannot see each other. It cannot jump.

2B.5.2. The forests of this division are in continuous belt with Ushakothi game Sanctuary and Khalasuni Sanctuary, which is famous for its elephants population. The elephants of those areas find their home in valleys of Khajuria, Pravasuni, Kansar (A), Kansar (B), blocks from July to March. They are moving in four to six herds with about six to seventeen numbers in each herd. Two herds of elephant are permanently moving in those areas. One herd of elephant is moving in Malyagiri & Khamar area. The herd contains about five to Seven number of elephants. One herd is permanently moving in Deogarh & Barkote area adjoins to Bonai Division. One herd consisting of six to seven is permanently staying Hadamunda area of Rambhadevi RF.

2B.5.3. **Elephant Census** - Elephant census had been taken up in different years in the forest of this tract. The census figure is given in the table below.

Table No. 77

Result of elephant census

Year	Male	Female	Unknown sex	Makhana	Calf	Total
2007	05	15	x	x	07	27
2010	10	33	x	x	15	58

Sources - 1st PWPR.

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2B.5.4. **Panther** – Panthers inhabit in this tract are powerful, active, swift runner and expert climber. It depends chiefly on its acute sense of hearing and eyesight. It hunts in at night and in the middle of the day. It has a yellowish-brown coat with a rose-shaped pattern. A panther varies in size from 168 cm to 210 cm length with weight from 27 kg to 68 kg. There are reports of panthers visiting forest fringe villages and lifting goats and sheep. The tiger census report of this division is given in the table below.

Table No. 78

Result of tiger census

Year	Male	Female	Cub	Unknown	Total
2004	Nil	Nil	Nil	Nil	Nil
2005	Nil	Nil	Nil	Nil	Nil
2006	Nil	Nil	Nil	Nil	Nil
2007	Nil	Nil	Nil	Nil	Nil
2008	Nil	Nil	Nil	Nil	Nil
2009	Nil	Nil	Nil	Nil	Nil
2010	Nil	Nil	Nil	Nil	Nil
2011	Nil	Nil	Nil	Nil	Nil
2012	Nil	Nil	Nil	Nil	Nil
2013	Nil	Nil	Nil	Nil	Nil

Sources - Divisional Forest Officer, Deogarh.

2B.5.5. **Bear** – It is a medium size animal with long coarse hairs. Limbs have 5-clawed digits, tail short and it can climb trees. Bear is partly carnivorous, also feed on fruits, honey and insects. It can walk upright on hind ledges and can be tamed. It is found in almost all blocks included in this revision. Especially Khauria, Pradhanpat, Malyagiri and Pravasuni blocks are famous for bear population. Bear is a peace loving animal but become cruel when hungry or under attack.

2B.5.6. **Spotted Deer** – It is seen in herds of 4 to 6 number on valley and plain along the perennial nalas flowing in this tract. The colour is bright fawn with white spots and a black line along the spine. It attains about 1 mt height. Only male has branchy horns. Their number is gradually decreasing.

2B.5.7. **Rabbit** – It is seen in al-most all peripheral forests in this zone. It is about 40 cm in length and 1 kg in weight. Body covered with fur and hairs. It varies in colour like pure white, black or mixed. Hind limbs longer and powerful for running and jumping. It has a pair of large movable pinnate and a short bushy tail. It feeds on grass.

2B.5.8. **Monkey** – Two types of monkeys are seen in this area. The common monkey has a black face with silvery gray body colour. Hind limbs are longer than fore limbs. Females live in herd headed by one strong male. Males live in herd without female. The red-faced monkey is of smaller size with short tail. Males and females irrespective in number live in herds. Some time a strong single male has seen alone.

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2B.5.9. **Fishing Cat** – They live in riverbank forests and hunt fish, crab, frog, birds, insects and some time others child mammals. It is a fierce beast smaller than a panther but capable of mauling one in a fight. Its specialty is to get on to rocks overhanging water and sweep at fish with its paw as they swim by.

2B.5.10. **Civet Cat** – A small flesh eating animals valued for production of fatty substances with strong scent from its pouches close to the tail. It is used in making several kinds of perfumes. It is a nocturnal of forests.

2B.5.11. **Jackal** – They are distributed uniformly in this tract. Its limbs long, claws non-retractile and teeth well developed. They move in pair or in herd. It is a very clever animal. It is a carnivorous and also a cane feeder.

2B.5.12. **Fox** – It is noticed in all part of this division. It has pointed snout, elongated body, short leg, erect ears and strong bushy tail. It lives in burrow. It is a nocturnal and feeds on birds, hares, rodents and fish. Its keen sight, smell and hearing make it a very good hunter. Vixen is known for her ferocity in protecting her young ones.

2B.5.13. **Hyena** – It is spotted or striped and voice is almost human. Front part of the body is heavy with massive jaw and neck. It is a scavenger, feeds on carrion though carnivorous. Very rarely seen in this tract either single or pair.

2B.5.14. **Sambar** – It is very rarely seen in Khajuria, Pradhanpat, Pravasuni, Kansar and Rambhadevi block. The coarse, shaggy brown coat darkens with age and turning almost black in old stage. The branched horns that stags bear take up to four years to reach full size, but once fully grown, they are shed every year and then re-grown for the breeding season in winter. Stages are usually alone without companions except when young. They associate with female deer only during the mating season. It has an excellent sense of hearing and smell. When in danger it flicks tail, stamps feet and gives out a loud alarm call, which can be heard 1 kmt away.

2B.5.15. **Barking Deer** – It is found in thickly wooded hills in this tract. It is 2 ft high and colour chestnut with black streaks on the face. Its antlers are 3 inch long and each with one tine on the main stem. Barking deer has no horns. It is diurnal, lives in pair. Its call sounds like dog.

2B.5.16. **Wild Boar** – It has long mobile snout with terminal nostrils. Its limbs short and narrow with 4 digits, colour dark gray with rusty and white hairs, feet and ears black. New born are brown. It is omnivorous and feed on carrion, snakes, insects and crops. It is said to be a courageous animals in the forests.

2B.5.17. **Squirrel** – It has elongated body covered with fur and has 5 long stripes of dark colour on the back. Its tail is a long and bushy, eye and ears are large. It is an arboreal, active climber and nests on trees. They feed on nut, seeds and fruits.

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2B.5.18. **Rat** – Rats are found nearer to villages and they are prolific breeder. They can give birth about 10 to 15 young ones at a time. They are burrowing animals and omnivorous. They have constantly growing teeth for which they bite wood, concrete and rocky soil. They can survive without water for a longer period than camels.

2B.5.19. **Mongoose** – Its body is elongated and covered with yellowish gray fur. Head long with pointed snout eyes, pinnate small and tail long. Limbs have 5 digits with claw. It can fight and kill snakes and feed on their blood.

2B.5.20. **Pangolin** – They are noticed in dense forests. They are about 5 ft long and their head, body and tail covered with round horny scales. Its head is small with short pointed snout, eyes and small pinnate. Its limbs strong with 5 clawed digits to dig anthills. It is a tree climber and can roll into ball on danger for defense.

2B.5.21. **Bat** – Bats live in colonies of hundreds. Its body covered with soft fur, snout short, pinnate large, eyes small, vision poor and tail concealed. Fore limbs only toe is clawed and hind limbs have 5-clawed digits. Produce ultra-sonic sound wave for flight.

2B.5.22. **Otter** – This is seen near Gohira, Rengali and forest fringe villages. Its body is slender, neck short, tail flattened, small pinnate, carnassials well developed and claws non-retractile. It is semi-aquatic with short and dense oily furs and webbed digits in both limbs for which it moves faster inside water. It feeds on fish, crabs and frogs.

2B.6. **Birds:**

2B.6.1. **Terrestrial Birds** – All terrestrial birds have been divided into three groups, as High, Medium and Low, depending on their numbers seen in this area. The fallowing birds named as Common myna, Jungle fowl, Hornbill, Sparrow, Raven myna, Cuckoo, Black drongo , Crow, Hornbill, Red crow, King fisher, Owl, Pigeon, Parrot, Dove, Nightingale and Heron are seen in maximum number in this locality. Those birds are included in High group.

2B.6.2. The fallowing birds named as Weaver bird, Falcon, Kite, Sandpiper, Chat, Woodpecker and Hawk are seen in medium numbers in this plan area. Those birds are included in Medium group.

2B.6.3. The fallowing birds named as Blue jay bird, Black bee, Swiftly, Grey crane, Golden oriole, Gander, King vulture and Brahmin kite are seen in very few numbers in this tract. Those birds are included in Lower group.

2B.6.4. **Aquatic Birds** – The fallowing aquatic birds such as Little cormorant, Graylag goose, Water hen and Water fowl are seen in this area.

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2B.7. **Aquatic Animals:**

2B.7.1. The fallowing aquatic animals such as Turtle, Crab, Leech, Oyster, Snail, Shrimp and Water snake are seen in the ponds, perennial and semi-perennial nala and dams exist in this tract.

2B.8. **Reptiles:**

2B.8.1. The common reptiles such as Tortoise, Lizard, Iguana, Garden lizard, all varieties of snake and Pangolin are seen in this locality. Besides this, Centipede, Earthworm, Millipede and Galley worm are seen everywhere in this division.

2B.8.2. Two varieties of tortoise such as Kachuga tenteria and Chitra indica are seen in this tract. Snakes are in danger. Pangolins are rarely seen in this forest tract.

2B.9. **Fish:**

2B.9.1. The fishes like Trout, Flat fish, Carp, Ground fish, Mrigal, Breeding fish and Big gudgeon are found in ponds and dams. Their size is large and they can attain weight up to 1 kg with in 1 year in the dam. All variety of fishes named above have scales except Trout. Flat fish, Trout, Ground fish and Big gudgeon feed on fishes and other aquatic animals.

2B.9.2. The fishes like Sand eel, Gilt head, Gudgeon, Water fish, Small trout, Flounder, and Eel are found in both dams and nalas. Their size is medium and they become easy pray for carnivorous during summer.

2B.9.3. The fishes like Grig, Minnow, Small sand fish and Floating fish are found every places. Their size is small and they are the best food for heron.

2B.9.4. The fishes like Cat fish, Scorpion fish and Nail fish are found in common water. They have no scales and their nails are very poisonous. They are commonly called as medicinal fishes.

2B.9.5. **Worms and Insects** - The common worms and insects noticed in this revision are Cockroach, White ant, Dragon fly, Mole cricket, Tree ant, Black bee, Beetle, Glow worm, Grasshopper, Spider, Wasp, Honey bee, Slug etc.

2B.10. **Injuries to which the Fauna is liable:**

2B.10.1. **Clear felling** – Large scale clear-felling of dense forests area for plantation and coppice regeneration were prescribed in the old plans. The implementation of such prescription resulted in disturbances and complete change of environment, thereby disturbing the main habitat of the Wild Life. This leads to the movement of Wild Life to other area, where they fall easy pray to poachers.

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2B.10.2. **Grazing** – Excessive grazing in the forests area is also responsible for damage to Wild Life. The herbivorous Wild animals are unable to compete with the cattle. The Wild Life in search of food strays in the agricultural field and gets shot there. The domestic animals are also carrying infectious diseases to the Wild Life, which are causing large scale epidemic in the forests.

2B.10.3. **Forests Fire** – This is most important factor responsible for destruction of Wild Life. The economy of the people of this area fully depends on forest produces. They set fire in the forest just after leaves shedding for better production of Kendu leaves, collection of Mahul, Tola, Sal seed and other Non Timber Forest Produces. The ground fire sprayed towards the uphill side in a continuous line. The Wild Life ran to open area and ultimately came to an end. After fire, the poachers can able to locate Wild animal from a longer distance. Destruction of ground cover of the forest increases the food scarcity for the Wild Life and finding no other alternative they change their habitat and face the danger.

2B.10.4. **Poaching** – The local people are killing wild animals with their hand made weapons for meat and skin. The outsiders are using guns, vehicle and powerful searchlight for poaching. Most of the Wild Life is easy pray during summer and at the time of meeting period.

2B.10.5. **Business** – Both Wild animals and birds can be trained and used as income generating sources by some people. Also people are interested to pet Wild Life for pleasure. Mostly some inhabitants of the locality are working as middleman for supply of young Wild Life from this tract. The local people are instigated for collection of cubs and chicks and paid nominal price to supply them.

2B.11. Protected Area:

2B.11.1. In the past system of management, the forest area had not been protected for development and multiplication of the Wild Life. There is no National park or Sanctuary in this tract. Deogarh Division is not coming under Sambalpur Elephant Reserve area. However some portion of this division is coming under eco-sensitive zone of Khalasuni and Badrama sanctuary.

2B.11.2. This division is rich in fauna due to continuous and dense vegetation cover. Practically it is not possible to stop the entry of the local people inside forests of the entire area. The Western part of this division have better wildlife habitat than the Eastern. The blocks named as Kansar, Prabhasuni, Rambhadevi, Khajuria and Chilantikhol shall be protected against entry with weapons or nets.

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2B.12. **Protection Measure:**

2B.12.1. While implementing the silvicultural prescription under various Working Circle, due regards has been paid to the requirement of proper habitat. Plantation followed by clear felling shall not be done in any circumstances. The area consisting of Pradhanpat, Pravasuni, Malyagiri, Kansar and Rambhadevi shall be restricted for grazing throughout the year.

2B.12.2. Learning of habitat requirement for each species of animals is considered as the most important Wild Life research needed today. All forest guard and one villager from each village shall be trained about the methods of improvement of habitat. Since habitat has been badly disturbed and primary productivity is low, simple protection is not enough to make an appreciable improvement of the Wild Life. Habitat and primary products are completely depending on forest fire and this can be stopped or controlled by local people only. An amount of Rs.1000000.00 is required in each year to control forest fire of this tract.

2B.13. **Management of Fauna:**

2B.13.1. **Pre-caution** – Habitat shall not be disturbed while carrying out plantation works. All food bearing and semi-evergreen trees are to be retained in the coupe area as standard to provide food and shelter for the Wild Life. Least possible interference in the habitat, which affords food, water and shelter to the Wild Life, should be done. No felling shall be carried out around water holes and care brakes which afford protection to all carnivorous.

2B.13.2. **Grazing** – Grazing in all 30 reserved forests is strictly prohibited. Mixing of Wild Life with the diseased cattle will make them vulnerable to the diseases, which may cause large scale destruction to the wild life. All veterinary officers shall be intimated to take preventive measures and villagers are to be advised not to allow their cattle to get in to the forests.

2B.13.3. **Succulent Grasses** – All open patches irrespective of its sizes shall be allowed to plough before the onset of the monsoon. The soil thus worked should be shown with seeds of succulent grasses. All domestic cattle should be kept away from these patches.

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2B.13.4. **Salt Lick and Water Supply** – A few salt licks should be provided in each fodder grass patches. Acute scarcity of water is felt in most of the forests area. The Wild Life has to travel long distances in search of water during summer and fall easy prey to poachers. Therefore digging of water body is highly essential in Malyagiri, Pravasuni, Rambhadevi, Gogua, Tianal, Panguli, Khajuria & in other forest blocks where scarcity of drinking water of Wild Life during summer is notice.

2B.13.5. **Disturbances** – Maximum effort shall be made to prevent interferences to Wild Life from all sources like Fire, Grazing, Explosion, Blasting, Netting etc. Heavy vehicles shall not be allowed to fly on the road passing through forest at high speed. Light vehicles shall not be allowed to enter inside forest area in night.

2B.14. Sambalpur Elephant Reserve (SPER):

2B.14.1. Government of Orissa has notified SPER vide No.8F (W) 10 / 2002 - 5840 / F and E. Dt.27.03.2002, basing on consent of Government of India vide letter No. F. No.7.2.2000 (P.E), Dt.04.02.2002. The area of SPER is 42691.00 ha, which is adjoing to Deogarh Division.

2B.15. Life Period and Multiplication:

2B.15.1. **Status of Multiplication** – The multiplication survey is not carried out in this zone of forest for the wildlife. However standard information in respect of multiplication of different species of wildlife is given in the table below.

Table No.79

Multiplication of different species of wildlife

Name of Wild Life	Age at first birth in year	Number of kids in one birth	Number of birth in life period	Total number of multiplication
Elephant	15 to 20	01	07 to 08	08
Leopard	05 to 06	02	10 to 12	20
Bear	04 to 05	02	20 to 21	40
Monkey	5 to 6	01	15 to 16	15
Red faced monkey	4 to 5	01	14 to 15	14
Fishing cat	2 to 3	2 to 4	8 to 9	24
Jackal	3 to 4	02	8 to 9	16
Wolf	3 to 4	02	8 to 9	16
Fox	3 to 4	02	8 to 9	16

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Wild dog	3 to 4	4 to 6	8 to 10	50
Spotted deer	5 to 7	01	9 to 10	09
Sambar	5 to 7	01	9 to 10	09
Barking deer	3 to 4	01	5 to 7	06
Rabbit	3 to 4	1 to 2	6 to 7	06
Rat	01	6 to 10	5 to 6	50
Otter	2 to 3	02	5 to 6	12
Wild boar	4 to 5	4 to 7	17 to 20	120
Kutura	2 to 3	01	5 to 7	06
Squirrel	1 to 2	02	10 to 12	22
Bat	2 to 3	01	12 to 14	11
Sources - V.A.S,				

2B.15.2. **Life Period** – There is no any research data in this division to determine exactly the life period of different species of wildlife. The planned number of years between birth and natural death of wildlife may vary depending on environmental condition of this zone. However, the approximate life period of the wildlife in this tract is given in the table below.

Table No.80

Approximate life period of the wildlife

Sl. No.	Name of species	Life period in year	Sl. No.	Name of species	Life period in year
1	Elephant	80 to 90	13	Spotted deer	15 to 20
2	Panther	20 to 24	14	Sambar	20 to 25
3	Monkey	30 to 32	15	Barking deer	8 to 10
4	Red faced monkey	28 to 30	16	Nilgai	20 to 25
5	R.B.T	30 to 35	17	Rabbit	10 to 12
6	Fishing cat	15 to 18	18	Porcupine	5 to 6
7	Civet cat	8 to 10	19	Squirrel	15 to 18
8	Jackal	15 to 18	20	Rat	4 to 6
9	Wolf	15 to 18	21	Pangolin	12 to 15
10	Fox	10 to 12	22	Bat	15 to 17
11	Wild dog	15 to 18	23	Wild boar	30 to 32
12	Bear	30 to 35	24	Kutura	8 to 10
Sources - V.A.S					

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CHAPTER - III

UTILIZATION OF THE FOREST PRODUCE.

3.1. Agricultural Customs and Wants of the Population:

3.1.1. Population – The area included in this division contains 04 no's of Tahasils (Reamal, Deogarh, Barkote & Pallahara). As per census figure the population of the area included in this division is given in the table below.

Table No. 81

Population

Year of census	Male	Female	Total	Rural	Urban
2001	138000	136000	274000	254000	20000
2011	158000	154000	312000	290000	22000

Sources - Directorate of Economics & Statistics, Odisha, Bhubaneswar.

Table No. 82

Population as per census

Year of census	Population			Total
	General	Scheduled Cast	Scheduled Tribe	
2001	1,39,780	42117	92103	274000

Sources - Directorate of Economics & Statistics, Odisha, Bhubaneswar.

3.1.2. Density of Population – The total geographical area covered by this division is 4106.98 sq. KM. The population is fairly high in the plains. The population is relatively thin in the area covered mostly by forest and hills. This is due to non-availability of agricultural land, absence of any industries and irrigation facilities. The density of population as per the census figure is given in the table below.

Table No. 83

Density of population

Year	Total population	Percentage of rural population to total population	Population density per Sq./Km
2001	274000	92.67	93.00

Sources - Directorate of Economics & Statistics, Odisha, Bhubaneswar.

3.1.3. Educational Institution – The facilities of education up to 7th standard exist in almost every village. At present, 13 colleges in Deogarh District for the higher study. The detail of educational institution and it's others relating information is given in the tables below.

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Table No. 84

Information on School

Year	Name of blocks	No. of Schools	No. of Teachers				No. of Students	
			Male		Female			
			Trained	Untrained	Trained	Untrained	Boys	Girls
2006 - 2007		520	705	40	156	24	18154	15413
	Barkote	135	262	8	23	06	6896	5235
	Reamal	160	263	16	49	09	5492	5457
	Tilebani	192	170	16	30	08	4321	3595
	ULB Deogarh (M)	31	10	0	54	1	1445	1126

Sources - Directorate of Economics & Statistics, Odisha, Bhubaneswar.

Table No. 85

Information on College

Year	Name of block	No. of college			No. of lecturer			No. of student		
		Men	Women	Total	Men	Women	Total	Boys	Girls	Total
2005-06		12	1	13	130	28	158	1435	615	2050
2006-07		12	1	13	135	36	171	1493	1026	2519
2006-07	Barkote	05	0	05	46	10	56	572	397	969
	Reamal	04	0	04	32	06	38	583	412	995
	Tilebani	02	0	02	20	09	29	203	90	293
	ULB Deogarh (M)	01	01	02	37	11	48	135	127	262

Sources - Directorate of Economics & Statistics, Odisha, Bhubaneswar.

3.1.4. Literacy – There are 956 educational institutions which includes 598 primary school, 262 Upper primary school, 76 Secondary School, 12 Junior College and 08 Degree College in this area of revision. The comparison statement of literacy is given in the table below.

Table No. 86

Literacy rate by Sex in different Block & Urban area of Deogarh District, 2001 Census

All Class

Year	Block	Person	Male	Female
2001		60.36	73.33	47.18
	Barkote	58.97	71.49	46.27
	Reamal	59.36	73.17	45.43
	Tileibani	60.93	78.39	44.8
	ULB Deogarh(M)	76.31	84.12	67.66

Sources - District, Statistical Hand Book, Deogarh-2007.

3.1.5. Agricultural Customs – In this revision the production of major crops shown in the table below.

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Table No. 87												
Production of Major Crops 2011-12 (In Quintals)												
Name of District	Paddy	Wheat	Maize	Ragi	Mung	Biri	Kulthi	Til	Groundnut	Mustard	Jute	Potato	Sugarcane
Deogarh	930318	173	1175	5	1907	1365	1571	1783	1304	430	0	17706	10987
Sources - Directorate of Economics & Statistics, Odisha, Bhubaneswar.													

3.1.6. Irrigation – Most of the cultivated land in this division are rain fed and the area is very much prone to drought. Some major & minor irrigation points constructed and watering done to Kharif & Rabi. The area Irrigation potential created is given in the table below.

Table No.88					
Irrigation Potential created (Area in '000 Hect.)					
Major & Medium 2011-12		Minor (Flow) 2011-12		Minor (Lift) 2011-12	
Kharif	Rabi	Kharif	Rabi	Kharif	Rabi
8.10	5.70	5.09	0.15	2.81	1.56
Sources - Directorate of Economics & Statistics, Odisha, Bhubaneswar.					

3.1.7. Agricultural Products – The bulk of the population are agriculturists and paddy is the main crop among the agricultural products. Besides paddy, they grow millets, black gram, horse gram, mustard, til, maize, potato, chilly, groundnut, onion, zinger, sugarcane, garlic etc. The important horticulture crops grown in this area are mango, banana, jackfruit, lemon etc.

3.1.8. Cattle Pasture – According to Districts at a glance, Odisha – 2013 census figure, there are nearly 178497 heads of cattle, 11764 heads of buffaloes and 106102 heads of sheep and goats in the area covered by this revision. Because of availability of abundant Khesra forest adjoining to villages, incidence of grazing in and around the forest managed in this revision is not so acute. The pasture management has not been planned yet. The quality of cattle is most uneconomical except for procurement of cow dung for farming. Upgrading the cattle by artificial insemination will prove quite beneficial and this benefit when realized by the cattle owners may prompt them to voluntarily reduce their cattle population.

3.1.9. Industry – The area covered by this division is one of the most backward zone of the state as regards to industries, as such there is 36 nos of MSME set up and total capital investment is 18.63 lakhs and 173 nos employment generated. This report is collected from Directorate of Economics & Statistics, Odisha, Bhubaneswar. Besides this, the local artisans are employed in Carpentry, Blacksmith. Though the area contains extensive forests, Sawmill, which is the primary forest based industry, is significantly absent in this tract. No other forests based industries are located in this division.

3.1.10. Tassar Cultivation – Tassar rearing is an old practice in the forests of this tract. Local people cultivate and It is mainly reared on Asan and Arjun trees in concentrated patches. The cocoons are collected by cultivators and steamed to prevent emergence of tassar moth, which could have spoilt the tassar cocoons by cutting it

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through. The collected cocoons are sold to the leaseholder, as there are no tasar weavers in this locality.

3.1.11. Rope Making – Most of the inhabitant of this zone are collecting Sabai grasses and Siali fibers from forests and make ropes for their domestic uses. It has developed into cottage industry in different villages. Sabai ropes prepared in this area are sold outside, particularly to Sambalpur, Angul, Cuttack etc. Maximum quantity of ropes is used by the Paper Mills for using them in twining of bamboo bundles. The ropes prepared by Siali fiber by the forest fringe villagers are sold in all local weekly markets.

3.1.12. Kendu Leaves – This area is famous for production of good quantity and quality of Kendu leaves. After Nationalization of kendu leaves, the collection and processing are taken up departmentally and disposal is arranged through the Forest Corporation Limited. Deogarh Kendu Leaf Division has their jurisdiction for collection of leaves in this area. All most all families in each village are being engaged during the collection season. The annual collection figure of processed kendu leaves is given in the table below.

Table No. 89

Kendu leaves production

Year	Name of division and K.L. production in quintal		Total in quintal
	Deogarh	Angul	
2000-01	25025.40	9308.4	34333.8
2001-02	18408.60	6700.2	25108.8
2002-03	20694.60	7668.6	28363.2
2003-04	20607.60	8148.0	28755.6
2004-05	19963.20	7446.6	27409.8
2005-06	18163.80	6615.0	24778.8
2006-07	19966.20	6672.0	26638.2
2007-08	20937.00	6968.4	27905.4
2008-09	19433.40	6525.6	25959.0
2009-10	20900.40	7035.0	27935.4
2010-11	20584.20	7021.8	27606.0
2011-12	15166.8	4804.8	19971.6
2012-13	18683.40	6924.0	25607.4
2013-14	x	7698.0	7698

3.1.13. **Wants of the people:**

3.1.13.1. **Timber** – The local people need timber mainly for onstruction of

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agriculture implementations, houses, carts and furniture. The bulk of the population being poor, their requirement of timbers for house building is rather small. They mainly need timber up to 90 cm girth. Due to gradual increase in the living standard of the people, the demand for bigger timbers mostly as sawn sizes are being met from the non-reserve forest. The pressure in Reserve Forest is negligible.

3.1.13.2. **Fire Wood** – Besides timber, huge quantity of firewood is needed as fuel and burning of bricks for local consumption. Requirement of firewood depends on their items of food preparation. The local inhabitants are preparing average of only two items of food and maximum twice per day. The requirement of firewood in the hotels is higher. The hotels running along the National Highway are using logs of average size 60 cm girth and 2 mt length for firewood. Absolutely there is no scarcity of firewood in this forest-dominated area. It has been observed that mort of the family in each village have kept double the actual requirement of firewood per annum. Huge quantity of firewood and timber are used for fencing around their cultivated land. They do not use leaves and small branches as firewood.

3.1.13.3. **Fodder** – The domestic animals population in the area of the division is approximately 370522, which includes cow, buffalo, sheep and goat. Practically there is no concept of stall-feeding and the usual practice followed is mass grazing. Maximum of three herdsmen are engaged to carry the herd, which is usually formed by the domestic animals of more than one village. Forest Survey of India investigation show that nearly 40 % of the fodder requirement is met from the forest. The annual requirement of the fodder by the domestic animal is calculated based on the field observation. Annual availability of fodder per hector in non-forest area is approximately calculated to 30.0 quintals for buffalo, 25.0 quintals for cow and 2.00 quintals for each of goat and sheep. The requirement of fodder is given in the table below.

Table No. 90

Availability and consumption of fodder

Name of livestock	Total population	Need of fodder per day per head in Qtl.	Annual need of fodder in quintal	Annual availability of fodder in quintal		
				Forest area	Other area	Total
Buffalo	11764	0.1369	1611.50	235280	352920	588200
Cow	252656	0.114	28842.00	4210933	6316400	10527333
Goat	100729	0.0091	919.89	134305	201458	335763
Sheep	5373	0.0091	49.0	7164	10746	17910
Total	370522	0.2691	31422.39	4587682	6881524	11469206

3.1.13.4. **Bamboo** – The total extent of bamboo bearing forest is 99767.596 ha, which is dominated by sporadic distribution of clumps of Salia bamboo. Availability of bamboo is in 21 forest blocks, but not sufficient as per requirement. There is heavy demand of bamboo for construction of houses, basket, tray, closed litter, stick etc. The Kardi is collected by the local people, which are used as food. The gradual heavy pressure on the clumps by local people and wild life results reduction in quality and quantity of the natural bamboo clumps. The outturn of bamboo of last 10 years is given in the table below.

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Table No. 91

Out turn of Bamboo

Year	No. & Name of coupes allotted	No. & Name of coupes worked out and Prodcution		
		Name of Coupes worked	I.B. in S.U	C.B. in Nos
2002-03	Working of Bamboo coupes stopped vide PCCF, Odisha, Bhubaneswar No.-21900 dt.01.11.2002 due to writ petition No 202/95(Supreme Court)			
2003-04	1. Pradhanpat B/C -A 2. Rambhadevi B/C- A 3. Kansar B/C- A 4. Pravasuni B/C -A 5. Khajuria B/C- A 6. Siridi B/C – A 7. Kuchinda B/C- A 8. Gogua B/C -A 9. Badtaila B/C- A 10. Mandasila B/C -A 11. Panguli B/C -A 12. Thianal B/C -A 13. Paburi B/C -A 14. Tusula B/C -A 15. Pallahara B/C- A 16. Paburi B/C-A 17. Danda B/C -A 18. Khamar B/C - A	1. Kansar, B/C -A (P-I) Kansar, B/C -A (P-II) 2.Sirid, B/C-A 3. Khajuria, B/C-A 4. Gogua, B/C-A 5. Old Pabudi, B/C-A	381.81 455.17 293.55 139.24 218.76 82.61	7899 1000 0 - - - -
2004-05	1. Pradhanpat B/C -B 2. Rambhadevi B/C- B 3. Kansar B/C- B 4. Pravasuni B/C -B 5. Khajuria B/C- B 6. Siridi B/C-B 7. Kuchinda B/C-B 8. Badtaila B/C-B 9. Mandasila B/C-B 10. Panguli B/C-B 11. Thianal B/C-B 12. Paburi B/C-B 13. Tusula B/C-B 14. Gogua B/C-B 15. Pallahara B/C-B 16. Paburi B/C-B 17. Danda B/C-B 18. Khamar B/C-B	1. Kansar, B/C-B 2.Sirid, B/C-B 3. Khajuria, B/C-B 4. Gogua, B/C-B	887.420 607.4936 203.997 408.074	1315 - - -

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2005-06	1. Kuchinda B/C-C 2. Pradhanpat B/C -C 3. Rambhadevi B/C- C 4. Gogua B/C-C 5. Kansar B/C- C 6. Pravasuni B/C –C 7. Badtaila B/C-C 8. Mandasila B/C-C 9. Panguli B/C-C 10. Thianal B/C-C 11. Paburi B/C-C 12. Tusula B/C-C 13. Pallahara B/C-C 14. Paburi B/C-C 15. Danda B/C-C 16. Khamar B/C-C	1. Kansar, B/C-C 2. Gogua, B/C-C	680.386 482.154	1000 -
2006-07	1. Pradhanpat B/C -D 2. Rambhadevi B/C- D 3. Gogua B/C -D 4. Kansar B/C- D 5. Pravasuni B/C –D 6. Badtaila B/C- D 7. Mandasila B/C –D 8. Panguli B/C -D 9. Thianal B/C –D 10. Paburi B/C –D 11. Tusula B/C –D 12. Pallahara B/C- D 13. Paburi B/C-D 14. Danda B/C –D 15. Khamar B/C – D 16. Khajuria B/C- D 17. Siridi B/C – D 18. Kuchinda B/C- D	1. Kansar, B/C-D 2. Gogua, B/C-D 3. Kuchinda B/C- D	952.37 262.29 308.41	1120 - -
2007-08	1. Pradhanpat B/C -A 2. Rambhadevi B/C- A 3. Kansar B/C- A 4. Pravasuni B/C –A 5. Khajuria B/C- A 6. Siridi B/C – A 7. Kuchinda B/C- A 8. Gogua B/C –A 9. Badtaila B/C- A 10. Mandasila B/C –A 11. Panguli B/C –A 12. Thianal B/C –A 13. Paburi B/C –A 14. Tusula B/C –A 15. Pallahara B/C- A	1. Kansar B/C-A 2. Pravasuni B/C-A 3. Kuchinda B/C-A 4. Siridi B/C-A 5. Gogua B/C-A	655.20 103.47 143.97 266.39 267.60	1000 - - 1520 -

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	16. Paburi B/C-A 17. Danda B/C –A 18. Khamar B/C – A			
2008-09	1. Pradhanpat B/C -B 2. Rambhadevi B/C- B 3. Kansar B/C- B 4. Pravasuni B/C –B 5. Khajuria B/C- B 6. Siridi B/C – B 7. Kuchinda B/C- B 8. Gogua B/C –B 9. Badtaila B/C- B 10. Mandasila B/C –B 11. Panguli B/C –B 12. Thianal B/C –B 13. Paburi B/C –B 14. Tusula B/C –B 15. Pallahara B/C- B 16. Paburi B/C-B 17. Danda B/C –B 18. Khamar B/C – B	1. Kansar B/C-B 2. Gogua B/C-B	523.457 407.682	2100 -----
2009-10	1. Siridi B/C – C 2. Kuchinda B/C- C 3. Pradhanpat B/C –C 4. Rambhadevi B/C- C 5. Gogua B/C –C 6. Kansar B/C- C 7. Pravasuni B/C –C 8. Badtaila B/C- C 9. Mandasila B/C –C 10. Panguli B/C –C 11. Thianal B/C –C 12. Paburi B/C-C 13. Tusula B/C –C 14. Pallahara B/C- C 15. Paburi B/C-C 16. Danda B/C –C 17. Khamar B/C – C	1. Kansar B/C-C 2. Gogua B/C-C	521.12 248.97	1281 -----
2010-11	1. Pradhanpat B/C -D 2. Rambhadevi B/C- D 3. Gogua B/C –D 4. Kansar B/C- D 5. Pravasuni B/C –D 6. Badtaila B/C- D 7. Mandasila B/C –D 8. Panguli B/C –D 9. Thianal B/C –D 10. Paburi B/C-D 11. Tusula B/C –D	1. Kuchinda B/C-D 2. Kansar B/C-D 3. Gogua B/C-D	238.6 1487.64 175.21	----- 1500 -----

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	12. Pallahara B/C- D 13. Paburi B/C-D 14. Danda B/C –D 15. Khamar B/C – D 16. Khajuria B/C-D 17. Siridi B/C-D 18. Kuchinda B/C- D			
2011-12	1. Kansar B/C- A 2. Pravasuni B/C –A 3. Kuchinda B/C- A 4. Siridi B/C – A 5. Gogua B/C –A 6. Pradhanpat B/C –A 7. Badtaila B/C- A 8. Mandasila B/C –A 9. Panguli B/C –A 10. Thianal B/C –A 11. Paudi B/C-A 12. Tusula B/C –A 13. Danda B/C –A 14. Pallahara B/C- A 15. Old Pauri B/C-A 16. Kkajuria B/C-A 17. Rambhadevi B/C- A	1. Kansar B/C-A 2. Pravasuni B/C-A 3. Kuchinda B/C-A 4. Siridi B/C-A 5. Gogua B/C-A	655.20 103.47 143.97 266.39 267.60	1000 - - 1520 -

3.1.13.5. **Non-timber Forest Produces (NTFP)** – The forest area under this revision are rich in NTFP. The main sources of income of the local inhabitant are Kendu leaves, Mahua flower, Sal seed, Tamarind, Siali leaves and fibers. All other NTFPs contribute sizable portion of livelihood of local people. People used to collect edible fruits for their own consumption and some time sale them in the local weekly markets. People collect gum, resin, oil and necessary part of the trees for medicine throughout the year. The people of this tract need forest and its product for their survival. The important characteristic of different trees is given in the table below.

Table No. 92

NTFPs and its uses

Sl. No	Name of tree	Flower		Seed		Part used as medicine	Uses
		Time	Colour	Coll'n time	No's / kg		
1	Arjun	May	Faint yellow	Feb	1600	Bark	Timber, cardio tonic, ulcers, diabetes, fracture
2	Ashan	Jun	-do-	Apr	550	-do-	Timber, cardio tonic, wound, ulcer, dysentery

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3	Ainla	Feb	-do-	Mar	150	All	Firewood, diabetes, ulcer, asthma, digestive
4	Anchu	Feb	White	Jan	50	Root, leaf	Firewood and naturopathy
5	Amba	Feb	Greenish white	Jun	15	Root, bark, seed	Timber, syphilis, wounds, ulcer, diphtheria, rheumatism
6	Babul	Dec	Faint white	Apr	7500	Bark and gum	Firewood, asthma, haemostatic, antipyretic, diarrhea
7	Baruna	Mar	Faint red	Jul	22000	All	Firewood, cardio tonic, anticonvulsant
8	Bara	May	Faint green	Jun	25000	All	Firewood, diarrhea, dysentery, gonorrhea
9	Bahada	Mar	Faint white	Jun	120	Bark and fruit	Firewood, anemia, digestive, dysentery
10	Bela	May	Faint green	Jun	5300	Leaf and fruit	Firewood, diarrhea, dysentery, breathy, diabetes, gastric
11	Chakunda	Sep	Yellow	May	35000	Leaf and seed	Firewood, thermogenic, laxative, liver tonic
12	Champa	Apr	Yellow	Aug	7000	All	Firewood, chronic gastritis, malaria
13	Chandan	Jun	Faint green	Jan	6000	Root and stem	Firewood, cardio tonic, haemostatic, acidity
14	Dhaura	Aug	Faint yellow	Mar	120000	All	Timber, haemostatic, cold fever, skin disease
15	Gambhari	Mar	Faint yellow	May	1600	All	Timber, fever, dyspepsia, skin, hair
16	Gohira	Oct	Faint white	Apr	45000	Bark	Timber, vomiting, leprosy, ulcer, cough
17	Harida	Jan	Faint white	Apr	230	Fruit	Timber, cardio tonic, digestive, purgative
18	Jamu	Mar	Faint green	Jun	350	All	Firewood, ring warm, diabetes, teeth, gums
19	Karanja	Apr	Orange	Feb	500	All	Firewood, gonorrhea, teeth, beriberi, ulcer

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20	Kamal-agundi	Oct	Yellow	Apr	x	Fruit's hair	Firewood, scabies, skin, ringworm, digestive
21	Kada-mba	Jun	Orange	Nov	6000	Bark, leaf, fruit	Firewood, febrifuge, ulcer, wound, gastric
22	Kochila	Mar	Faint white	Jun	x	Root, leaf	Timber, ulcer, diabetes, malarial, chronic wound
23	Kumbhi	Mar	White	Jul	x	Bark, leaf, fruit	Firewood, fits, tumors epileptic, colic, worm
24	Kusum	Mar	Faint green	Aug	1800	Bark, oil	Firewood, malaria, ulcer, burns
25	Mahula	Jan	Faint yellow	Jun	150	Bark, seed	Firewood, epilepsy, sprains, rheumatism
26	Maha-nimba	Mar	Faint violet	Jun	200	All	Firewood, asthma, fever, diabetes, hysteria, delivery
27	Mai	Mar	Faint white	Jun	x	Bark, leaf	Timber, wound, bruises, ulcer, sprains
28	Nimba	Mar	White	Jun	1500	All	Firewood, skin, malaria, bronchitis, paralysis
28	Panas	Jan	Green	Jun	50	All	Firewood, aphrodisiac, sedative, cough, bile
29	Palas	Feb	Red	May	x	Bark, seed, gum	Firewood, aphrodisiac, appetizer, digestive, worm, fracture, rectal disease
30	Piasal	Oct	Pale yellow	Apr	1500	Heartwood and gum	Timber, fracture, skin, leucaderma, diabetes
31	Rohini	Feb	White	Jun	10000	Fruit	Timber, fever, tonic
32	Saguan	Jun	White	Feb	1700	All	Timber, acidity, diabetes, leprosy, skin
33	Sal	Feb	White	Jun	500	Bark, fruit and resin	Timber, cough, ulcer, tuberculosis, eye
34	Simili	Jan	Red	May	26000	Root, bark, gum fruit	Firewood, skin, bladder, kidney
35	Sisoo	June	Pale white	Jan	53000	Root, leaf, bark and wood	Timber, skin, leucoderma, scabies, ulcer, syphilis

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36	Siris	May	Pale yellow	Apr	7000	Bark, seed and flower	Firewood, cough, catarrh, asthma, leprosy, ulcer
37	Sunari	Jul	Yellow	Apr	5500	All	Firewood, skin, diabetes, leprosy, ring worm
38	Tentuli	Apr	Pale white	Mar	250	Root, fruit and seed	Firewood, anti-fungal, jaundice, scabies, diabetes, small pox.
39	Khair	x	x	x	x	Stem used Manufacture of Katha	Used as in bettle Shop as Khair.

3.1.13.6. The quantity of NTFP collected for last 10 years in this area of this division is given in the table below.

Table No. 93

Production of NTFP

Name of NTFP	Year and production in quintal from 1990-91 to 1993-94							
	1990-91		1991-92		1992-93		1993-94	
	Production	Revenue	Production	Revenue	Production	Revenue	Production	Revenue
Sal Seeds	1,638 M.T.	34,10,169	717 M.T.	x	1,533 M.T	x	1,156 M.T	x
Siali leaves	72 M.T.	31,050	9 M.T	x	103 M.T.	x	731 M.T	x
Tasar Cocoon	235Kahan	2,39,656	633 Kahan	2,63,618	624 Kahan	2,89,980	1,379 Kahan	3,18,988
Gendali gum	x	x	x	x	x	x	x	x
Mohua flowers	3786 M.T	26,06,418	9165 M.T	x	13 M.T.	96,332	76 M.T	55,860
Myraboians	x	x	1,016 M.T.	x	x	x	x	x
Tamarind	x	x	x	x	x	x	11 M.T.	x
Char seeds	4,043	x	0.152 M.T.	x	0.085 M.T.	x	0.056 M.T.	x
Lac	x	850	x	850	x	x	20.55 M.T.	x
Hill Brooms	x	x	x	x	x	x	13.32 M.T.	x
Siali fibres	11.5 M.T	x	32.5 M.T.	x	1206 M.T.	736	2100 M.T.	610
Bantulsi	74 M.T	x	6 M.T.	x	7 M.T.	x	20 M.T.	x
Bankulthi	3 M.T.	x	2 M.T.	x	4 M.T.	x	1 M.T.	x
Gilo	x	x	0.059 M.T.	x	x	x	50352 M.T.	x
Chakunda	0.262 M.T.	x	33.510 M.T.	x	14.430 M.T.	x	3.750 M.T.	x
Sikakai	4.150 M.T.	x	1.113 M.T.	x	0.310 M.T.	x	0.007 M.T.	x
Benacher	0.124 M.T.	x	0.540 M.T.	x	x	x	x	x
Banahaldi	0.058 M.T.	x	0.210 M.T.	x	x	x	x	x
Baghanakhi	0.020 M.T.	x	0.251	x	0.008 M.T.	x	x	x

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			M.T.					
Kamalagundi	X	X	0.113 M.T.	X	X	X	X	X
Gaba	X	X	0.859 M.T.	X	X	X	X	X
Kusum seeds	0.089 M.T.	X	16.617 M.T.	X	1.368 M.T.	X	1.621 M.T.	X
Mohua seeds	134.77 M.T.	X	2.217 M.T.	X	32.548 M.T.	X	5.082 M.T.	X
Neem seeds	0.001 M.T.	X	0.086 M.T.	X	X	X	0.004 M.T.	X
Mango kernel	X	X	11.536 M.T.	X	X	X	4.169 M.T.	X
Nageswar seeds	X	X	0.130 M.T.	X	X	X	X	X
Marda seeds	0.011 M.T.	X	1.197 M.T.	X	X	X	X	X
Indrajab	1.278 M.T.	X	0.040 M.T.	X	X	X	0.084 M.T.	X
Karanja seeds	0.006 M.T.	X	X	X	X	X	0.146 M.T.	X

Sources - Divisional Forest Officer, Deogarh Division.

3.2. Market and Marketable Product:

3.2.1. **Market** – There is no any special market or shop for the forest produces to be marketed in this division. The forest produces collected by the people are sold in common weekly market or sold to daily purchaser at their villages. The list of common weekly market of this area of division is given in the table below.

Table No. 94

List of market

Sl. No.	Name of the Range	Name of market place	Name of market day	Distance from Range Office in km.
1	Deogarh	Deogarh	Daily	01.00 KM
		Tileibani	Tuesday	17.00 KM
2	Reamal	Reamal	Wednesday	00.50 KM
		Rengalbeda	Monday	15.00 KM
		Chhatabar	Friday	05.00 KM
3	Barkote	Barkote	Tuesday, Sunday	00.50 KM
		Kola	Tuesday	05.00 KM
		Balam	Monday	10.00 KM
4	Pallahara	Pallahara	Sunday	00.50 KM
		Jamardihi	Tuesday	10.00 KM
		Chheliabeda	Friday	15.00 KM
5	Khamar	Khamar	Monday	01.50 KM
		Injidi	Tuesday	10.00 KM
		Shahargurujan	Saturday	12.00 KM

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3.2.2. **Marketable Products** – High forests dominate the area included in this division. It produces almost all verities of forest product. The important marketable forest products of this area and its disposal method are given in the table below.

Table No. 95

Marketable forest products

Name of product	Description	Disposal method
Timber	Sal is important timber and it accounts for 71.6 % of the timber production during 2005-06. Besides sal this area is famous for its Bija, Haldu, Sissoo, Asan etc. The quality of timber produced in this area is superior to that of neighboring Division. All timbers are disposed of in the form of logs, as there is no sawmill established in this area of Division.	Since 1981-82, the Orissa Forests Corporation has taken total lease of all the timber coupes of this Division. The corporation has established a depot at Badakudr Near Kala.
Poles	Established trees of girth less than 30 cm at breast height are treated as poles. Poles are obtained from coppice coupes, thinning in congested patches and regeneration cleaning.	Poles are in great demand for construction of houses of the local people. They are supplied to Sambalpur, Angul, Cuttack etc for centering works. Due to higher profitability from sale of sawn sizes straight poles are also fed to the sawmills and sold as scantling and battens.
Firewood	The trees and its part can be converted into firewood if it is unfit for otherwise. The billets are kept in 12 ft x 3 ft x 3 ft size for sale. Mostly branches and defective trees are fit for firewood.	The density of population in the area of revision is low. The local demand for firewood is mostly met from the forest areas, which are under the control of Revenue Department. The firewood procured from this area is mainly handed over to OFDC.
Bamboo	There are 13 numbers of reserve forest included in this Division, contain mainly Salia bamboo. They are of quality II.	Annual bamboo coupes are delivered to Orissa Forests Development corporation limited for cutting. The produces obtained from this area are sold to paper mills. The local people use very small quantity of bamboos.
Kendu-leaf	It occurs through out the area under this Division and has good quality. It is collected by Deogarh kendu leaf Divisions.	Local people collect leaves and sold to Department. It is processed departmentally and marketed through the corporation. Due to superior quality it has a ready market in West Bengal and in the southern states for manufacture of Bidi.

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Sal seed	The main species in this zone of forests is Sal. Sal seed has gained much important during the last decade. It constitutes an important minor forest produce item.	It was leased out to Utkal Contractors and Joinery limited, Sambalpur, who consume the same in their solvent extraction plant at Sasan. Then Orissa Forests Development Corporation Limited collected it from 1984 to 2005. But from the year 2006-07 its collection and disposal are vested to Panchayat.
Tassar	Tassar is mainly reared on Asan and Arjun trees. The cocoons are collected by cultivators and steamed to prevent emergence of tassar moth, which could have spoilt the tassar cocoon by cutting it through.	There are no tasar weavers in this area of Division. The collected cocoons are sold to the leaseholders. It is in great demand by the weaving industries in Sambalpur, Nuapatna and Bhagalpur.
Mahua flower	This is an important item, which is not controlled by any leaseholders. The local people collect the flowers from ground only and controlled by Panchayat and Excise department.	The collected flowers are dried up in the open yard for two to three days and sold at weekly market to traders. It is used by local distilleries for alcohol and also exported outside for use in the solvent extraction plants.
Mahua seeds	Mahua seed is locally called as Tola. The local people collect it either from ground or from the trees with the help of a stick.	It is used for extraction of oil only. The extracted oil is edible. It is collected for their own use but not for sale or commercial purposes.
Gum	It is a substance of more or less sticky nature. The gum produced from Genduli, Char, Dhaura, Moi, Khair, Bija are of commercial important.	The traders collect these from different forest fringe villages through their agents. It is exported outside for use in different industries.
Resin	The resin neither dissolves nor softens in water but it is more or less soluble in organic solvents. It occurs in special cavities of the trees like Sal, Salai etc. They normally ooze out through the bark, hardening on exposure.	Local people collect commercial resins through artificial wounds in the trees. The resins are widely used in the manufacture of paints and varnishes, waterproofing substances, medicine, pharmacy, sizing paper etc. It is sold in the local market from where the traders export these resins to different part of the country.
Myrob-alans	By far the most important of the myrobalans are the fruit of Harida, Bahada and Anla. The trees of those species are widely distributed in this area.	The fruits are collected by the local people and sold in the weekly market to the traders. In addition to the whole fruits, crushed extracts are also prepared. The tannin material yielded is of high quality, the average tannin contain is 32 %. It imparts a bright colour and is a valuable softener to the leather.

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Sialileaf	Siali (Bauhinia vahlii) climber is widely distributed in this zone of forests. It is of gigantic size.	The poor people living in and around the forests collect the leaves. The leaves are stitched in the circular shape plate of 6" radius. It is sold to the traders in weekly market.
Sialifibre	The bark of Bauhinia vahlii removed from the climber and after drying it yields a strong valuable fiber.	The fibers are collected by local people and sold to kendu leaf Department for consuming in the processing of kendu leaves. The local people also use it for rope making.

3.2.3. NTFP Policy – Government of Odisha announced new NTFP policy during March 2000. The orientation is changed from revenue earning to livelihood approach. The ownership of control over 68 minor forest produce items in the area under Division has been vested with Panchayats. The interested traders have to get registered in Panchayat. Subsequently 'Odisha Gram Panchayats Rule, 2002' have been framed by Panchayat Raj Department. Basing on the Rules, the Panchayat Samiti has to fix up the minimum procurement price for minor forest produce items. But Panchayat Samiti has not fixed the rate. The rate of NTFP for this area collected in the local market is given in the table below.

Table No. 96

Rate of NTFP

Sl. No.	Name of the NTFP	Rate per kg in Rs.	Sl. No.	Name of NTFP	Rate per kg in Rs.
1	Tamarind	30	31	Mahula	30
2	Tamarind seed	05	32	Hill broom	40
3	Phula jhadu	40	33	Nux vomica	50
4	Harida	10	34	Bahada	10
5	Aula	15	35	Bhalia	25
6	Cleaning nut	30	36	Honey	400
7	Siali leaves	35	37	Sabai grass	50
8	Mango kernel	10	38	Thatch grass	05
9	Simul cotton	200	39	Arrow rout	200
10	Dhatuki flower	25	40	Guba	10
11	Palas seed	25	41	Siali seed	25
12	Kurai seed	40	42	Gila	100
13	Bena root	200	43	Bana haldi	100
14	Bana kolatha	50	44	Kanta padma seed	200
15	Tala makhana seed	200	45	Baidank seed	400
16	Baghanakhi seed	200	46	Kamalagundi fruit	45
17	Landa baguli	150	47	Bela	15
18	Chiraita	100	48	Khajuri pata	25
19	Rohini fruit	10	49	Bhrusunga leaf	120
20	Rasana root	100	50	Phenphena fruit	45
21	Sidha fruit	10	51	Satabari	150

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22	Kata lai	05	52	Athunli lai	04
23	Khelua lai	05	53	Suan lai	10
24	Eksira fruit	10	54	Katha chatu	10
25	Mat reed	45	55	Ananta muli	350
26	Nageswar flower	200	56	Mankenda kendu	10
27	Mahula seed	50	57	Kusum seed	45
28	Karanja seed	100	58	Neem seed	100
29	Char seed	300	59	Babul seed	50
30	Sal seed	20			
Sources - Field Staff of WPO, Keonjhar.					

3.3. Demand and Supply of Forest Produce and Pressure on Forests:

3.3.1. **Demand of Timber** – According to the census of 2001, the population of the state area of revision was 274000 and in the census of 2011, the population was 312000. The bulk of the populations depend entirely on agriculture. The requirements of the people are simple and consist mainly of timber for ploughs and other agricultural implements. They require poles, bamboos and grasses for house building and firewood for fuel. The demand of timber is quantified on the basis of report of Forest Survey of India, 1996. The timber requirement projection in different census year is given in the table below.

Table No. 97

Demand of timber

Year	Annual timber demand per head in cum				Total population	Total timber demand in cum
	House	Furniture	Agriculture	Total		
2001	0.0435	0.0115	0.053	0.108	274000	29592.00
2011	-do-	-do-	-do-	-do-	312000	33696.00
Sources - District Statistical Handbook						

3.3.2. **Demand of Firewood** – There is heavy demand of firewood since most of the population is rural and depends much upon firewood for cooking purpose. The fuel wood requirement of this area of revision is calculated based on the report of forest survey of India, 1996. The requirement of fuel wood, based on census is given in the table below.

Table No. 98

Demand of Firewood

Year	Annual fuel demand per head in kg			Total population	Total fuel demand in quintal
	Rural	Urban	Average		
2001	168	140	154	274000	421960.00
2011	-do-	-do-	-do-	312000	480480.00
Sources - District Statistical Handbook					

3.3.3. **Demand of Fodder** – There is no concept of stall-feeding and the usual practice followed is massive grazing. The annual requirement of fodder is given in Para No. 3.1.13.3. Forest is the main source to supply the required fodder for the domestic animal of the villagers. As per calculation the quantity of fodder required is

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6034252.9 quintals against the availability of 7022191.2 quintals. Roughly there is no any scarcity of fodder for the domestic animals in this area of revision.

3.3.4. **Supply of Forest Produce** – There is no any provision for supplying the forest produces to the people as per their requirement by the Forest Department. They will have to purchase the required forest produces from corporation. The Odisha Forest Development Corporation Limited has established only one depot at Badakudr near Kala for supplying forest produces. The rate fixed by the corporation is high. Also transportation of the forest produces from Badakudr near kala to their respective native places is not easy. The economical status of the inhabitants of this area does not permit them to purchase their requirement from corporation.

3.3.5. **Pressure on Forest** – Practically the people of this locality are not fully aware of the Forest Act and Rules. The forest area covers 53.86 % of the geographical area of this division. As per the opinion of Sri B. Behera, I.F.S, Working Plans Officer, Angul there is a big gap between demand and availability of the firewood, it is not possible to meet the demand of firewood. Therefore the people should be motivate to utilise energy from other non- conventional sources like Biogas, LPG, Solar Chullahs, and other modern divides to meet the acquit scarcity of fuel wood. But at present the pressure on forest, increased considerably and needs to reduce it through awareness.

3.3.6. **Working Plan Officer's Own Survey** – To study the actual present position of demand and supply of forest produces and pressure on forest by the inhabitant of forest fringe villages, socioeconomic survey of the villages will be done through the field staff. The result of the survey in Desinkuli and Kulipal village is given in the table below.

Table No. 99

Socio Economic Survey in Desinkuli Village

Name of householder	Total member	Time of cooking	Annual need of forest produces					
			Fuel in kg	Pole in nos	Small timber in cft	Brush wood in carts	Bamboo in nos	Timber in cft
S. Naik	8	2	3000	80	5	3	x	2
R. Adha	5	2	2500	87	2	5	30	1
H. Naik	6	2	3000	100	15	3	80	2
P. Kishan	8	2	3500	70	4	4	30	3
L. Naik	4	2	3500	70	5	3	50	2
T. Lakra	6	2	3000	50	6	4	30	1
P. Naik	1	2	1000	30	2	1	x	3
S. Naik	3	2	2000	75	5	4	30	1
J. Kishan	4	2	2500	85	3	3	x	2
T. Kujur	5	2	3000	90	6	5	x	1
A. Lakra	4	2	2500	90	4	4	x	3
H. Naik	5	2	3000	50	5	3	20	1
K. Naik	3	2	3000	40	3	2	x	2
B. Naik	5	2	3500	70	4	5	30	2
T. Lakra	4	2	3000	55	5	3	10	1
P. Nayak	7	2	4500	40	4	1	20	3

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L. Nayak	6	2	3000	50	6	2	30	2
S k Nayak	4	2	2500	30	5	1	20	1
K. Nayak	4	2	2000	30	4	1	10	2
L. Nayak	4	2	1500	30	3	1	X	1
S. Nayak	2	2	1500	30	1	1	20	1
S. Kishan	4	2	2500	30	2	1	10	1
B. Nayak	4	2	2000	40	6	1	10	2
S. Nayak	3	2	1800	x	5	5	30	1
R. Oflia	5	2	2500	30	4	1	20	1
N. Dungdung	8	2	1200	70	7	2	10	1
S. Kishan	4	2	3000	15	3	1	20	2

Table No. 100

Socio Economic Survey in Kulipal Village

Name of householder	Total member	Time of cooking	Annual need of forest produces					
			Fuel in kg	Pole in nos	Small timber in cft	Brush wood in carts	Bamboo in nos	Timber in cft
D. Dehury	4	2	3500	60	3	1	x	x
A. Dehury	4	2	3500	60	3	1	x	x
M. Dehury	4	2	3000	20	2	1	x	x
S. Dehury	3	2	3000	20	2	1	x	x
B. Mahakud	4	2	4000	25	2	1	x	x
P. Santra	5	2	3500	30	4	2	x	x
M. Dehury	5	2	4500	20	2	1	x	x
D. Santra	6	2	4000	25	3	1	x	x
C. santra	2	2	2500	10	2	1	x	x
B. Santra	5	2	3000	20	2	1	x	x
M. Thakur	6	2	5000	30	3	1	x	x
S. Nayak	7	2	5000	60	3	2	x	x
C. Dehury	5	2	4000	30	3	2	10	x
D. Dehury	6	2	4500	40	3	1	x	x
A. Dehury	2	2	2500	20	2	1	x	x
J. Dehury	7	2	4500	60	3	2	25	5
P. Dehury	6	2	4000	30	3	2	x	x
B. Dehury	5	2	3000	30	2	1	x	x
B. Nayak	5	2	5000	50	6	4	30	1
D. Pradhan	5	2	2500	30	2	1	x	3
B. Nayak	9	2	5000	75	5	4	30	1
B. Mahakud	5	2	2500	85	3	3	x	2
B. Giri	7	2	4500	90	6	5	x	1
U. Giri	3	2	2500	90	4	4	x	3
N. Nayak	4	2	3000	50	5	3	20	1
R. Nayak	2	2	1000	40	3	2	x	2
K. Giri	5	2	3500	70	4	5	30	2
R. Giri	8	2	3000	55	5	3	10	1
D. Giri	3	2	1700	40	4	1	20	3
B. Giri	5	2	2700	50	6	2	30	2
C. Giri	3	2	1600	30	5	1	20	1
P. Kerai	6	2	2600	30	4	1	10	2
P. Kerai	6	2	2600	30	3	1	x	1

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N. Kerai	1	2	1300	30	1	1	20	1
T. haiburu	6	2	3600	30	2	1	10	1
C. Haiburu	2	2	1600	40	6	1	10	2
A. Sinku	4	2	2400	x	5	.5	30	1
B. Sinku	5	2	4000	25	3	1	x	x
G. Sinku	6	2	2500	10	2	1	x	x
D. Haiburu	5	2	3000	20	2	1	x	x
G. Haiburu	4	2	5000	30	3	1	x	x
L. Haiburu	5	2	5000	60	3	2	x	x
L. Haiburu	8	2	4500	40	3	1	x	x
J. Haiburu	5	2	3500	20	2	1	x	x
J. Haiburu	2	2	4500	60	3	2	25	5
G. Pradhan	4	2	4000	30	3	2	x	x
G. Pradhan	4	2	3000	30	2	1	x	x
S. Pradhan	4	2	3000	50	6	4	30	1
P. Pradhan	4	2	2000	30	2	1	x	3
H. Pradhan	6	2	3000	75	5	4	30	1
D. Pradhan	4	2	2500	85	3	3	x	2
K. Behera	2	2	1500	90	6	5	x	1
C. Behera	6	2	3500	90	4	4	x	3
G. Giri	3	2	3000	50	5	3	20	1
P. Giri	3	2	1700	40	4	1	20	3
B. Nayak	5	2	2700	50	6	2	30	2
S. Giri	4	2	2600	30	5	1	20	1
R. Giri	5	2	3600	30	4	1	10	2
R. Giri	3	2	1600	30	3	1	x	1
L. Pradhan	4	2	2300	30	1	1	20	1
K. Pradhan	3	2	1600	30	2	1	10	1
B. pradhan	7	2	3600	40	6	1	10	2
S. Giri	6	2	3400	x	5	.5	30	1
J. Giri	5	2	4000	25	3	1	x	x
L. Giri	2	2	2500	10	2	1	x	x
A. Giri	4	2	3000	20	2	1	x	x
K. Giri	4	2	3000	30	3	1	x	x
T. Gagrai	7	2	5000	60	3	2	x	x
S. Gagrai	4	2	4500	40	3	1	x	x
K. Bankira	6	2	3500	20	2	1	x	x
S. Bankira	2	2	2500	60	3	2	25	5
B. Bankira	7	2	3700	50	6	2	30	2
H. majhi	8	2	5600	30	5	1	20	1
S. Sinku	5	2	3600	30	4	1	10	2
S. Dig	5	2	3600	30	3	1	x	1
R. Haiburu	3	2	1300	30	1	1	20	1
P. Badra	3	2	1600	30	2	1	10	1
T. bankira	2	2	1600	40	6	1	10	2
U. bankira	6	2	3400	x	5	.5	30	1
R. Bankira	6	2	4000	25	3	1	x	x
J. Bankira	4	2	2500	10	2	1	x	x
R. Bankira	1	2	1000	20	2	1	x	x
R. Bankira	3	2	3000	30	3	1	x	x
S. Bankira	4	2	4500	40	3	1	x	x
B. Bankira	2	2	2500	20	2	1	x	x
B. Kuanr	5	2	4500	60	3	2	25	5
C. kuanr	6	2	3700	50	6	2	30	2
D. Kuanr	1	2	1000	30	5	1	20	1
G. Pal	4	2	2600	30	4	1	10	2
B. Pal	4	2	2000	75	5	4	30	1

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R. Naik	5	2	2500	85	3	3	x	2
B. Naik	4	2	3000	90	6	5	x	1
B. Naik	2	2	2500	90	4	4	x	3
M. Naik	2	2	3000	50	5	3	20	1
C. Naik	5	2	2700	40	4	1	20	3
R. Naik	5	2	2700	50	6	2	30	2
P. Naik	4	2	2600	30	5	1	20	1
P. Naik	5	2	3600	30	4	1	10	2
R. Naik	5	2	2600	30	3	1	x	1
M. Naik	2	2	1300	30	1	1	20	1
S. Naik	5	2	3600	30	2	1	10	1
D. Naik	5	2	3600	40	6	1	10	2
L. Naik	4	2	2400	x	5	.5	30	1
G. Naik	3	2	4000	25	3	1	x	x
B. Naik	4	2	2500	10	2	1	x	x
K.L. Pal	4	2	3000	20	2	1	x	x
D. Nayak	4	2	5000	30	3	1	x	x
K. Naik	2	2	2000	60	3	2	x	x
N. Naik	4	2	4500	40	3	1	x	x
G. Naik	2	2	2500	20	2	1	x	x
T. Naik	4	2	4500	60	3	2	25	5
A. Naik	3	2	1700	50	6	2	30	2
R. Naik	4	2	1600	30	5	1	20	1
N. Naik	2	2	1600	30	4	1	10	2
D. Naik	2	2	1600	30	3	1	x	1
M. Naik	4	2	2300	30	1	1	20	1
N. Naik	2	2	1600	30	2	1	10	1
D. Naik	4	2	2600	40	6	1	10	2
R. Naik	7	2	4400	x	5	.5	30	1
B. Naik	5	2	4000	30	2	1	x	3
B. Naik	9	2	5000	75	5	4	30	1
J. Naik	1	2	2500	85	3	3	x	2
S. Naik	5	2	3000	90	6	5	x	1
P. Naik	5	2	3500	90	4	4	x	3
R. Sinku	8	2	5000	50	5	3	20	1
R. Majhi	7	2	4000	40	3	2	x	2
S. Majhi	4	2	3500	70	4	5	30	2
R. majhi	5	2	3000	55	5	3	10	1
K. Majhi	3	2	2700	40	4	1	20	3
B. Majhi	5	2	3700	50	6	2	30	2
S. majhi	5	2	3600	30	5	1	20	1
B. Majhi	5	2	3600	30	4	1	10	2
J. Majhi	4	2	2600	30	3	1	x	1
N. Majhi	3	2	2300	30	1	1	20	1
S. Majhi	3	2	2600	30	2	1	10	1
B. Majhi	6	2	3600	40	6	1	10	2
L. Majhi	5	2	2400	x	5	.5	30	1
K. Naik	4	2	3000	55	5	3	10	1
R. Naik	3	2	2700	40	4	1	20	3
D. Naik	3	2	2700	50	6	2	30	2
C. Naik	5	2	3600	30	5	1	20	1
P.C. Pal	3	2	2600	30	4	1	10	2
U.B. Pal	3	2	2600	30	3	1	x	1
H.K. Pal	6	2	3300	30	1	1	20	1
M. Naik	4	2	4600	30	2	1	10	1
J. Naik	4	2	3600	40	6	1	10	2
D. Naik	7	2	4400	x	5	.5	30	1

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K. Naik	4	2	2500	85	3	3	x	2
R. Dash	3	2	3000	90	6	5	x	1
G. Dash	5	2	2500	90	4	4	x	3
A. Dash	3	2	3000	50	5	3	20	1
L. Dash	2	2	3000	40	3	2	x	2
R. Dash	7	2	3500	70	4	5	30	2
B. Dash	5	2	3000	x	x	1	x	x
P. Dash	4	2	2000	x	x	1	x	x
A. Dash	2	2	1500	10	2	1	x	x

3.3.7. **Observation:**

3.3.7.1. The people living in adjacent villages to the forest of Deogarh Forest Division are very much dependent on the forests for their livelihood.

3.3.7.2. In the opinion of majority of the respondents, the forests are degrading at a faster rate, which needs conservation.

3.3.7.3. Forests used to contribute significantly to the State revenue in terms of sale of Kendu Leaves, timber and other forest products.

3.3.8. **Recommendation:**

3.3.8.1. Keeping in view the above-discussed socio-economic conditions of the villagers living adjacent to forests and their dependency on forests, the following recommendations are made for improving their socio-economic conditions along with conservation of forest.

3.3.8.2. The villagers must be involved in the development of strategies under the Joint Forest Management programme for protection, conservation and regeneration of forests.

3.3.8.3. Agriculture being the primary occupation of majority of the villagers, the officials of state Agriculture Department, Forest Department and Finance Department should form Special Committees to find out strategies for improvement in agricultural production and production of minor forest produces. Thereby, the socio-economic conditions can be improved.

3.3.8.4. The forest rules and regulations should be oriented in such a manner that the villagers inhabitating near the forests will enjoy better forest resource and management rights.

3.3.8.5. The infra-structural facilities in the villages, situated adjacent to the forests in terms of roads, electricity, transportation and education should be provided.

3.3.8.6. Institutional marketing facilities should be provided to the villagers by the Forest Department for getting better income from the minor forest products.

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3.4. Methods of Harvesting and Their Cost:

3.4.1. Method of Harvesting –

3.4.2. **Bamboo** – Previously bamboo coupes have been settled with M/S Orient paper mills Ltd. Brajarajnager on long-term lease. All bamboo coupes were harvested by the Odisha Forest Development Corporation Ltd. from 1980-81 and onwards. The O.F.D.C. Ltd. harvests the bamboo through an agent named as M/s BILT Sewa from the year 2003-04 and onwards. The details outturn of bamboo is given in the table below.

Table No. 101

Outturn of bamboo

Year	Bamboo in sale unity		Bamboo in pieces	
	ISB	IDB	CSB	CDB
1995-96	4406	x	4160	x
1996-97	5315.53	x	38577	x
1997-98	3350.92	x	54096	x
1998-99	1433.13	x	9805	x
1999-2000	1629.63	x	64245	x
2000-01	x	x	x	x
2001-02	x	x	x	x
2002-03	x	x	x	x
2003-04	1571.14	x	17899	x
2004-05	2096.983	x	1315	x
2005-06	1162.540	x	1000	x
2006-07	1523.070	x	1120	x
2007-08	1436.630	x	2520	x
2008-09	940.139	x	2100	x
2009-10	770.090	x	1281	x
2010-11	1901.450	x	1500	x
2011-12	968.981	x	1400	x
2012-13	x	x	x	x

Sources- Divisional Forest Officer, Deogarh.

3.4.3. **Kendu Leaves and Other NTFP** – Previously the long-term lease of sal seed has been granted to M /s. Utkal Contractors and Joinery limited. Again collection of sal seed is vested with the Odisha Forest Development Corporation Ltd. Most of the minor forest produce items were either settled with Co-operatives or with the Odisha Forest Development Corporation Ltd. The other minor forest produces were sold in public auction. Kendu leaves are exploited departmentally. Collection of all non-timber forest produces has been granted in favor of Panchayat form the year 2000.

3.4.4. All annual coupes are handed over to Odisha Forest Development Corporation Limited from the month of October after completion of demarcation and marking. The Odisha Forest Development Corporation undertakes all the harvesting operation through its employees by engaging local labour force and extracts the timber to its depots. Felling and logging are done mainly by axe, but felling through saw, which has been introduced is now practiced in some of the coupes. The felled trees are

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logged and debarked through manual labour. Local labourer also does dragging of timber to the loading site. They construct extraction paths connecting to the recognized road. Stacks are made only on the side of extraction paths. Trucks are used to transport the logs to the depot established at Deogarh.

3.4.5. **Cost of Exploitation for Timber and Firewood** – The cost incurred by the Orissa Forest Development Corporation Limited in their Timber Division at Deogarh for felling, logging and transportation to depot is furnished in the table below.

Table No. 102

Expenditure for exploitation for timber and firewood by OFDC Ltd.

Sl. No	Name of work	Rate per cum during 1985-86 in Rs.	Rate per cum during 2005-06 in Rs.	Rate per cum during 2012-13 in Rs.
1	Felling, Logging and debarking	15.00	150.00	300.00
2	Dragging of log to truckable point	18.00	150.00	300.00
3	Transportation - loading, unloading and repair of extraction path	125.00	1200.00	2400.00
4	Cutting, dragging and stacking of firewood	5.00	50.00	100.00

Sources - Divisional Manager, C-KL, Division. Deogarh.

3.4.6. Cost Incurred for Collection of Kendu Leaf - Cost incurred in different items for collection and processing of Kendu leaves during the crop year 2006 is given in the table bellow.

Table No. 103

Expenditure for procurement of K.L.

Year	Bush cutting expenditure	Kerry purchase expenditure	Drying and storage of Kerry expenditure	Binding & Bagging expenditure	Quantity of work
2000	2986584	20841152.80	2812989.35	6224693.15	The quantity of work according to the Kendu Leaves production from 2000 to 2013.
2001	2550000	18933420.00	1988030.00	3586005.77	
2002	3119974	2786203.30	2677111.00	6060914.97	
2003	2850000	22869951.30	2613707.00	6001434.21	
2004	2868750	22589742.00	2581685.00	5942637.21	
2005	2827000	20237449.05	2354744.40	5357867.04	
2006	2883985	22455389.05	2376092.50	7196111.57	
2007	2925000	27227820.00	2971744.00	8174850.00	
2008	3600000	27334357.20	2885293.00	9230823.70	
2009	3600000	30842390.30	3231000.00	12603270.40	
2010	4634998	35336125.40	3533609.00	12400292.80	
2011	4635000	26145612.50	2539859.00	9374957.90	
2012	4747500	37816552.00	3356196.00	11958150.00	
2013	7550000	60478530.00	4729367.00	20366197.00	
There is no grower leaves collected from Tenant in this division.					
Sources - Divisional Forest Officer,(K.L.) Deogarh.					

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Table No. 104			
Expenditure for procurement of K.L.			
Sl No.	Name of work	Quantity of work	Expenditure in Rs
1	Bush cutting	9190.00 ha	30,26,000.00
2	Kerry purchase	3,46,61,070 kery	2,07,96,642.00
3	Drying and storage of Kerry	3,46,61,070 kery	16,29,070.00
4	Binding	7698.00 qntl	75,83,345.00
5	Bagging		
6	Growers leaf	x	x
Sources - Divisional Forest Officer, (K.L) Angul.			

3.4.7. Cost Incurred for Extraction of Bamboo – One bundle contains 21 pieces of bamboo. In full bundles, the length of one bamboo piece is 2.30 meters. Fifty bundles of bamboo are called one sale unit, which is equivalent to 01 metric tone. The average expenditure made for collection of 01 metric tone of bamboo from coupe to deport is Rs.750.00 during the year 2004-05. The expenditure incurred for different works of bamboo extraction is given in the table below.

Table No.105			
Expenditure for Extraction of Bamboo			
Sl. No.	Name of work	Quantity of work	Expenditure in Rs.
1	Cutting	50 full bundle	400.00
2	Bundling	50 bundles	25.00
3	Dragging to truckable point	01 sale unit	125.00
4	Transportation to deport	01 metric tone	150.00
5	Repairing of extraction path	01 metric tone of bamboo	50.00
Sources - Divisional Manager, C-KL, Division, Deogarh			

3.5. Line of Export:

3.5.1. Railway Line –

Table No. 106			
Distance of important places near Deogarh Division			
Sl. No.	Name of the Station		Distance in km
	From	To	
1	Sambalpur	Cuttack	275
2	Rourkela	Cuttack	335
Sources - Field Staff of WPO, Keonjhar			

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3.5.2. **Road** – The National Highway No.06 from Kolkata to Raipur and National Highway No.200 from Rairakhol to Jharsuguda passes through Deogarh Forest Division. The State Highway No.10 A from Barkote to Rourkela passes through Deogarh Forest Division. There are net works of major District roads, Panchayat roads, Village roads and Forest roads in this area. Most of the Roads in the network system are used for transportation of forest produces. The network system of Road is given in the table below.

Table No. 107

Network system of Road

Name of the road	Connecting places of this area			Name of controlling office	Name of adjoining forest blocks
	From	To	Distance in km		
N.H - 06	Kantala	Jamankira	120	S.D.O., N.H. Sub-division	Malyagiri, Pradhanpat, Pravasuni, Thianal
N.H-200	Rengali	Tileibani	50	-do-	Jhadeswar, Pradhanpat, Pravasuni
N.H-143	Barkote	Mandasila	20	-do-	Badatajla, Mandasila
N.H-149	Pallahara	Khamar	22	-do-	Kunjam, Chargochhia, Malyagiri
S.H – 24	Naktideuli	Deogarh	35	B.D.O., P.W.D	Kansar, Kankarkhol, Jhadeswar
S.H-10A	Barkote	Panguli	20	-do-	Panguli
Forest road	Pathargarh	Kailash	4.00	D.F.O, Deogarh	Pravasuni
	Kansar	Hairan	9.00	-do-	Kansar
	Suguda	Gundiapali	13.00	-do-	x
	Badbahal	Laimura	4.00	-do-	Salobi-Laimura
	Jharpur	Laimura	4.00	-do-	Khajuria
	Kholdehi	Goilo	4.00	-do-	Telikusum
	Khairipali	Palsama	3.00	-do-	x
	Khairipali	Palsama	3.00	-do-	x
	Chhuriabahal	Tusula	19.00	-do-	Tusula
	Thianal	Autal	17.00	-do-	Thianal, Pauri
	Bamparada	Kadalidihi	2.25	-do-	x
	Kadalidihi	Jalisuan	7.00	-do-	x
	Tusula	Parposh	12.00	-do-	Tusula
	Daminta	Pacheripani	3.50	-do-	x
	Bamparada	Netrabahal	2.50	-do-	x
	Jamardehi	Nagira	13.50	-do-	Old Pauri, New Pauri
	Chargochhia	Turaghati	05.00	-do-	Chargochhia, Kalamjuangasahi
	Bankdarh	Jamardihi	09.00	-do-	Tamkia, Kakharua & Saida
	Kuchiabeda	Raipal	15.00	-do-	x
	Dimiria	Ranja	01.50	-do-	Ranja

Sources - Executive Engineer N.H. Division, Rural Development, Divisional forest Officer Deogarh

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3.5.3. **River, Mules, Elephant** – Transportation of forest produces was previously done through Brahmani and hill streams. But at present due to development of road system, forest produces are not transported through river. Buffalos and Cows are used for transportation of forest produces through cart or yoke. Mules and Elephants are not used for transportation of forest produces in this division.

3.6. Past and Current Prices:

3.6.1. **Scheduled of Rate** – The scheduled of rate fixed during Darbar administration was in force till the year 1977. Due to increase in price of timber and other forest produce the scheduled of rate was revised by Government of Orissa FF and AH Department in their Notification No.39957 / FFAH dt.14.11.1977. Those rates were in force till date.

3.6.2. During the preparation of First Working Plan, timbers were mainly sold in the form of sleepers and green poles of 6 to 7 inches diameter. The average price of a broad gauge sleeper was Rs.7.00 in the year 1942. The price of one Pani Katha containing 80 logs was Rs.225.00. The average price of scantling at Sambalpur was Rs.0.75 per cft.

3.6.3. The demand of timber was increased from the year 1950 and the price of timber and other forest produces have increased considerable thereafter. The sale price of forest produces in Deogarh timber Division during the year from 1921 to 2005 is given in the table below.

Table No. 108

Sale price of major forest produces of Deogarh timber Division Since 1921 to 2005

Name of produce		Price per cft in Rs.				
		1921	1940	1960	1980	2005
Sal	Log	1.5	1.6	3 to 6	100.0 to 250.0	195.0 to 558.0
	Beam	2.25	1.19	5.5	206.0	544.0
	Scantling	x	1.0	4.0	100.0	368.0
	Plank	x	x	4.0	100.0 to 300.0	250.0 to 621.0
	Pole	1.25	1.75	5.0	8.0	15.0 to 20.0
Bija	Log	1.5	1.37	5 to 6	100.0 to 280.0	220.0 to 650.0
	Scantling	2.25	1.25	6.0	100.0	350.0
	Plank	x	x	6.0	150.0 to 320.0	300.0 to 680.0
Asan	Log	x	x	2 to 3	50.0 to 200.0	150.0 to 350.0
	Scanting	x	x	4.0	100.0	280.0
	Beam	x	x	4.0	150.0	300.0
	Plank	x	x	4.0	200.0 to 300.0	250.0 to 500.0
	Pole	x	x	8.0	10.0	10.0 to 15.0
Haldu	Log	x	x	x	100.0 to 250.0	150.0 to 450.0
Others	Log	x	x	2.5	100.0 to 200.0	150.0 to 400.0

Sources – Divisional Manager, C-KL, Division, Deogarh.

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3.6.4. The sale price of other forest products of this division is given in the table below.

Table No . 109

Sale price of other forest produces of this division.

Name of forest produce		Price in Rs.				
		1921	1940	1960	1980	2005
Sleeper per piece	1st class	7.5	5.75	x	x	x
	MG	3.25	2.25	x	x	x
	NG	1.75	1.42	x	x	x
Firewood	Per Qntl.	0.31	0.31	1.25	10.00	50.00
Charcoal	Per bag	1.25	1.0	x	x	x
Bamboo	Per 100	3.12	4.12	14.0	400.00	1500.00
Kendu leaf per quintal	I qty	x	x	105 to 111	x	x
	II qty	x	x	95 to 101	x	x
	III qty	x	x	75 to 81	x	x
	IV	x	x	70 and below	200.0 to 300.0	3000.0 to 4000.0
	IV M			x	500.00	7000.00

Sources - Divisional Manager, C-KL, Division, Deogarh.

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CHAPTER - I V

ORISSA FOREST DEVELOPMENT CORPORATION LIMITED

4.1. General Information:

4.1.1. Formation - The Orissa Forest Corporation (OFC) was created in the year 1962. It is the first forest based corporation in the country. It was renamed as Odisha Forest Development Corporation Ltd from October, 1990, after merging of Odisha Plantation Development Corporation, Similipahad Forest Development Corporation with Orissa Forest Corporation. The Deogarh Timber Division of OFDC Ltd has been created in the year August-1983 for scientifically harvesting of forest resources, regenerate forest revenue, eliminate unscrupulous forest contractors and ameliorate the poor economical condition of the forest fringe villagers. Previously, forest operations of this division were looked after by Sambalpur and Rourkela OFDC Division. Subsequently, its name has been changed to Commercial & Kendu Leaves Division since dt.01.01.2004. This division is covering its jurisdiction of whole forest area of Deogarh District and Pallahara sub division of Angul District.

4.1.2. Organization Structure - As on dt.25-03-2014, this Commercial & KL Division has 03 nos sub division i.e. Pallahara Sub-Division, Deogarh Sub-Division and Badkudar Depot Sub division. The area of operation of each sub-division is given in the table below.

Table No. 110

Organization Structure

Sl No.	Name of sub-division	Working items	Working jurisdiction.
1	Pallahara Sub-Division	All forest products including Kendu leaves.	Khamar, Pallahara, Barkote Forest Ranges.
2	Deogarh Sub-Division	All forest products including Kendu leaves.	Deogarh, Reamal Forest Ranges.
3	Badkudar Depot Sub-Division	Storage of timber, F.Wood, except KL.	x

Sources - Divisional Manager, (C-KL) Division, Deogarh.

4.1.3. The Sub-Divisional Managers are looking after their respective field works assigned by the Divisional Manager. Each Sub-Divisional Manager is assisted by Sectional Supervisors, Field Assts, Watchers and Peon. The present staff position as on dt.25-03-2014 is given in the table below.

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Table No. 111

Present staff position as on dt.25-03-2014

SL.	CADRE	Cadre Strength.	Existing position	Surplus/ Deficit	Remark
Managerial Cadre					
1	Divisional Manager	01	01	0	x
2	Dy. Divisional Manager.	01	0	- 01	x
3	Sub Divisional Manager Dy. Sub Divisional Manager	03	02	- 01	x
Ministerial Cadre					
5	Section Officer	01	0	- 01	x
6	Accountant	02	02	0	x
7	Jr Accountant	03	0	- 03	x
8	U.D.Asst.	04	03	- 01	x
9	L.D.Asst.	04	03	- 01	x
10	Jr. Stenographer	01	01	0	x
11	Jr. Typist	01	0	-01	x
Field Cadre					
12	Sectional Supervisor	08	05	- 03	x
13	Field Asst	40	37	-03	x
14	TGS	x	x	x	
15	SM	x	x	x	
Other Cadre					
14	Driver	01	01	0	x
15	Peon	06	06	0	x
16	Watcher	23	20	- 03	x
	Total	**99**	**81**	-18	x

Sources - Divisional Manager, (C-KL) Division, Deogarh.

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4.2. Field Operation:

4.2.1. **Timber** – Marked trees in the annual coupe area were removed by saw through local trained and experienced labourers. Defective trees with visible hollow were treated with axe to fell. During felling, care was being taken to avoid damage to the surrounding trees. Logging and conversion of the felled trees into different marketable length were being done with the help of trained labourers. The quantity of timber received during the Plan period is given in the table below.

Table No. 112

Timber received during outgoing plan period from Coupe

Year	In unit	In cum	Salvage & UDC Timber.	Royalty assessed	
1995-96	x	x	722.963	23,55,800	Coupe not worked Due to ban on felling.
1996-97	x	x	1298.853	56,80,700	
1997-98	x	x	1120.200	55,64,533	
1998-99	x	x	516.694	38,27,258	
1999-00	x	x	581.254	38,46,056	
2000-01	x	x	1054.651	55,08,647	
2001-02	x	x	463.080	26,30,718	
2002-03	x	x	786.980	48,27,189	
2003-04	x	x	887.974	61,79,840	
2004-05	x	x	1351.000	84,39,445	
2005-06	1289.55	336.927	621.316	54,65,943	
2006-07	1673.25	486.954	568.075	60,97,713	
2007-08	1651.09	566.388	560.293	53,69,202	
2008-09	1497.50	524.355	493.526	34,88,021	
2009-10	1631.74	541.903	477.425	48,99,390	
2010-11	1295.22	435.082	594.873	49,90,051	
2011-12	1251.05	654.667	411.687	35,60,106	
2012-13	1666.71	696.098	378.671	42,61,050	
2013-14 Up to Feb-14	2442.25	696.947	388.820	34,17,256	

Sources - Divisional Manager, (C-KL) Division, Deogarh.

4.2.2. Coupe working has already been stopped in this division since 1993-94 due to ban on tree felling issued by the Govt of Odisha F.F & A.H Department vide letter No.27161/F.F dtd.12-11-1992. After lifting of ban order, regular coupe working has been started from October, 2005-06. OFDC is also receiving timber and firewood from the salvage and UD case timber during the ban period as well as after lifting of the ban period. The species wise approved rate of royalty of UD/Salvage timber since 2003-04 is given in the table below.

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Table No.113

Species wise approved rate of royalty of this Division Since 2003-04 to 2013-14

Name of the species	2003-04		2004-05		2005-06		2006-07		2007-08	
	S	U.S	S	U.S	S	U.S	S	U.S	S	U.S
1	2	3	4	5	6	7	8	9	10	11
Sal , Kurum	212	114	220	125	243	146	248	150	250	155
Teak 45-59 cm	x	x	165	95	187	105	195	110	205	125
60-89 cm	360	260	360	260	365	270	372	277	385	285
90-119 cm	540	360	540	360	540	370	550	380	560	385
120-149 cm	850	600	850	600	850	600	860	615	875	620
150 & above	930	650	930	650	930	650	940	665	950	670
Bija , Sisoo	325	325	330	330	330	330	340	340	350	350
Non -Sal	75	75	80	80	88	88	92	92	100	100
Sal , Kurum Sizes	354	212	365	215	380	225	390	235	400	245
Bija , Gombhari sizes	404	242	410	245	420	250	430	260	450	270
Teak sisoo sizes	606	364	610	365	620	370	635	380	645	400
Non - Sal sizes	182	109	185	110	185	110	190	115	200	120
Teak poles Pcs	65	x	60	x	65	x	70	x	85	x
Sal poles pcs	50	x	55	x	60	x	65	x	70	x
Non Sal poles pcs	20	x	22	x	22	x	25	x	30	x
Firewood per stack 12' x3'x3 'size	227	x	240	x	260	x	275	x	285	x

Name of the species	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
	S & U.S	S & U.S	S & U.S	S & U.S	S & U.S	S & U.S
	12	13	14	15	16	17
Timber for all species	150	157	167	180	198	212
Sizes for all species	195	204	217	234	258	276
Teak poles	25	30	35	37	39	40
Sal poles	30	35	40	42	44	47
Non Sal poles	20	25	25	25	25	27
Firewood	300	330	365	365	375	385

Sources- Divisional Manager, (C-KL) Division, Deogarh.

4.2.3. **Firewood** – Defective trees and branches are converted in to firewood billets of length 100 cm. Fire woods are stacked in standard size of 12'x 3'x 3'. The converted timber and firewood are transported to sale depot by coupe permit. The quantity of firewood and poles collected and handed over to Orissa Forest Development Corporation Limited is furnished in the table given bellow.

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Table No. 114

Quantity of firewood and poles collected

Year	No of firewood stack in 12'x3'x3' size	Rate of royalty per stack	Selling rate by OFDC Ltd., per stack	No of Poles
1997-98	636	165	800	304
1998-99	610	173	800	721
1999-00	273	182	800	21
2000-01	539	210	800	35
2001-02	553	210	800	550
2002-03	528	210	800	17
2003-04	91.25	227	850	194
2004-05	128	240	1000	183
2005-06	243	260	1050	551
2006-07	123	275	1050	320
2007-08	75	285	1392	120
2008-09	45	300	1560	534
2009-10	181	300	1560	172
2010-11	170	365	1800	168
2011-12	87	365	1800	325
2012-13	18	375	2160	1105
2013-14	x	385	3000	x

Sources - Divisional Manager, (C-KL) Division, Deogarh.

4.2.4. Bamboo – The Corporation works out the bamboo coupes of this division as per prescribed cutting rules for industrial purpose as raw materials to the pulp and paper industries of the State. Labourers engaged in harvesting operation are either locals or skilled migrated. Sharp instrument like small axe, billhooks etc. are used for cutting. As per allotment by empowered committee the industrial bamboo of this division were sold to M/s BILT. Sale unit is the yardstick to calculate volume of production and disposal. One sale unit is notionally considered against 2400.0 meter. (1 sale unit = 50 number of full bundles of salia bamboo = 150 number of full bundles of daba bamboo = 350 pieces of C.D.B = 175 pieces of C.D.B). The standard length of cutting of bamboo for industrial use is 2.3 mt. and one bamboo bundle consists of 21 pieces. Disposal through weighment was introduced from the year 2004. The production of bamboo and its disposal during the Plan period is furnished in the table below.

Table No. 115

Production of bamboo and its disposal during the plan period

Year	Bamboo in SU		Bamboo in Pcs		Name of working agency
	ISB	IDB	CSB	CDB	
1995-96	4639.89	x	4160	x	M/s O.P.Mills
1996-97	5318.26	x	12859	x	M/s O.P.Mills
1997-98	3350.92	x	18032	x	M/s O.P.Mills
1998-99	1433.13	x	9805	x	OFDC Ltd
1999-00	1629.63	x	64245	x	OFDC Ltd

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2000-01	x	x		x	Coupe not worked.
2001-02	x	x		x	
2002-03	x	x		x	
2003-04	1571.14	x		x	M/s BILT Sewa
2004-05	2096.983	x	1315	x	M/s BILT Sewa
2005-06	1162.540	x	1000	x	M/s BILT Sewa
2006-07	1523.070	x	1120	x	M/s BILT Sewa
2007-08	1436.630	x	2520	x	M/s BILT Sewa
2008-09	940.139	x	2100	x	M/s BILT Sewa
2009-10	770.090	x	1281	x	M/s BILT Sewa
2010-11	1901.450	x	1500	x	M/s BILT Sewa
2011-12	968.981	x	1400	x	M/s BILT Sewa
2012-13	x	x	x	x	OFDC Ltd(not worked)
2013-14	x	x	x	x	OFDC Ltd(not worked)
Sources - Divisional Manager, (C-KL) Division, Deogarh.					

4.2.5. The royalty fixed for bamboo and its selling rate is given in the table below.

Table No.116

Royalty fixed for bamboo and its selling rate

Year	Royalty per sale unit		Selling rate per sale unit	
	ISB	IDB	CSB	CDB
1995-96	532	x	x	x
1996-97	559	x	1389	x
1997-98	587	x	1468	x
1998-99	616	x	231	x
1999-00	647	x	375	x
2000-01	x	x	x	x
2001-02	x	x	x	x
2002-03	x	x	x	x
2003-04	350	x	1221	x
2004-05	500 per MT	x	1500 per MT	x
2005-06	500 per MT	x	1500 per MT	x
2006-07	500 per MT	x	1500 per MT	x
2007-08	500 per MT	x	1500 per MT	x
2008-09	500 per MT	x	2100	x
2009-10	500 per MT	x	2100	x
2010-11	500 per MT	x	2100	x
2011-12	500 per MT	x	2100	x
2012-13	130 per s.u.	x	x	x
2013-14	130 per s.u.	x	x	x
Sources - Divisional Manager, (C-KL) Division, Deogarh.				

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4.2.6. **Sal Seed -** After nationalization since 1984, Odisha Forest Development Corporation Ltd, being an agent of the Government has taken up collection and marketing of sal seed till 2005. Sal seed is de-nationalized and the collection is entrusted to Gram Panchayat authorities from Crop year 2006 and onwards. The details of sal seed collected is given in the table below.

Table No. 117

Details of sal seed collected

Crop year	Production in MT	Sale price (in Rs)	Name of the purchaser
1995	1740.146	3845723	M/s Orissa Oil Industries Ltd., Sambalpur
1996	339.269	x	M/s Orissa Oil Industries Ltd., Sambalpur
1997	663.370	2482992	M /s Hanuman Vitamin food , Bargarh
1998	290.420	x	Collected by TDCC
1999	750.00	x	Collected by MARKFED
2000	2160.658	x	Collected by MARKFED
2001	509.091	1883637	M /s Hanuman Vitamin food , Bargarh ,M/s foods fats &fertilizer Ltd.,
2002	29.623	162956	M/s M.P.Oil Ectraction Pvt Ltd, Raipur
2003	1458.978	6054759	M /s Gojashakti Trading Co.Pvt ltd., Mumbai.
2004	38.910	134240	M/s Pranav International , Pune
2005	265.895	611202	M/s Paras Vanspati Pvt ltd, Raipur
2006 on wards	x	Not purchased by OFDC	

Sources - Divisional Manager, (C-KL) Division, Deogarh.

4.2.7. **Kendu Leaf** - The Orissa Forest Development Corporation ltd, Deogarh (C-KL) Division is taking delivery and sold the processed Kendu leaves bags produced by Deogarh (KL) forest Division. The operational KL Ranges of Deogarh (C-KL) Division are- (1) Deogarh KL Range (2) Tileibani KL Range (3) Rengalbeda KL Range (4) Reamal KL Range (5) Kundheigola KL Range (6) Kandhal KL Range (7) Bamparda KL Range & (8) Barkote KL Range. The year wise production and revenue realized for the period 2004-05 to 2012-13 is given in the table below.

Table No.118

Production of K.L.

Year	Production(in quintal)	Sale (in quintal)	Sale value (in Rs)	Average per quintal
2004	19968.20	19968.20	6,42,03,508	3,216.09
2005	18163.80	18163.80	6,51,92,844	3,589.16
2006	19966.20	19966.20	13,57,65,553	6,799.76
2007	20937.00	20937.00	11,91,60,816	5,691.39
2008	19433.40	19433.40	14,93,15,556	7683.45
2009	20900.40	20900.40	16,24,29,452	7,771.59
2010	20584.20	20584.20	19,70,56,518	9,573.19
2011	15166.80	15166.80	17,42,44,946.40	11,488.57
2012	18683.40	18683.40	18,95,04,706.80	10,142.94

Sources - Divisional Manager, (C-KL) Division, Deogarh.

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4.3. Marketing

4.3.1. Auction/Tender Sale – Logs are sold through auction or tender for bulk purchase by formation of lots according to species and quality. Each lot is around one truckload. The sale is regulated by the approved sale policy. The auction/tender sales are conducted every monthly basis on a fixed declared date.

4.3.2. Retail Sale – At present retail sale provision to meet the bonafide consumption at the approved price is also extended on specific request to the local people under the jurisdiction of this division. The retail rate is subsidized rate to the bonafied local people only under the jurisdiction of this division and they are entitled to get 35 cft of Round/sawn timber or 10 quintals of round firewood or 25 nos poles per annum per family.

In addition to Auction, Tender and retail sale, there is a General Sale. One can purchase Round Timber/Sawn Timber /poles any quantities of timber/poles at his choice from the existing loose stock from the depot at General Selling rate and transport the materials to inside or outside the state.

The average sale price obtained on different species during the year 1995-96 to 2012-13 is given in the table below.

Table No. 119

Average sale price obtained on different species during the year 1995-96 to 2012-13

Species	Year wise rate per cft.								
	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
1	2	3	4	5	6	7	8	9	10
Sal	153	219	230	256	239	260	280	341	327
Teak	281	x	389	x	205	337	185	467	851
Sisoo	x	x	x	x	x	x	x	x	x
Bija	335	x	294	x	239	x	277	320	461
Gambhari	x	x	279	x	x	x	x	x	x
Kasi	x	x	x	x	x	x	x	213	x
kurum	95	290	266	x	217	190	188	394	339
Asan	-	132	140	161	160	172	x	x	x
Dhaura	97	x	x	x	x	159	x	x	x
Jamu	93	x	x	x	141	x	x	x	x
Kendu	79	x	x	x	x	x	x	x	x
Mahul	58	x	142	x	x	x	x	x	x
Misc	74	100	x	x	x	x	x	x	x
Mango	x	75	x	x	x	x	x	x	x
Hardwood	x	45	x	x	x	x	160	x	x
Tentra	x	x	231	x	x	x	267	x	x
Bandhan	x	x	x	x	x	x	x	x	191
Arjun	x	x	x	x	x	x	x	x	x
kangada	x	x	x	x	x	x	x	x	x

Sources - Divisional Manager, (C-KL) Division, Deogarh.

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Species	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	11	12	13	14	15	16	17	18	19
Sal	310	270	276	307	362	369	461	427	486
Teak	561	363	503	557	679	650	683	640	713
Sisoo	x	x	986	x	x	949	1163	1052	x
Bija	584	282	458	607	486	463	655	993	684
Gambhari	x	x	x	x	x	558	750	736	x
kasi	x	303	284	320	488	386	506	397	476
kurum	413	345	381	453	412	475	-	590	581
Asan	132	135	166	161	143	265	178	188	189
Dhaura	x	x	x	144	127	154	x	x	x
Jamu	x	x	x	199	187	x	x	x	x
Kendu	x	x	x	140	580	x	x	x	x
Mahul	x	x	x	x	x	x	x	x	x
Misc	107	x	x	139	184	139	219	x	188
Mango	x	85	x	x	x	x	x	x	x
Hardwood	x	x	x	x	x	x	x	x	x
Tentra	x	182	x	288	353	282	x	x	551
Bandhan	x	x	305	221	391	326	302	251	x
Arjun	x	x	x	154	x	x	256	x	224
kangada	x	x	x	x	224	x	x	x	x

Sources - Divisional Manager, (C-KL) Division, Deogarh.

4.3.3. Approved selling rate of round timber on retail sale and /general sale are given in the table below.

Table No. 120

Approved selling rate of round timber on retail sale and /general sale

Sl No.	Name of the species	Measurement		Retail Selling rate Per CFT	Gen.selling rate per cft.
		Girth	Length		
1	Sal,Kasi,Panas	90-119	Up to 6'.6"	304.00	434.00
2	Sal,Kasi ,Panas	90-119	6'6" to 12.0"	403.00	576.00
3	Piasal	90-119	6'6"	364.00	574.00
4	Piasal	90-119	6'6" to 12.0"	484.00	749.00
5	Teak,Sisoo	90-119	6'6"	608.00	977.00
6	Teak,Sisoo	90-119	6'6" to 12.0"	807.00	1297.00
7	Gambhar,Champa	90-119	6'6"	334.00	521.00
8	Gambhari Champa	90-119	6'6" to 12.0"	444.00	691.00
9	Accacia, Sirish,Bandhan, Balisisoo.	90-119	6'6"	273.00	391.00
10	Accacia,Sirish,Bandhan, Balisisoo.	90-119	6'6" to 12.0"	363.00	518.00

Sources - Divisional Manager, (C-KL) Division, Deogarh.

4.4. Socio Economic Survey:

4.4.1. **Initiation** – This is a new chapter. Therefore I discussed with Sri Basanta Kumar Pradhan, Divisional Manager, Deogarh to write the chapter in an innovative manner. He has extended his full cooperation and supplied all required information to highlight this chapter. He has extended his interest on socio economic survey and completed the survey in the village Budhikuten & Khamanda with the help of his staff.

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4.4.2 **Socio Economic Survey in Village Budhikuten** - The village Budhikuten is situated about 24.00 km from Deogarh. This village is surrounded by hills covered with dense forest. The forest adjoining to boundary of the village is Dry Deciduous and its middle story consists of bamboos. The composition of the forest creates a favourable condition for the Wild life. The detail of the survey made in the village Budhikuten by the Orissa Forest Development Corporation Limited is displayed in the table below.

Table No. 121

Socio Economic Survey of Village – Budhikuten - Under Deogarh Range of Deogarh Forest Division.

S. No	Name of the house owner	M	F	Total	Cow	Goat	Cock	Cultivated land	Income from cultivation	Income from forest			Income from others	Total
										K.L. Rs	Sal seed	Other		
1	Saharai Purti	10	5	15	9	7	0	0.15	7000	1200	-	1000	20000	29,200
2	Budhuram Purti	5	4	9	5	7	0	0.15	7000	1500	-	1200	15000	24,700
3	Sahu Purti	1	1	2	7	0	0	0.15	7000	500	-	800	5000	13,300
4	Birsa Purti	3	3	6	5	1	2	0.15	6000	800	-	700	8000	15,500
5	Sadhu Purti	7	6	13	7	0	0	0.15	5000	2000	-	1500	25000	33,500
6	Markanda Sahu	1	2	3	0	0	8	0.24	15000	1200	-	1000	9000	26,200
7	Magan Dehury	3	2	5	0	2	5	6.50	10000	1500	-	3000	12000	26,500
8	Satyananda Bhoi	4	4	8	0	0	0	0	0	2000	-	1100	5000	10,100
9	Lalmohan Dehury	3	2	5	0	0	0	0	0	1200	-	900	10000	12,101
10	Bandhua Pradhan	2	2	4	0	0	0	0	0	800	-	700	5000	6,500
11	Bidyuraj Nayak	2	1	3	0	0	0	0	0	600	-	500	7000	8,100
12	Lalmohan Pradhan	1	2	3	0	0	0	0	0	500	-	400	8000	8,900
13	Panchanan Pradhan	2	2	4	0	0	0	0	0	1200	-	1500	9000	11,700
14	Srinibas Dehury	5	4	9	0	0	3	3.0	7000	1500	-	2000	13000	23,500
15	Girish Bhoi	3	2	5	1	0	0	0	0	1000	-	1200	5000	7,200
16	Ankuru Pradhan	3	3	6	0	3	10	3.0	8000	4000	-	4500	8000	24,500
17	Ranjit Sahu	1	1	2	0	0	0	0.10	5000	1200	-	1500	3000	10,700
18	Sanja Kandere	4	6	10	5	10	10	0	0	500	-	1200	12000	13,700
19	Guru kandere	6	4	10	8	3	0	0	0	1200	-	800	15000	17,000
20	Birsa Kandere	5	3	8	0	0	0	0	0	600	-	500	11000	12,100
21	Ebar Munda	5	1	6	6	10	0	0	0	2000	-	1200	14000	17,200
22	Sulemun Munda	4	2	6	5	4	0	0	0	0	-	4000	7000	11,000
23	Ramsae Munda	3	4	7	2	6	12	0.75	6000	1600	-	1500	8200	17,300
24	Jual Munda	5	2	7	6	5	10	0.75	5000	1500	-	2000	10000	18,500
25	Shukuram Soi	3	4	7	1	2	6	0.55	7000	1200	-	2000	15000	25,200
26	Ramsai soi	2	4	6	4	6	5	0.55	10000	1500	-	2180	7000	26,600
27	Mansa soi	2	1	3	0	0	0	0.55	8000	1200	-	0	5000	14,200
28	Raju kandhir	5	1	6	1	0	0	0.25	5000	1700	-	2100	11000	19,850
29	Inda munda	5	6	11	3	5	4	0	0	200	-	1500	6000	7,700
	Total	105	84	189	75	71	75	16.99	118000	35900	00	42480	290200	486,500

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4.4.3. **Socio Economic Survey in Village Khamanda** – The village Khamanda is situated about 20.00 km from Deogarh. This village is surrounded by hills covered with dense forest. The forest adjoining to boundary of the village is DryDeciduous. The composition of the forest creates a favourable condition for the Wild life. The detail of the survey made in the village Khamanda by the Orissa Forest Development Corporation Limited is displayed in the table below.

Table No. 122

Socio Economic Survey of Village – Khamanda - Under Reamal Range of Deogarh Forest Division.

S. No	Name of the house owner	M	F	Total	Cow	Goat	Cock	Cultivated land	Income from cultivation	Income from forest			Income from others	Total
										Kl. Rs	Sal seed	Other		
1	Dhiren Sahu	1	2	3	0	0	0	-	-	1500	-	500	7000	9,000
2	Maheswar Sahu	2	2	4	4	2	5	-	-	2000	-	1000	9000	12,000
3	Kartikeswar Sahu	3	0	3	3	5	2	-	-	1500	-	0	7000	8,500
4	Suren Sahu	3	1	4	2	0	0	-	-	1700	-	800	8500	11,500
5	Amulya Sahu	2	2	4	0	0	0	-	-	1200	-	0	5000	6,200
6	Ekadasia Pradhan	2	1	3	0	0	0	-	-	500	-	0	3000	3,500
7	Santosh Majhi	5	1	6	3	7	0	-	-	3000	-	2000	15000	20,000
8	Chakradhar Majhi	3	2	5	1	7	0	-	-	2000	-	2200	9000	13,200
9	Tritachon majhi	3	1	4	1	0	0	-	-	2000	-	500	8000	10,500
10	Kashi Sahu	3	2	5	1	8	0	-	-	1200	-	800	10000	12,000
11	Dhubei Sahu	4	2	6	1	0	0	-	-	300	-	500	0	800
12	Ranjan Sahu	3	1	4	0	0	0	-	-	1000	-	400	2000	3,400
13	Santosh Sahu	3	2	5	1	4	2	-	-	2000	-	2000	6000	10,000
14	Gobardhan Sahu	4	1	5	0	0	0	-	-	1200	-	1300	3000	5,500
15	Purnachandra Majhi	3	1	4	0	10	0	-	-	1100	-	1000	5000	7,100
16	Mitrabhanu Behera	4	3	7	0	0	0	-	-	1200	-	1000	5000	7,200
17	Madan Sahu	4	1	5	0	0	15	-	-	1700	-	1200	8000	10,900
18	Ananda Behera	2	1	3	1	0	0	-	-	1200	-	1000	3000	5,200
19	Prafulla Behera	3	1	4	1	0	0	-	-	1300	-	800	10000	12,100
20	Kumara Behera	3	2	5	0	0	0	-	-	1900	-	900	8000	10,800
21	Sudam Behera	1	3	4	1	0	10	-	-	4000	-	2000	12000	18,000
22	Ganeswar Sahu	3	1	4	1	12	6	-	-	1000	-	3000	13000	17,000
23	Pitabasa Pradhan	2	3	5	1	6	2	-	-	3000	-	2000	10000	15,000
24	Khirod Behera	4	3	7	2	10	15	-	-	1500	-	1000	15000	17,500
	Total	78	39	109	24	71	57	00	00	39000	00	25500	181500	236410.5

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4.5. Result of Socio Economic Survey:

Table No. 123

Name of village	Name of house hold	Human population			Cattle population				Cultivated land in Ac.
		M	F	Total	C	O	H	Total	
Budhikuten	29	105	84	189	75	71	75	221	16.00
Khamanda	24	70	39	109	15	33	5	143	7.00

4.5.1. **Human Population** – There are 1063 number of revenue villages exist in the total geographical area included in this revision. The total population is about 3,12,000 numbers as per census 2011. About 90 % of the total families in forest fringe villages are depended on forest produces to survive. Forest cover managed under this revision is 53.32 % of the total geographical area. The availability of land and its facilities for better production of agricultural crop are very negligible. The people need work to earn and survive. They are collecting forest produces throughout the year to minimize the depth of their poverty.

4.5.2. **Cattle Population** – As per the socio economic survey the cattle population in the village **Budhikuten** is 75 against the human population of 189 numbers and in the village Khamanda is 24 against the human population of 109 numbers. The cattle graze in adjoining forest area and damages the recruits.

4.5.3. **Occupation** – The main occupation of the villagers are cultivation and collection of forest produces. The villagers of **Budhikuten** are depend on forest for their survival. The villagers of Khamanda partially depend on forest for their survival.

4.5.4. **Annual Income** – The highest annual income in one household having 13 members is Rs.33,500.00 and lowest income in one household having 04 members is Rs.6,500.00 in case of village Budhikuten. Similarly the highest and lowest annual income per household in case of village Khamanda are Rs.17,500.00 for 07 members and Rs.800.00 for 06 members respectively.

4.5.5 **Incident of Poverty** – The highest annual income per head is Rs.2577.00 and lowest annual income per head is Rs.1625.00 in case of village **Budhikuten**. Similarly the highest and lowest annual incomes per head in case of village Khamanda are Rs.2500.00 and Rs.133.00 respectively. As per Poverty Line criteria if one household's annual income is Rs.18000.00 or less, then it will be treated as Below Poverty Line family. Considering this criterion all households of village Khamanda come under Below Poverty Line. Incase of village **Budhikuten** 18 number of households come under Below Poverty Line out of 29 households.

4.5.6. **Sources of Energy and Fodder** – All household of village Khamanda are using firewood as their sources of energy. Almost all household of village **Budhikuten** are using firewood for their sources of energy. There are 221 numbers of domestic animals in village **Budhikuten** and 152 domestic animals in village Khamanda. The requirement of fodder for their domestic animal is met from adjoining forest. There is no scarcity of fodder for the domestic animal.

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4.5.7. **Social Custom** – Almost all household of village **Budhikuten** are Hindu and they follow all custom of Hindu religion. All household of village Khamanda are Hindu and they follow the custom of Hindu religion. In certain occasion they use sacrifice of domestic animal during their worship. In some cases they use to offer garland to the trees. They use to hang old bamboo made basket in a trees standing at junction, which is about one kilometer away from the village to get rid of Chicken Pox. They worship Lord Indra for rain.

4.5.8. **Old Traditional Knowledge** - The households of village Khamanda are under Bellow Poverty Line. All the villagers are not educated. Almost all villagers are following their own old traditional knowledge. Most of the households of village **Budhikuten** are educated. Some villages are following old traditional knowledge. During nighttime they are looking star and moon and able to ascertain about the rain. In daytime by looking the position of the sun they ascertain the time. Some household aret using modern technique of agriculture.

4.6. Sale Value:

4.6.1. **Timber** – The present sale value of logs of different species is given from table No113 to 116 below.

Table No. 124

Sale value of timber

Name of species	Girth class in cm	Length class wise value of log per cum in Rs.			
		1 to < 2 mt	2 to < 3.75 mt	3.75 to < 5 mt	5 mt and above
Sal	60 to < 75	4121.00	6771.00	7099.00	7576.00
	75 to < 90	5333.00	7691.00	8482.00	10309.00
	90 to < 120	7247.00	10471.00	13154.00	14930.00
	120 to < 150	8695.00	11405.00	13861.00	15526.00
	150 to < 180	9602.00	12723.00	14930.00	17330.00
	180 +	10143.00	14634.00	16484.00	18088.00
Asan	U/75	2350.00	3302.00	3820.00	4491.00
	75-89	3224.00	3765.00	4889.00	4889.00
	90-119	5180.00	6012.00	6600.00	6600.00
	120-149	5471.00	6600.00	7136.00	7321.00
	150 +	6012.00	7132.00	7724.00	8163.00

Sources - Divisional Manager, (C-KL) Division

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Table No. 125

Sale value of timber

Name of species	Girth class in cm	Length class wise value of log in Rs.		
		Below 1 mt.	1 to < 2.5 mt	2.5 mt and above
Haldu and Kurum	Bellow 66	2114.00	2937.00	4052.00
	60-74	2576.00	6628.00	7923.00
	75-89	3293.00	7923.00	10360.00
	90-104	3996.00	9213.00	10522.00
	105-119	4708.00	10522.00	11817.00
	120-134	5458.00	11817.00	13770.00
	135-149	6151.00	12770.00	14046.00
	150-164	7053.00	14046.00	15387.00
	165-179	7604.00	15387.00	16673.00
	180 +	8297.00	16673.00	17991.00

Sources - Divisional Manager, (C-KL) Division

Table No.126

Sale value of timber

Name of species	Girth class in cm	Length class wise value of log in Rs.	
		Bellow 2 Mt.	2 Mt. +
Jammu	Below 75	4445.00	5000.00
Daura	75-89	4694.00	6642.00
Arjun	90-119	5185.00	7308.00
	120-149	6174.00	7696.00
	150 and above	6420.00	8468.00
Hard wood Kendu Sidha Harida Bahada	Below 75cm.	3362.00	3774.00
	75-89	3552.00	5000.00
	90-119	3913.00	5522.00
	120-149	4662.00	5814.00
	150 and above	4866.00	6392.00

Sources - Divisional Manager, (C-KL) Division

Table No.127

Value of timber in all length

Name of species	Girth class in cm	Vale of log in Rs. for all length
Mango	Below 90cm	2072.00
Jack-fruit	90 cm and above	3598.00

Sources - Divisional Manager, (C-KL) Division

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CHAPTER – V

FIVE YEAR PLANS

5.1. General View:

5.1.1. **Plan Outlay of the Country** – After Independence, the first five years Plan had been started from the year 1951. As per the outlay in different Plan period, the investment made was 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. Rs.85.00 -13824 has been spent in the forestry sector from first to eight five years Plan. Where as financial allocation in first five years Plan to eight years Plan has been increased from Rs.76.00 million to Rs.40820.00 million respectively.

5.1.2. **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. Always it is not possible to calculate the benefit in monetary term. However, the pressure on the forest is increasing in day by day. Therefore the combined effect of high demand and less financial allocation in every five years Plan period resulted in continuous deterioration of forest resources.

5.1.3. **Plan Period** – The details of each Plan period in forestry sector are given in the table below.

Table No. 128

Plan Period

Plan's No.	Year of plans	Main objects of the plan periods	Exp'ture in million Rs.
1	1951-52 to 1955-56	In this period the focus was on the rehabilitate 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 rehabilitate 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 out put from the existing forest through improve 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	459.00

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		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 forests based industries. (iii) To develop forests as a support to rural economy. Emphasis was laid on measurers 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, where forest produce was removed for industrial uses, were taken. The object was to achieve save sufficiency in forest products as early as possible, specially 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, improve 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 main made forest and forest based industries. Special efforts were proposed to made to prepare a number of projects in various States, for immediate and long term benefits in term of increased row materials for industries and additional revenues a different levels of investment.	2088.00
Annual	1979-80	In this period only one annual plan have been implemented, where emphasis was laid on plantation for rehabilitation of degraded forest.	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 helps 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 field schemes, such as land reclamation, forestation, cleaning of water bodies, Research and Training etc. The programme is also geared	19759.00

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		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 of the like fungi, bacterial invertebrates etc. Man and Biosphere Programme were also oriented towards the ecosystem development. Implementation of the Biosphere Reserve Programme will start in the Seventh Plan with the Department of Environment acting as the nodal agency. The conservation programmes in the Reserves will be 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. would be strengthened in this Plan period.	
Annual	1990-91 to 1991-92	In this period, the main objectives were to protect the environment, increase productivity, 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 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 would be strengthened. Stress will also be 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 continue to participate in the protection of the environment.	39930.00
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 is to be given to the participation of people in	68228.00

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		the management and sharing of usufruct through Joint Forest Management. The involvement of NGOs is also sought for building awareness and acting as an interface. The priority is also to be given to 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 will be made to take advantage of various Employment Generation Schemes of Rural Development Departments to supplements funds for plantation activities. Emphasis is 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 will be make to empower the women by ensuring their involvement from micro planning stage to implementation and usufruct sharing.	
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 Jatropa, merge all afforestation programme under National Afforestation Programme which will be implemented through Forest Development Agency. The livelihood needs of the people leaving adjoining to the forests would be addressed. JFM would be given more thrust for the generation 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 firm lands and degraded lands, efforts would be taken on protecting the natural forest to have a better carbon trading potential to increase the market avenues for forest protection and management, to conservation and protection of the medicinal plants.	x
Sources - Developing Wasteland, Ministry of Environment and Forests			

5.2. Financial Achievements up to 4th Five year Plans:

5.2.1. 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.

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Table No. 129

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
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

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5.3. Review of Seventh Plan:

5.3.1. Seven Biosphere Reserves have been set up for preserving the genetic diversity in representative ecosystems. Ecological restoration work has been undertaken 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.

5.3.2. **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 biogeographic classification system.

5.3.3. **Afforestation programme** - In the 7th Plan there was considerable increase in the total area brought under afforestation programme. Block plantations, Srtip plantation and firm 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 of afforestation were taken up to secure people's participation. Under this scheme, priority was given to different items, which is given below.

Table No.130

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 bellow 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 and Forests.

5.3.3.1. 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 hectors 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.

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5.3.3.2. 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 forestlands. 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 No. 131

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	46.5
9	Seventh	88.7
	Total	170.76

Sources - Developing Wasteland, Ministry of Environment and Forests.

5.4. Review of Eighth Plan:

5.4.1. **Bio-Diversity Conservation** – The scheme on Bio-diversity Conservation was initiated during 1991-92 to ensure proper coordination among various agencies concerned with the issues relnting to conservation of biological diversity and to review, monitor and evolve adequate policy instruments for the same. During the Reo meetings, 168 countries, including India signed in the convention on Biological Diversity. India has since ratified the convention.

5.4.2. 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.

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5.4.3. 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.

5.4.4. **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 No. 132

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

5.5. Evaluation of Ninth Plan:

5.5.1. The Scheme of Ninth Five Year plan are 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.

5.5.2. 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 forestland to the Private Entrepreneurs either directly or indirectly through Forest Corporations.

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5.6. Investment in Forestry Sector (in million of Rupees):

Table No. 133

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.

5.7. Activities of Deogarh Division in Plan Periods:

5.7.1. The different activities have been taken up in this division during the Plan periods depending on the allocation. The details of the work done and the expenditure made for the purposes are given in the table given below.

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Table No.134

Expenditure various work of Deogarh Division in plan period.

No. of plans	Year of plan	Details of developmental work done	Exp'ture in Rs.
1	1950 -56	One Depot mahorir shed at Prabhasani, Two F.G shed at Amgnon & Kansar, One L.D.C Quarter at Deogarh, One Well at Forester Quarter at Jamardihi, One Second shed of L.D.C Quarter at Deogarh.	20260.00
2	1956-61	One F.G shed at Jamardihi, one Depot Forest Quarter at Purunagarh.	5400.00
3	1961-66	One Well at Range Office Compound at Pallahara, One F.G shed at Khulundikudar, Four Forester Quarter at Mardang, Kantiaposi, Deogarh & Nuangaon, One Depot Forest Quarter at Deogarh, One 3rd Quarter at Deogarh, One Well at Range Office Colony & Block Plantation over 351.27 ha.	952816.83
Annual	1966-69	Block Plantation over 225.71 ha.	587974.55
4	1969-74	Block Plantation over 227.44 ha.	592481.20
5	1974-79	Block Plantation over 57.45 ha.	207107.25
Annual	1979-80	x	x
6	1980-85	Block Plantation over 230.23 ha.	714864.15
7	1985-90	One Well at Barkote Range Office Campus & Block Plantation over 310.00 ha.	2029678.85
Annual	1990-92	Block Plantation over 412.00 ha.	4542300.00
8	1992-97	Block Plantation over 281.00 ha. & RDF over 369.28 ha.	4881994.60
9	1997-02	Block Plantation over 587.00 ha. & Avenu Plantation over 18.5 RKM. The species planted are Tick, Bamboo, Chakunda, Khaira, Asana, Arjuna, Gambhari, Acasia etc.	9922080.00
10	2002-07	Block Plantation = 1969.62 ha. & RDF = 300.00 ha. The species planted are Tick, Bamboo, Chakunda, Khaira, Asana, Arjuna, Gambhari, Acasia etc.	36176172.00
11	2007-08 to 2011-12	Plantation done over 25380.47 ha. The species planted are Tick, Bamboo, Chakunda, Khaira, Asana, Arjuna, Gambhari, Acasia etc.	731972754.80
12	2012-13 to 2016-17	x	x

Sources - Divisional Forest Officer, Deogarh.

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5.8. Suggestion for Future Five-Year Plan:

5.8.1. The Twelveth Five Year plan period starts from 2012-13. The area covered with natural vegetation in Angul portion is inferior to that of Deogarh portion. 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.

5.8.2. **Plantation** – There is no any blank area covering more than two hectors of land at one place. Therefore, it is suggested that the Divisional Forest Officer should not encourage any Scheme for block plantation during the next Five Year plan. The area allotted to Rehabilitation Working Circle has few open spaces in patches, where maximum up to 200 seedlings can be planted per hector. It is advised to prepare Scheme for gap plantation for Rehabilitation of Degraded Forest. The extent of gap planting area should normally be limited to 1000.0 hectors per year. The annual area should be distributed equally in six Ranges for smooth execution and better supervision.

5.8.3. **Climber Cutting** – Climber cutting had not been done in the last out going Plan period. Also due to ban on tree, felling there was not any 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. During the revision of this Plan, the girth of climber has attended more than 02 ft at 04 ft height above the ground level. It is necessary to cut all the climbers in the forest area included in this revision. It is advised to the Divisional Forest Officer to prepare a special Scheme for cutting of the climbers within an interval of 03 years. He is also advised to appraise the facts before the Higher Forest Officers and get the Scheme approved for implementation of the programme.

5.8.4. **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 kendu leaf puckers set fire in the forests for production of better quality leaf. The tribals 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 an early stage. The Divisional Forest Officer shall engage at least two people in each forest fringe villages to detect and extinguish forest fire before it is spreading extensively. A special Scheme for control of the forests fire shall be prepared in each year during the Plan period.

5.8.5. **Wild Life** – The survival and multiplication of the Wild Life purely 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. It is opined that the total number of Wild Life can be increased to five 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.

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CHAPTER – V I

STAFF AND LABOUR SUPPLY

6.1. Staff.

6.1.1. As per the Working Plan for the period from 1970 to 1990, the total Cadre Strength of the subordinate staff for managing this forest division were 125 numbers. The detail of staff position is given in the table below.

Table No.135

Staff position of the division

Sl. No.	Name of the post	No. of staff
1	DFO	1
2	ACF (Enf)	x
3	ACF (Aff)	x
4	F.R (Range)	3
5	F.R (Aff)	x
6	F.R (Enf)	1
7	Deputy Ranger (Ch)	x
8	Forester	15+6
9	F.G (Beat)	73+15
10	F.G (Ch)	x
11	F.G (Enf/Affn)	x
12	Head Clerk	1
13	Accountant	1
14	UD. Clerk	2
15	LD. Clerk	6
16	Stenographer	1
17	F.E.O (FES)	x
18	Driver (LV)	x
19	Dak Runner	x
20	Office Choukidar	x
21	O.P/Or.P	x
22	R.I Peon	x
23	R.I	x
24	Chain man	x
25	Amin	x
Total		125

Sources - Revised Working Plan for the period from 1970-90.

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6.1.2. **Incumbency List of D.F.O** - The incumbency list of Divisional Forest Officers in different working Plan period is given in the table below.

Table No.136

Incumbency List of D.F.O

Sl No.	Name of the D.F.O	Working period		Working Plan period
		From	To	
1	Sri Balaram Bhoi	15.01.1948	16.04.1948	1932-33 to 1942-43
2	Sri S.C. Bose	17.04.1948	10.02.1950	1949-50 to 1969-70
3	Sri B. Bhoi	11.02.1950	31.03.1950	1949-50 to 1969-70
4	M Ahamadullaha	01.04.1950	12.08.1951	1949-50 to 1969-70
5	Sri D. Patra	13.08.1951	19.02.1953	1949-50 to 1969-70
6	Sri G.M. Dash	20.02.1953	21.03.1954	1949-50 to 1969-70
7	Sri S.K. Bohidar	22.03.1954	15.07.1954	1949-50 to 1969-70
8	Sri G.M. Dash	16.07.1954	22.09.1955	1949-50 to 1969-70
9	Sri A.B. Lal	23.09.1955	16.05.1956	1949-50 to 1969-70
10	Sri Trinath Dash	17.05.1956	14.12.1958	1949-50 to 1969-70
11	Sri B.M. Pujari	15.12.1958	01.01.1959	1949-50 to 1969-70
12	Sri D.B. Mishra	02.01.1959	20.10.1959	1949-50 to 1969-70
13	Sri B.M. Pujari	21.10.1959	28.10.1959	1949-50 to 1969-70
14	Sri P.K. Pani	29.10.1959	04.10.1960	1949-50 to 1969-70
15	Sri A.N. Mahakud	05.10.1960	04.01.1965	1949-50 to 1969-70
16	Sri K. Patnaik	05.01.1965	13.07.1965	1949-50 to 1969-70
17	Sri R.C Patnaik	14.07.1965	29.11.966	1949-50 to 1969-70
18	Sri Ranjit Mahapatra	30.11.1966	13.08.1968	1949-50 to 1969-70
19	Sri S.S. Padhi	14.08.1968	24.07.1972	1970-71 to 1989-90
20	Sri B.K. Mishra, IFS	25.07.1972	11.07.1974	1970-71 to 1989-90
21	Sri Achyuta Nand Nath, IFS	12.07.1974	07.07.1978	1970-71 to 1989-90
22	Sri B. Routray, IFS	08.07.1978	06.07.1979	1970-71 to 1989-90
23	Sri S.N. Bohidar, IFS	07.07.1979	25.08.1982	1970-71 to 1989-90
24	Sri S.C. Bohidar, IFS	26.08.1982	19.09.1983	1970-71 to 1989-90
25	Sri Ghanashyam Naik, OFS (I)	20.09.1983	22.04.1985	1970-71 to 1989-90
26	Sri N.C Bala, OFS (I)	23.04.1985	12.05.1985	1970-71 to 1989-90
27	Sri Ghanashyam Naik, OFS (I)	13.06.1985	31.10.1985	1970-71 to 1989-90
28	Sri Subash Ch. Sahu, OFS (I)	01.11.1985	04.03.1986	1970-71 to 1989-90
29	Sri Bittanath Naik, OFS (I)	05.03.1986	02.08.1987	1970-71 to 1989-90
30	Sri Gadadhar Sahu, IFS	03.08.1987	25.09.1989	1970-71 to 1989-90
31	Sri Anup Kumar Nayak, IFS	26.09.1989	19.07.1991	1970-71 to 1989-90
32	Sri Maloth Mohan, IFS	20.07.1991	09.08.1991	x
33	Sri Pruthibi Raj Singh, IFS	10.08.1991	15.05.1993	x
34	Sri Maloth Mohan, IFS	16.05.1993	01.07.1993	x
35	Sri Pruthibi Raj Singh, IFS	02.07.1993	10.12.1993	x
36	Sri Maloth Mohan, IFS	11.12.1993	08.02.1997	1995-96 to 2014-15
37	A.O.F Bakhala, IFS	09.02.1997	31.12.1999	1995-96 to 2014-15
38	Sri Om Prakash Singh, IFS	01.01.2000	11.06.2004	1995-96 to 2014-15
39	Sri Narayan Samal, OFS (I)	11.06.2004	11.01.2006	1995-96 to 2014-15

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40	Sri Bhimsen Maharana, OFS -I	11.01.2006	06.07.2007	1995-96 to 2014-15
41	Sri Suresh Chandra Mohanty, OFS (II)	06.07.2007	27.07.2007	1995-96 to 2014-15
42	MS. Uma Nanduri, IFS	27.07.2007	01.09.2007	1995-96 to 2014-15
43	Sri Prakash Raj Karat, IFS	02.09.2007	17.09.2007	1995-96 to 2014-15
44	MS. Uma Nanduri, IFS	17.09.2007	20.10.2007	1995-96 to 2014-15
45	Sri Suresh Chandra Mohanty, OFS (II)	20.10.2007	06.05.2008	1995-96 to 2014-15
46	Sri Bhimsen Maharana, OFS (I)	07.05.2008	07.12.2009	1995-96 to 2014-15
47	Sri Ramakanta Mishra, IFS	07.12.2009	30.04.2014	1995-96 to 2014-15
48	Sri Suresh Chandra Sethi, OFS	30.04.2014	25.07.2014	1995-96 to 2014-15
49	Sri Pinaya Bhashan Kumar Biswasi, OFS-I	25.07.2014	Continuing	1995-96 to 2014-15
Sources - Divisional Forest Officer, Deogarh.				

6.1.3. **Incumbency List of A.C.F** - The incumbency list of Assistant Conservator of Forest in different Plan period is given in the table below.

Table No. 137

Incumbency List of A.C.F

Sl No	Name of the A.C.F.	Working period		Plan's period
		From	To	
1	Sri Subhranshu Sekhar Mohanty, ACF, OFS (II)	12.09.1980	09.06.1983	1970-1990
2	Sri Jayaram Sahu, OFS (II)	30.07.1989	31.07.1992	1970-1990
3	Sri Bikash Ranjan Das, OFS (II)	31.07.1992	31.08.1996	1995-96 to 2014-15
4	Sri Bana Bihary Patel, OFS (II)	12.08.1996	11.04.2005	1995-96 to 2014-15
5	Sri Suresh Chandra Mohanty, OFS (II)	03.08.2005	31.10.2008	1995-96 to 2014-15
6	Sri Debapriya Kampa, OFS (II) (probationer)	04.05.2007	03.06.2010	1995-96 to 2014-15
7	Sri Suresh Ch. Sethi, OFS-I (JB)	06.12.2010	Continuing	1995-96 to 2014-15
Sources - Divisional Forest Officer, Deogarh.				

6.1.4. The Forest Department of Orissa have been re-organized vide Notification No.13228 / F and E dt.08.08.2003 with effect from 01.10.2003. After re-organization, Deogarh Forest Division comprises of 05 Ranges, 20 Section and 90 Beats. There are 44 posts for Divisional Office and 153 posts for Range Offices sanctioned to manage and protect the forest of Deogarh Division. The details of staff position as on dt.30.09.2013 are given in the table below.

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Table No. 138

Staff position of the division as on dt.30.09.2013

Name of the Circle / Division	Name of the Post	Sanctioned Strength	Staff position	Excess	Vacancy	Remarks
Rourkela / Deogarh Division.	DFO	1	1	0	0	x
	ACF (Enf.)	1	1	0	0	x
	ACF (Aff)	1	0	0	1	x
	F.R (Range)	5	3	0	2	x
	F.R (Aff)	1	0	0	1	x
	F.R (Enf)	1	1	0	0	x
	Deputy Ranger (Ch)	4	0	0	4	x
	Forester	40	34	0	6	x
	F.G (Beat)	90	61	0	29	Excluding One Contractual Forest Guard
	F.G (Ch)	8	0	0	8	x
	F.G (Enf/Affn)	6	0	0	6	x
	Head Clerk	1	1	0	0	x
	Junior Accountant	1	1	0	0	x
	Senior Clerk	6	3	0	3	x
	Junior Clerk	9	8	0	1	x
	Junior Stenographer	1	0	0	1	x
	Forest Extension Officer	5	2	0	3	x
	Driver (LV)	2	0	0	2	x
	Dak Runner	2	1	0	1	x
	Office Choukidar	1	1	0	0	x
	O.P/Or.P	2	2	0	0	x
	R.I. Peon	2	1	0	1	x
	R.I	1	1	0	0	x
	Chainman	5	2	0	3	x
	Amin	1	0	0	1	x
Total		197	124	0	73	

Sources - Divisional Forest Officer, Deogarh.

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6.1.5. **Present Organization Setup** - The present organization setup for administrative management of this division is given in the table below.

Table No. 139

BEAT WISE AREA STATISTICS OF DEOGARH FOREST DIVISION (ORSAC)

SL No.	DIVISION NAME	RANGE NAME	SECTION NAME	BEAT NAME	AREA IN HA
1	DEOGARH	BARKOTE	BALAM	BALAM	6187.29
2	DEOGARH	BARKOTE	BALAM	DANDASINGHA	6588.48
3	DEOGARH	BARKOTE	BALAM	KAUNSIBAHAL	2911.61
4	DEOGARH	BARKOTE	BALAM	NUAGAON	3802.42
5	DEOGARH	BARKOTE	BARKOTE	BARKOTE	3747.02
6	DEOGARH	BARKOTE	BARKOTE	CHAPBAHAL	3803.14
7	DEOGARH	BARKOTE	BARKOTE	KELDA	3033.80
8	DEOGARH	BARKOTE	BARKOTE	KHULUNNDIKUDAR	2323.56
9	DEOGARH	BARKOTE	BARKOTE	MARDANG	3824.19
10	DEOGARH	BARKOTE	DANTARI BAHAL	DANTARI BAHAL	4725.20
11	DEOGARH	BARKOTE	DANTARI BAHAL	KANTAPALI	4687.87
12	DEOGARH	BARKOTE	DANTARI BAHAL	PURKUNDA	2284.14
13	DEOGARH	BARKOTE	DANTARI BAHAL	TUSULA	3229.10
14	DEOGARH	BARKOTE	KALLA	GOPAPUR	2366.15
15	DEOGARH	BARKOTE	KALLA	KALIAPAL	3790.79
16	DEOGARH	BARKOTE	KALLA	SAIDA	6512.10
17	DEOGARH	BARKOTE	KALLA	SINGSAL	3985.25
18	DEOGARH	BARKOTE	THIANAL	CHASAGURUJANGA	2525.87
19	DEOGARH	BARKOTE	THIANAL	PETAPURA	6007.11
20	DEOGARH	BARKOTE	THIANAL	RAITABAHAL	12510.00
21	DEOGARH	BARKOTE	THIANAL	SIARIMALIA	5241.69
22	DEOGARH	BARKOTE	THIANAL	SURUALI	7486.20
23	DEOGARH	BARKOTE	THIANAL	THIANAL	5593.89
24	DEOGARH	DEOGARH	DEOGARH	DEOGARH NORTH	3628.80
25	DEOGARH	DEOGARH	DEOGARH	DEOGARH SOUTH	2691.30
26	DEOGARH	DEOGARH	DEOGARH	HADAMUNDA	3729.85
27	DEOGARH	DEOGARH	DEOGARH	KALAMATI	3087.30
28	DEOGARH	DEOGARH	DEOGARH	SUGUDA	10070.00
29	DEOGARH	DEOGARH	KANSAR	KANSAR	7110.03
30	DEOGARH	DEOGARH	KANSAR	KANTEIKOLI	4896.92
31	DEOGARH	DEOGARH	KANSAR	PALKUDAR	2789.03
32	DEOGARH	DEOGARH	KANSAR	PALUNIPADA	4464.21
33	DEOGARH	DEOGARH	KANSAR	SODO	3433.09
34	DEOGARH	DEOGARH	LAIMURA	GAMHARIPOSI	5694.62
35	DEOGARH	DEOGARH	LAIMURA	GANDAM	5678.81
36	DEOGARH	DEOGARH	LAIMURA	LAIMURA	7335.46
37	DEOGARH	DEOGARH	LAIMURA	LUDHAR	5340.83

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38	DEOGARH	DEOGARH	LAIMURA	POHALAMARA	2072.20
39	DEOGARH	DEOGARH	TILEIBANI	CHATTI BARAGHAT	4953.79
40	DEOGARH	DEOGARH	TILEIBANI	JHARA GOGUA	4170.39
41	DEOGARH	DEOGARH	TILEIBANI	PRAVASUNI	3986.58
42	DEOGARH	DEOGARH	TILEIBANI	TAINSAR	4766.68
43	DEOGARH	DEOGARH	TILEIBANI	TILEIIBANI	4252.00
44	DEOGARH	KHAMAR	KHAMAR	BARKOTIA	3974.04
45	DEOGARH	KHAMAR	KHAMAR	JAMBUA	5106.09
46	DEOGARH	KHAMAR	KHAMAR	KHAMAR	4556.29
47	DEOGARH	KHAMAR	KHAMAR	PAUNSHIA	6411.92
48	DEOGARH	KHAMAR	KHAMAR	ROHIRA	3003.82
49	DEOGARH	KHAMAR	KHAMAR	TAMBUR	3274.40
50	DEOGARH	KHAMAR	NUAGAON	BURUBURA	2722.24
51	DEOGARH	KHAMAR	NUAGAON	HANSALA	2855.57
52	DEOGARH	KHAMAR	NUAGAON	INJIDE	5730.61
53	DEOGARH	KHAMAR	NUAGAON	NUAGAN	3520.07
54	DEOGARH	KHAMAR	SAHAR GURUJANG	RANJA-PITTA	6975.61
55	DEOGARH	KHAMAR	SAHAR GURUJANG	SAHAR GURUJANG	11340.00
56	DEOGARH	PALLAHARA	JAMARDIHI	ITI	3610.92
57	DEOGARH	PALLAHARA	JAMARDIHI	JAMARDIHI	6340.53
58	DEOGARH	PALLAHARA	JAMARDIHI	RUGIDIDIHA	9453.34
59	DEOGARH	PALLAHARA	JAMARDIHI	SAIDA	1942.53
60	DEOGARH	PALLAHARA	JAMARDIHI	SIBIDA	3813.38
61	DEOGARH	PALLAHARA	KANTALA	JAMARA	3524.29
62	DEOGARH	PALLAHARA	KANTALA	KANTALA	1317.12
63	DEOGARH	PALLAHARA	KANTALA	RAIPAL	3003.74
64	DEOGARH	PALLAHARA	PALLAHARA	BATISUAN	3589.08
65	DEOGARH	PALLAHARA	PALLAHARA	ISHWARNAGAR	2656.06
66	DEOGARH	PALLAHARA	PALLAHARA	PALLAHARA	4874.20
67	DEOGARH	PALLAHARA	PALLAHARA	RANJO	1828.84
68	DEOGARH	PALLAHARA	PALLAHARA	SEEGARH	4032.14
69	DEOGARH	REAMAL	KUNDHEIGOLA	BUDHAPAL	3291.84
70	DEOGARH	REAMAL	KUNDHEIGOLA	KUNDHEIGOLA	4687.15
71	DEOGARH	REAMAL	KUNDHEIGOLA	LOHARAKOT	3981.95
72	DEOGARH	REAMAL	KUNDHEIGOLA	RENGALPALI	4726.16
73	DEOGARH	REAMAL	KUNDHEIGOLA	SANGAPOSI	7867.95
74	DEOGARH	REAMAL	NUADIHI	NUADIHI NORTH	5038.73
75	DEOGARH	REAMAL	NUADIHI	NUADIHII SOUTH	4257.09
76	DEOGARH	REAMAL	NUADIHI	RANIANA	5725.55
77	DEOGARH	REAMAL	PALASAMA	BRAMAHANIPALI	4761.50
78	DEOGARH	REAMAL	PALASAMA	KUSKULIA	4183.63
79	DEOGARH	REAMAL	PALASAMA	LAXMIPUR	2525.89
80	DEOGARH	REAMAL	PALASAMA	PALASAMA	5023.29

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81	DEOGARH	REAMAL	PALASAMA	SIMILIHATA	5472.40
82	DEOGARH	REAMAL	REAMAL	BURBUDA	3324.08
83	DEOGARH	REAMAL	REAMAL	REAMAL	2216.09
84	DEOGARH	REAMAL	REAMAL	SIARIA	4169.97
85	DEOGARH	REAMAL	REAMAL	SIMLOI	3512.97
86	DEOGARH	REAMAL	REAMAL	TARANG	6934.80
87	DEOGARH	REAMAL	RENGALBEDA	BUDIDEO	2359.33
88	DEOGARH	REAMAL	RENGALBEDA	GUNDIAPALI	2554.14
89	DEOGARH	REAMAL	RENGALBEDA	RENGALBEDA	6227.59
90	DEOGARH	REAMAL	RENGALBEDA	TINKBIR	3978.95
				Total	407596.66
Sources - Divisional Forest Officer, Deogarh.					

6.1.6. **Forest Act and Rules** – Several Forest Acts and Rules have been framed by the Government of Orissa / India for enforcement through the State to arrest deforestation and stricter regulation of Wild Life matters. The name of the Acts, Rules, Policy and Code are given in the table below.

6.2. **Labour Supply:**

6.2.1. The density of population in the division is very low. The requirement of labourer in different category for various operations like marking, felling, logging, dragging, loading, unloading, forest road working, plantation works and silvicultural works are quite inadequate in the neighboring villages. Shortage of labourer is acutely felt during summer season, when the local labourers are mostly engaging in collection of Kendu leaves and other non-timber forest produces. The labourers are also diverted to various developmental works under taken by other line department of this District.

6.2.2. **Category of Labour and Wages** – The labourers are classified into Unskilled, Semi-Skilled, Skilled and Highly Skilled categories depending on their experiences and types of works. Accordingly the wages differ and the Government from time to time under the provision of the Minimum Wage Act fixes it. The different wages in force from dt.01.07.2013, vide Notification No.8304 dt.01.08.2013 of Labour Commissioner, Orissa are given in the table below.

Table No. 140

Category of Labour and Wages

Sl. No.	Quality of labour	Description of labour	Name of labour	Wage per day in Rs.
1	Unskilled	It involves in simple operation and requires little or no skill on the job.	Mulia, Peon, Office boy and Watcher	150.00
2	Semi-skilled	It involves some degree of skill and competence acquired through experience on the job and which is capable of being performed under the supervision of a skilled employee.	Mate, Helper, Cleaner	170.00

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3	Skilled	It involves skill or competence acquired through training as apprentice into technical institute and the performance of which calls for initiative and judgement.	Driver, Typist, Clerk	190.00
4	Highly skilled	It involves skill or competence of extraordinary degree and supervising ability.	Head mason, Supervisor, Manager, and Cashier	205.00
Sources - Works Department.				

6.2.3. **Demand of Labourers** – An average demand of labourers annual required for various forestry works in Deogarh Division and the main area of availability of labourer is given in the table below.

Table No. 141

Demand of Labourers

Sl. No.	Type of labourer	Average demand in number	Area of availability
1	Unskilled	133921	Distributed
2	Semi Skilled	x	x
3	Skilled	537	Deogarh
4	High Skilled	x	x
Sources - Divisional Forest Officer, Deogarh.			

6.2.4. **Average Daily Wage Labourers** – The average daily wage workers engaged for various forestry activity of this division for last five years is given in the table below.

Table No. 142

Daily Wage Labourers

Name of year	Number of Driers	Number of Watchers	Number of labourers
2001-02	0.92	06	136.82
2002-03	0.92	06	137.75
2003-04	0.92	06	140.98
2004-05	0.92	06	141.06
2005-06	1.46	08	153.37
2006-07	1.47	08	366.90
Sources - Divisional Forest Officer, Deogarh.			

6.2.5. **Past and Present Wages** – The rate of all common articles including food materials are in increasing order. It is now essential to maintain equilibrium between persons of different status. Accordingly the wages of different qualities of labourer are in increasing order. Forest Department needs all qualities of labourer in different projects. The comparison of wages of all categories of labourer between past and present as per Labour and Employment Department is given in the table below.

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Table No. 143

Rate of Wages of all category of labour

Category of labour	Rate of wages per day as per notification in Rs.										
	1976	1981	1990	1996	1998	2000	2002	2004	2006	2012	2013
Unskilled	4.0	6.0	25.0	30.0	32.5	40.0	50.0	52.5	55.0	90.00	150.00
Semi-skilled	5.0	7.5	30.0	36.0	38.5	48.0	60.0	62.5	65.0	103.00	170.00
Skilled	7.5	10.0	40.0	48.0	44.5	56.0	70.0	72.5	75.0	116.00	190.00
Highly skilled	8.0	12.5	40.0	48.0	50.0	64.0	80.0	82.5	85.0	129.00	205.00

Sources - Works Department.

6.2.6. **Analysis of Wages** – The operation carried out in the forest with an aim to increase the volume of the growing stock and develop the present condition of the vegetation cover. All Schemes prepared by the Forest Department are labour generated. The Forest Guard is taking the attendance of laboures in the Muster Roll while executing the field works. The laboures shall receive their wages for maximum six days in a week. During the Plan period the rate of wages has been increased from Rs.25.00 to Rs.150.00 for unskilled labourer. The rate of wages has been increased to 600 % within 20 years. So the rise of wages per year is 26.08 %. Depending on the increase of wages, all estimates during the current Plan period is furnished in the concerned chapter.

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CHAPTER – V I I

PAST SYSTEM OF MANAGEMENT

7.1. General History of the Forest:

7.1.1. The early history of these forests is directly linked with the use of the Bhuyans and Kondhs- the original principal inhabitants made of then. The Bhuyans then occupied the tract lying east of the Brahmani and the Kondhs occupied the rest. Their knowledge of agriculture was as much primitive as the aborigines in the other parts of the world and like everywhere else their agriculture was axe-cultivation. In those early days their population being small and the forests over which they practiced shifting cultivation being vast, the forests after clear-felling were getting sufficient rest to recover its pristine glory. No doubt with the passage of time, their population increased but still the forests were getting sufficient rest to rehabilitate them. The shifting cultivation locally know as Biringa in the Bhuyan tract and Rama in the Kondh tract, consisted of felling the forests leaving a few poles only to support the climbing beams they would grow, burning the felled materials by the stumps, rake up the soil with the axe or with some crude implement and planting seeds of their food crop of bean, yan and coarse millet. In the early days the forest being virgin, the tract chosen for shifting cultivation being rich valleys and undulating grounds, the rich soil fertilised by the ash of the burnt trees was yielding crop in abundance. Consequently, less area was needed for their subsistence.

7.1.2. Sometime during the 10th Century A.D. these aboriginal tribes being in a State of constant internecine strife, felt the necessity of bringing in a ruler or chieftain from outside. Accordingly, it is said, they brought one Surajit Deb from Patna ruling family and made him their ruler. It was the ruling family which subsequently brought Brahmins from Puri and 'Chasas' from more advanced outlying tracts for the general welfare of the State in the matter of culture and agriculture. It is those later migrants, taking advantage of the simplicity of the aborigins, gradually ousted the aborigin from his hearth and field who gradually receded from the rich valleys to the infertile hills. Their first contact with civilisation brought upon them so much have that they retired to the remote mountainous tracts to lead a seclusive life following their time-honoured custom and traditions having walled themselves in by the sheer inaccessibility of the terrain. Area available to them for shining cultivation consequently shrunt shrunk, soil became increasingly less fertile and hence less productive, population gradually increased, all of which brought gradually increasing pressure on the forest. With the shortening of rotation in shifting cultivation, more immature pole crop resulted. The poor crop in Kansar block is a direct result of the heavy incidence of shifting cultivation practiced till very recent time.

7.1.3. Early steps in forests conservancy: During the regime of Raja Basudeb Sudhal Deb, in the latter part of the 19th Century endeavors were made to contain Adibasis practicing shifting cultivation to the pragnas of Pauri and Kansar so as to localise the evil there within. Thereby large tracts of forests got rid of the evil influence and the present day even-aged forests on the plains and low lying hills are a result of this attempt at forest conservancy.

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7.1.4. In more recent time during the regime of Raja Bhanuganga Tribhuban Deb, vigorous endeavour was made to stop shifting cultivation and schemes as advocated by late Dr. Mooney, to resettle those Adibasis doing shifting cultivation on permanent agriculture was adopted and acted upon. As a result of that scheme, a number of Adibasi colonies were started where such Adibasis were given built houses for a fixed abode and cattle, agricultural implements, seeds along with expertise to adapt to permanent agriculture. With the resettlement of those Adibasis, shifting cultivation came to a stop in the Reserve Forest blocks of Deogarh forests. The last to escape from the clutches shifting cultivation are the Kansar and Pauri blocks and the present immature crop there is the tell table of the evil effects of shifting cultivation.

7.1.5. **Early forest exploitation:** Dr. Mooney with all his intimate knowledge of the Eastern States has been able to trace back the early history of forest administration till the 1880. He has brought out that there was even then a trade in Mudikath (log) with Jenapur in Cuttack where to logs were floated down the river Brahmani.

7.1.6. With the construction of Calcutta-Bombay Railway line sleeper supply gained importance and the then Ruler contracted with the Railways for direct supply of sleepers to them and an organization styled. The Rajkumar Sleeper Business was started in 1890. It had, in fact the sole monopoly to work all the forests. Fixation of royalty for the sleeper operation was arbitrary and was understandably low. Originally sleeper operation was confined to the more accessible areas within the reach of Kolkatta-Bambay Railway line which crossed the State in the North. When the Sambalpur branch rail-line was started the Southern forests as also the Western were worked. The organization worked under no handicap. There was no marking rule or any limit the number of trees that may be worked was not placed nor was any lower limit on the size of tree that may fixed. Any tree which may yield a sleeper could be felled. This operation resulted in the removal of the cream of the forest. That organisation was under no obligation to fell the unsound trees or the carryout neither any cultural operation for the improvement of the forest nor any such operation was taken up separately by the State administration. The result was the increased percentage of unsoundness in the forest. This sleeper operation was, however, stopped in the year 1924.

7.1.7. **Early forest:** With the appointment of a Dehra Dun trained Forest Ranger in the year 1906 forest conservancy on modern lines was given a start. Till that time no forest block had been demarcated. Demarcation work was initiated in the year 1907 with the demarcation of Bandhabar block. Forest staff then consisted of a few Foresters and about a dozen Forest Guards besides the Forest Officer, later, three Inspectors (Corresponding to Range Officers) were appointed under the Forest Officer and were stationed at Gourpali, Barkote and Garposh, the three main outlets for export of forest produce. When the State passed under the management of the Political Department between 1920-34, the forest administration was organised under the advice of the Agency Forest Officer. The Rajkumar Sleeper Operation was stopped to save the forest from further deterioration. More attention was paid to the improvement of the forest. The First Forest Rules of the State was published in 1924. Most of the R.Fs. were constituted during this period. The first working plan was also prepared during this time and was published in 1933.

7.2. **Mathur's Plan 33-43:**

7.2.1. Shri Mathur authored the first ever working plan for the Bamra forests. The period of the plan was from 33 to 43. The plan provided for two selection coupes and half a dozen coppice coupes. Almost half the forests were excluded from any work. It has been explained that the working plan was formed when there was a world-wide depression during the 1930s which had also hit the timber trade. The plan, therefore, prescribed working in such

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areas which were within easy reach of the market and working of such species which had a ready demand. With the passing over of the depression, provisions of the plan were found inadequate and large areas were brought over from the unregulated working circle for working and still more areas were brought over for working as demand for timber grew with the progress of the Second World War.

Mathur's plan prescribed the following working circles:-

1. The High Forest Working Circle
2. The Coppice Working Circle
3. The Unregulated Working Circle
4. The Bamboo Working Circle

7.2.2. **The High Forest Working Circle:** Prescription-The Working Circle consisted of one Felling Series viz (i) Pauri F.S. consisting of Pauri, Panguli, Thianal and Mandasila blocks. Yield in the F.S. was regulated by area. The exploitable girth was fixed at 4' for sal in the better and inferior quality areas. Felling cycle was fixed as 30 years. Thinning was recommended to be carried out in the coupe amongst groups of congested pole crop.

7.2.3. **Results of prescription:** The low girth limit for exploitation was found to be leading to much waste of timber in conversion. Conversion for sleeper at stump site being the general practice, then optimum outturn was not obtained from small sized trees and hence there was wastage inside slabs. Further, the quality of the forests was not such that trees of such low girth will begin to turn unsound if left in the forest for any length-of time. On consideration of these aspects the girth limit was raised to 5' under the advice of Dr. Mooney, the then Chief Forest Advisor, Eastern States.

7.2.4. Work in Pauri was much hampered by the local Bhuyans then, who were allowed in 1939 to practice shifting cultivation over an area of about 400 hectares inside Pauri R.F. which was then excluded from the block operation here came to an end in the year 1942- 43.

7.2.5. Markings in this working circle were to be carried out by the Range Officers themselves but were actually done by the Foresters, who did the marking with scant regard to silvicultural considerations,

7.2.6. Thinning were carried out in the first four coupes but was discontinued as there was then no market for small poles obtained at thinning. The operation was, however, resumed from 1942.

7.2.7. Major part of Ushakothi and parts of Badrama were put under conversion in the subsequent plan and the other areas not transferred to coppice in 44-45 were continued under selection. Pauri needed a rest for which it was put under protection and Panguli, Thianal and Mandasila were put under coppice with their unworkable portion under protection in the subsequent plan.

7.2.8. **Coppice Working Circle:** Prescription - This Working Circle had six F.S. in Garpati, Badrama, Binjipali, Rambhadebi, Bandhabar and Mahabir blocks. Rotation was fixed at 40 years and the system adopted was coppice with standards. Yield was regulated by area. Climber cutting was prescribed in the third year after main felling. Since the plan was for 10 years no thinning was done during the plan period.

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7.2.9. **Results of Prescription:** Those coupes were successfully worked and were fully restocked. The Rambhadebi coupe was primarily opened to meet the demand in Deogarh and in its neighborhood for fuel and small timber. Annual coupe area was 50 acres which was increased to 100 acres from 45-46 as the demand on it grew.

7.2.10. Climber cutting which was prescribed to be done in the third year was subsequently changed to be done in the fifth year after main felling. All the F.S. continued under coppice in the subsequent plan. Tending of the coppiced crop was prescribed and has been attended to during the subsequent plan period.

7.2.11. **Unregulated Working Circle:** Prescription - The areas not allotted to either High Forest or Coppice were allotted to this Working Circle which covered the whole of Khajuria, Badtaila, Pradhanpat and Gogua blocks and parts of Rambhadebi blocks. No working was prescribed. Not that these areas were unworkable but lack of demand made them so. It was, however, laid down that if in future demand arose for working any block it may be done under executive orders. As a matter of fact many of these blocks were subsequently opened up for working. The areas so opened up were given below.

1. The whole of Khajuria block over 15542.5 ha was transferred to High Forest Working Circle in 38-39.

2. The whole of Pravasuni block over 18421.05 ha was transferred to High Forest Working Circle in 38-39.

3. Part of Rambhadevi block over 809.71 ha was transferred to Coppice Working Circle in 44-45 to increase the coupe area in Rambhadebi Coppice FS.

4. The whole of Gogua block over 1520.64 ha was transferred to Bamboo Working Circle in 41-42.

7.2.12. Bamboo Working Circle: For want of stock map and lack of demand no definite allotment was made to this Working circle.

7.2.13. Merits and Deficiencies: - Mathur's plan was the first attempt at scientific forestry and considering the standard of technical staff then available, prescriptions were simple. Not much was expected nor much was gained,

7.3. Dr. Mooney's Plan for 50-70:

7.3.1. Mooney's Plan 50-70: The first plan expired in the year 1943 when the Second World War was still reging. All the forest staff was then engaged in war-supply and revision of the plan could not be taken up. That plan was extended for 5 years and revision work was taken up subsequently. A new plan would have been brought to force from the year 1948 but administrative changes consequent to merger of the princely States with the Province of Orissa from 1 st January 1948 resulted in dislocation of the work. With the transfer of officer entrusted with the revision of the plan Dr. Mooney had to complete the plan which was enforced from the year 1950. Some amendments to the prescriptions were subsequently carried out under the supervision of Shri G. K. Das, the then Working Plans Officer, Sambalpur Circle and also the area statement was recast basing on computation with planimeter.

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7.3.2. Dr. Mooney's plan prescribed 06 working circles covering all the R. Fs. These Working Circles were given below.

1. Sal Conversion Working Circle covering 28693 acres
2. Selection Working Circle covering 163822.80 acres
3. Coppice Working Circle covering 68226.40 acres
4. Soft-Wood Working Circle covering 175439.80 acres (over lapping)
5. Protection Working Circle covering 43448.40 acres
6. Bamboo Working Circle covering 337870.60 acres (over lapping).

Prescription therein and results achieved are discussed in the following paragraphs:-

7.3.3. **Sal Conversion Working Circle:** Prescription: - To this working circle were allotted the better type sal areas of Ushakothi and Badrama R.F which, on the whole are the crean of both the divisions. Only one F.S. under the name Ushakothi-Badrama was formed which lies entirely in Bamra Division. Because it was for the first time that conversion to uniform system was introduced.

7.3.4. **Selection Working Circle:** Prescription - All the high hill blocks of Khajuria, Pradhanpat, Pravasuni and Badtaila totaling an area of were allotted to this working circle. Four felling series (Khajuria, Pravasuni, Pradhanpat and Badtaila) were formed. Sal was the main principal species. Exploitable diameter for Sal was fixed at 20" d.b.h. in Pradhanpat and Badtaila, where as in Khajuria and Pravasuni it was 18" d.b.h.Improvement marking down to 8" d.b.h. in all these F.S. along with the main marking was prescribed. Yield was prescribed on number of trees basis in Khajuria, Pravasuni and Pradhanpat FS. where total enumeration had been carried out. In the other F.S.yield was prescribed by area. Felling cycle in all the F.S. was fixed at 20 years synchronizing with the plan period.

7.3.5. **Results of the prescription:** There cannot be any dispute about the correctness of allotment of areas to this working circle.

7.3.6. All these F.S except Pradhanpat had been worked under High Forest Working Circle in Mathur's Plan and the same system was continued. Pradhanpat had been kept under unregulated working circle so far because of lack of demand. All these forests have been combed for war-supply during the Second World War.

7.3.7. All the coupes in all the F.S. have been worked out and it cannot be said that a better crop has not resulted. In Khajuria, Pravasuni and Pradhanpat F.S. where yield was prescribed on the basis of number of exploitable trees, the entire area should have been worked over at the end of the felling cycle but large areas have remained unworked. The unworked area is about 50% in Khajuria, 25% in Pravasuni and 20% in Pradhanpat. The yield calculation has gone entirely wrong in all these felling series. Either the enumeration figures on the basis of which the yield was calculated were not a true representation or the hypothesis that no allowance be given for increment on consideration of the high amount of degrade in some of these forests, which may very likely off-set the increment did not prove correct. No gainful purpose will be achieved to find out which of the two was incorrect or both have contributed to the present state of affairs. The only outcome is that profitable exploitation of some trees will be lost as those are likely to turn unsound by the time the F.S. is completely worked. Had there been an interim revision this could have been avoided.

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7.3.8. These areas except for those compartments mentioned above are most suited for selection working and should be continued to be worked as such. Yield regulation on numerical basis is hazardous unless the enumeration figures are statistically acceptable and due allowance is correctly given for the future increment and degrade.

7.3.9. **Coppice Working Circle:** After allotment of conversion and selection working circles the balance workable areas were allotted to this working circle. The system adopted was coppice with standards, Rambhadevi and Thianal felling series (to 60 years in Kholbilong and Gogua felling series) and 80 years in Badtaila, Panguli and Mandasila felling series. Many of the F.Ss. were being worked from the last plan. The new ones were Chaitrai, Thianal, Kholbilong, Gogua, Badtaila, Panguli and Mandasila. Chaitrai and Gogua were to meet the local demand whereas the other new F.S was to cater to the general market. This F.S. which was hither to before consider uneconomical for working because of their distance from the market could be opened up with the improvement of the main routes of communication and frequent use of trucks in the extraction of timber and firewood from the forests. The heavy demand for poles and T.I.s. in the Colliery at Talcher brought in added importance to the coupes round about Barkote. Forests in this working circle have a wide range of variation. From almost pure Sal in Badtaila it varies to dry mixed forest in Gogua and scrub in Chaitrai. Opening of so many F.S. has been fully justified for the demand they have met.

7.3.10. **Result of the prescription:** Coppicing has, on the whole, succeeded in most of the felling series. There has been a set-back on the upper slopes of Bandhabar East and West and Haldibahal where bamboo has swamped over the higher slopes. Coppicing has surprisingly succeeded on the higher slopes of Binjipali where one would now-a-days hesitate to clear fell, because the ground is so much strewn with boulders that soil is scarcely seen on the surface. Gourpali has been mainly disreserved. Chaitrai has turned into scrub and Mahabir of Garpati F.S. has fared no better. Their deterioration has nothing to do with the aptness of prescription but their present state is mostly because of biotic interference.

7.3.11. Allotment of all the areas to this working circle can be fully justified except that of Binjipali. No doubt coppice growth has fully restocked the area but the terrain and nature of ground contra indicate its allotment to coppice.

7.3.12. The necessity for a shorter rotation of 40 years for Bandhabar East and West, Kundeisara, Haldibahal, when there was no local demand to meet and when these forests are capable of growing still higher girth-class trees, is not clearly understood.

7.3.13 It had been visualised that Badtaila, Panguli and Mandasila may be taken over to uniform system in the next plan to facilitate which a longer rotation of 80 years had been fixed but the crop condition in Panguli and Mandasila does not justify their transfer to uniform system and hence the long coppice rotation of 80 years for those blocks is also not clearly understood. Further, having fixed such a long rotation, provision ought to have been made to remove the over mature trees (above 5' girth) from over the area which would not be worked under coppice during the currency of that plan. As a result, some trees of higher girth class have already gone unsound. Some of the F.S. viz. Kholbilong, Rambhadevi, Haldibahal had been opened up to coppice during the previous plan period. Thinning in the worked over coupes then were not prescribed. Possibly because by numbering the coupes again from 1, past working was forgotten and thinning therein escaped notice. The management maps also showed only the 20 coupes of the new plan and hence the older ones escaped attention especially those which had been opened a midst the extended period of the last plan.

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7.3.14. The only bad outcome of the past working is the bamboo menace on the higher slopes of Haldibahal and Bandhabar. Not that bamboo invaded the area after clearfelling but bamboo which was in the second-storey got an impetus to grow vigorously with the condition brought about by removing the overhead shade on clear-felling. Tree species there being mainly miscellaneous are naturally slow growing and could not compete with the growth of bamboo. Repeated cutting back of bamboo there to rehabilitate the miscellaneous species was also not desirable as that would have outright eradicated the bamboo. Lopping a few Culms also would not have been of much help. Selection felling on the higher slopes is perhaps the only solution to check bamboo menace there.

7.3.15. No sowing and planting in this working circle had been prescribed but regular Teak plantation has been raised in Haldibahal FS after clear-felling the miscellaneous forests which were then not due for working. In addition certain portions of annual coupes have been planted up with Teak. Some strip planting of Teak has also been done there with poor results. Some Teak plantations have also been raised in Bandhabar West.

7.3.16. In the coppice coupes also there has been inadequate clennings after the main felling.

7.3.17. **Soft-wood Working Circle:** Prescription - This working circle overlapped the conversion, selection and coppice working circle and extended over 71028.25 Hect. (), 75,439.80 acres) and was divided into four felling series viz. Bandhabar, Betjharan, Badrama-Binjipali, Ushakothi-Badrama and Badtaila-Panguli soft-wood F.S. No doubt, general market would have got the benefit from the constitution of the working circle but the primary intention was to make soft-wood available to the match factory at Bamra. Exploitable diameter was fixed at 24" for Kadam and Mango, 20" for Semul, Chhatian, Mahanim and Betra and 16" for Salai, Girdhini, Bhunkund and Mai. The felling cycle was fixed at 20 years. Except for selection felling of exploitable trees as mentioned above no other operation was prescribed.

7.3.18. **Result of Prescription:** Except for one FS near Bamra i.e. Betiharan-Bandhabar FS no other F.S. has been worked. Even in Betjharan-Bandhabar work was done in fits and starts depending upon the working of the match factory. Occurrence of soft-wood in both the divisions is not much and its non-working has no importance.

7.3.19. **Bamboo Working Circle:** Prescription - This was an overlapping working circle covering an area of 138789.71 hectares (337870.60 acres). All the reserve forest blocks in both the division except Garpati, Mahabir and Chaitrai were included in this working circle. The growing demand for bamboo mainly for paper pulp necessitated formation of such a large working circle. As a matter of fact, no bamboo bearing area in the R.F was left out of this working circle. There were 21 felling series of which the smallest was 63.56 hectares (1640 acres) and the largest was 20474.49 hectares (50572 acres). A four year cutting cycle was adopted. Removal of clump from a clump was on selection basis. The felling rules provided to fell all culms in a clump except all culms under 13 month old and except 6 old green culms not more than 3 year growth distributed evenly round the periphery. No Culm in flower was allowed to be felled till the seeds ripened nor was any clump with ten or less culms allowed to be worked.

7.3.20. **Result of Prescription:** The 12 year lease of Bharat Sabai Grass Ltd. continued for two years at the beginning of this plan over portions of this working circle in Ushakothi and Badrama blocks. Bamboo has been almost solely worked by the Orient Paper Mill who has been holding long term leases all along from 1-10-56. The other, no doubt unauthorized, exploiter of these forests is the mat-maker. Their number has become so large

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that they have become a serious menace to the Bamboo forests. Unless their depredation is checked all over, cutting rules based on sound silvicultural practice will have no meaning. Bamboo forests are fast deteriorating for which these unauthorized over-workings are in no small measure responsible. Apart from that, the prescription to retain all Culm under 13 month old was confusing in itself taking advantage of which Culm of one season growth were retained and more than one season growth were removed. Over- felled clumps was the general state of affairs, whether because of bad working of the lessee or because of clandestinely removal by the mat-maker cannot be specifically described. If it was the intention of the prescription to retain all culms up to two season's growth, there has been over felling which has been covered by the ambiguity. If, however, it was intended to retain only one season's growth, the prescription was not a sound one. Fact remains that the Bamboo forests have deteriorated in the meanwhile.

7.3.21. **Protection Working Circle**: This working circle covered 17590.44 hectares (43448.40 acres). Except for working Bamboo wherever it occurs no other felling was prescribed. This working circle also included forests which could be worked but were not opened for working because of lack of demand as in Rambhadevi or because of immature crop as in Pauri and Kansar.

7.4. Shri S.S Panigrahi's Plan of forests of Bamra and Deogarh Division (1970-1990):

7.4.1. In the plan of the forests of Bamra and Deogargh Forest Division by Shri S.S. Panigrahi which came into force from 1970-90, one of the main object of management was to improve the present irregular crop by means of long range scientific management combined with sound silvicultural practices so as to bring about conditions approaching a normal forest where from the maximum annual sustained yield can be obtained. Keeping this in view Shri Panigrahi had prescribed the following five working circles:-

1. The Sal Conversion Working Circle
2. The Selection-Cum-Improvement Working Circle
3. The Coppice Working Circle
4. The Rehabilitation Working Circle
5. The Bamboo (Overlapping) Working Circle

7.4.2. **The Sal Conversion Working Circle:** The best Sal forests of the tract had been allotted to this working circle. The main object of management here was to obtain an uniform crop in the least possible time without excessive sacrifice or wastage of immature trees. The total area allotted to this working circle was 10070.730 hectares (24866.06 acres). This silvicultural system prescribed was concentrated regeneration felling by periodic blocks. The average site quality of Sal here as per standards prescribed in All India Yield and Volume Tables was quality III. One felling series namely Ushakothi had been constituted and there was allotment of areas to P.B.I., P.B.II., P.B. Inter and P.B.V. each of 20 years period, the conversion period being 100 years. The system adopted for P.B. I was "Conversion to uniform" by clear felling after retention of advance growth and some standards which does not include the areas on higher slope above 30^0. In such areas system adopted is selection felling. Artificial regeneration in moist patches and valley bottoms had been prescribed to restock the blank patches with scanty regeneration. In P.B.II areas selection felling of over mature trees of and above 60 Cm. in diameter and crown thinning were prescribed. In P.B Inter selection felling of mature trees of and above 50 Cm. in diameter and periodical thinning were prescribed. In P.B.V. cultural operations like cleaning and thinning had been prescribed.

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7.4.3. **Result:** There have been wrong allotments to this working circle on consideration of crop condition or the terrain or both. Ushakothi compartments 30, 46 and 50 were on this ground misfit in this working circle. Hence in the Panigrahi's plan these compartments were allotted to Selection-cum-Improvement Working Circle.

7.4.4. As noticed by Shri Panigrahi, I.F.S. regeneration has been established in clear felled area with varying degree of success. The degree of success depends on adequacy of the regeneration on the ground at the time of main felling. Where regeneration was adequate and afterward tended properly, a fine crop has come up. Where tending operation has been neglected a very dense crop has come up but poorly developed stems noticed. In areas deficient of regeneration, grassy blanks have come up. Where bamboo was present in the areas with deficient regeneration, it has swamped over the deficient and 32 (a) were clear felled area in Mooney's plan and P.B.V. in Panigrahi's plan are the examples. Hence area should be allotted to P.B.I. looking to the regeneration only and tending operation is a must after clear felling to achieve fully stocked forests.

7.4.5. Prescription for P.B.II areas was not adequate in Mooney's plan. But in Panigrahi's plan the prescription for P.B. II areas were there with removal of over mature trees and crown thinning which enable the crop to put up a final spurt of diameter increment. Moony anticipated revenue felling in such removal of over mature trees which Shri Panigrahi have cautioned the Divisional Forest Officer to ensure care during such removal of over nature trees. By this action the areas deficient in regeneration have shown no improvement. Some areas due to be worked towards the end of the plan where the over mature trees would have got a long interval to become unsound. Hence Panigrahi has prescribed against this unnecessary sacrifice. There are also wrong allotments of area in P.B. II in Panigrahi's plan. As per example Ushakothi compartment 54 (a) is in P.B. II. This area is on steep hill with scanty Sal. The natural regeneration of Sal was heavily infested with climber and tall weeds. Young Sal regeneration was suppressed because subsequent silvicultural operations were not carried out fully as per prescription. In some areas coupe working was not completed in time. Damage to young regeneration due to fire, grazing was common. Damage to mature trees due to illicit felling was also noticed.

7.4.6. The area in P.B. Inter in Mooney's plan were worked under selection with improvement felling with the object of removing mature and over mature trees. So that when their time comes to pass up into P.B. II sound well grown crops of middle age will be available. Felling of over mature trees as in selection system in these areas was inescapable whether the areas were put under P.B. Inter or to different P.Bs. But instead of prescription of improvement marking in P.B. Inter, the particular age class would have been given preferential treatment in the different areas allotted to different P.Bs. and those age classes had been tended in succeeding periodic blocks, so that even agedness could have been brought about in a shorter period. In Mooney's plan marking for improvement felling has been very liberally done as a result, for example compartments like Ushakothi 43, 42 which were in P.B. Inter and brought to P.B.II of Panigrahi plan, the trees of higher girth class were not many. Panigrahi noticed that by such liberal improvement felling profuse regeneration has come up in those openings. But low incidence of higher girth class trees, it will amount to sacrifice if those areas are straight away transferred to P.B.I., although the conditions of regeneration justify such a transfer. But as a whole with utmost care for the prescription of Panigrahi heavy selection fellings have been carried out in P.B. Inter areas in part of Badrama and Ushakothi forest blocks. Many mature and sub-mature trees have been removed resulting in permanent openings in the canopy.

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7.4.7. **Selection-cum-Improvement Working Circle:** The total area allotted to this working circle was 88, 438.473 hectares of which 44,446.725 ha lie in Bamra Division and 43,991.748 hectares lie in Deogarh Division. The greater part lies in remotely situated high hills having dry and miscellaneous forests. Ten felling series had been constituted of which 4 lie in Deogarh Division, 5 in Bamra Division and 1 over-lapping both the division. Different exploitable diameter had been adopted for different species ill different felling series. Felling cycle adopted was 20 years. Yield was fixed on area basis subject only to Smythies's Sage Guarding formula to safeguard the future yield. Detailed marking rules were prescribed for (a) Marking exploitable trees and (b) Improvement markings. In general retention of one tree out of every three sound trees marked for felling had been prescribed.

7.4.8. **Results:** This working circle has worked comparatively better than other working circle. Although felling have been done in general as per prescriptions of the plan up to 1982-83, subsequently certain felling series could not be worked due to submergences by Rengali Dam Project and rehabilitation of displaced persons. Coupe Nos. 14 to 20 in Pravasuni felling sries were not worked due to rehabilitation and subsequently for preservation. Pradhanpat coupe Nos.13 to 20 was not worked because the same lay in catchment area of Pradhanpat water-fall. Badataila coupes Nos.14 to 20 were affected by rehabilitation. Similarly Malyagiri and Kansar felling series were also affected due rehabilitation and submergence. However coupes in the felling series of Kansar, Pauri, Makarchua and Kuladera, etc. were continuously worked. In the worked-out areas the forests have been over exploitated. Prescriptions for cleaning, thinning, and climber cutting were generaly neglected and this has affected the condition of the crop seriously.

7.4.9. **Coppice Working Circle:** This working circle was spread over an area of 35,691.881 hectares. The silvicultural system adopted was coppice with standard. The primary object of retaining standard was to provide seed of valuable tree species for seedling regeneration to supplement the coppice regeneration in the usual course SQ also as a safeguard against the remote chance of failure of the later. Artificial regeneration of economically important specie's was prescribed for blanks and open areas as well as eroded areas. Rotation of 40 years in respect of 9 felling series and 60 years for other 9 felling series was adopted. Yield was fixed on the basis of area. Annual coupes had been found on approximately equi-productive area basis. The forests allotted to this working circle had been divided into 18 felling series out of which 9 lie in Bamara Division and 9 in Deogarh Division.

7.4.10. **Results:** The results of working under this working circle has proved disastrous except a few blocks like Bandhabar (part), Badtaila (part), Panguli (part), Mandasila (part), Rambhadevi (part) and Gogua (part). Almost all the B class blocks and many of the A class blocks have depleted as the coppice growth failed to rejuvenate. Due to nearness of the area allotted to this working circle to habitation where population of men and cattle have increased alarmingly. Inspite of the prescriptions for the working plan it has not been possible to control the illicit removal of forest produce from these areas, regulate grazing and protect from forest fire as a result of which degradation of forests in the blocks like Rambhadevi, Badtaila, etc, has taken place so much so that several portions of it have become completely tree less. Though standards were left but subsequently removed by the villagers. Subsidiary silvicultural operations have not been carried out and on the whole the crop has not responded to this system. Therefore this system has been discarded. Furthermore basing on the provisions in sub-clause 2 (IV) of Forest Conservations Act, 1988 this system have been decided to be discontinued.

7.4.11. **The Rehabilitation Working Circle:** This Working Circle covers an area of 1, 497 hectares and includes Sal-bearing area which had over the years been clear-felled due to its nearness to habitation. Part of Kansar is included in this working circle. Cultural operations like cleaning and artificial regeneration supplemented with soil conservation

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measures was the system recommended. Kansar had been formed and elaborate soil conservation measures like gully control, contour-trenching protection from grazing, fire, etc. had been recommended.

7.4.12. **Results:** Although Peripheral trench-digging operation was attempted in Kansar block to afford protection. The Sal shoots occurring in open areas were recklessly cut for making tooth-sticks. Due to financial constraints, several necessary operations prescribed in the working plan could not be carried out.

7.4.13. **The Bamboo (Overlapping) Working Circle:** This Working Circle covers an area of which is about 97% of the total RF area of the last working plan. The extent of the forest area of the working circle gives an idea of the widespread nature of bamboo in the forest Divisions. Salia bamboo (Dendrocalamus strictus) is the main bamboo species occurring in all the felling series. The other bamboo, namely Kanta bamboo (Bambusa arundinaceace) and Dongi bamboo (Cophalostachyun pergractle) occur very sporadically in moist areas and higher elevations. Salia bamboo occurs extensively in Kansar block where the growth is luxuriant and incidence high. The cutting cycle fixed is 4 years. All the felling series have been worked out by Mls O.P. Mills Ltd., Brajarajnagar on long-term lease basis and then worked by Orissa Forest Development Corporation Ltd. Culms silviculturally available have been prescribed for cutting and the yield prescribed is an area basis. No enumeration was done.

7.4.14. **Results:** In many areas the cutting rules have not been properly followed. In Pravasuni, the local artisans have been relentlessly cutting the bamboo clumps. Bamboo clumps have also severely suffered due to removal of young shoots called "Kardi" and also for manufacture of bamboo mats and baskets.

7.5. **Past System of Management of Kulabira Ex-Zamidary Forest:**

7.5.1.The Kulabira forests were under Zamindar Saheb since 1914. The forests were exploited with irregular felling by granting lease to timber merchants till 1933-34. During 1933-34 under the instruction of the Deputy Commissioner the Zamindar Saheb prepared a Working Scheme which was redrafted by D.F.O., Sambalpur East. The system of management was coppice with standard with rotation of 30 years. But the coupes were not worked according to the sequence.

7.5.2. During 1942 a revised scheme was drawn by Mr. M.L. Sengupta, I.F.S. and came into force from 1943-44. All the 18 blocks were brought under one working circle, treatment being coppice with standard and rotation fixed at 40 years. There were three felling series- (a) Talamunda F.S. worked up to 1972-73, (b) Bagdehi F.S. worked up to 1969-70 and (c) Mahulmunda F.S. worked up to 1971-72.

7.5.3. The scheme was a failure because the results are very disappointing due to inadequate protection and non-execution of subsidiary operation.

7.5.4. The next scheme was prepared by Shri Ananta Tripathy for the period from 1978-79 to 1993-94. The object of the scheme was to affect a rigid protection to the existing crop and to improve the partial degraded forest by proper tending and other operations. In fact the forest was under three distinct conditions. (a) First Category: those forests which have not been worked during the last scheme period, (b) Second Category: The Sal forests which after working in the previous scheme were still in bushy stage, (c) Third Category: It includes the forest where Sal forms the negligible percentage of the composition and the areas are almost barren with miscellaneous bushes.

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7.5.5. The scheme stipulates to bring up the second category to the level of forest with a period of 10 to 15 years after which both the first and second category would be worked under one system of management. Plantation was prescribed for third category. The following working circles were prescribed-

1.Coppice Working Circle
2. Rehabilitation Working Circle
3. Protection Working Circle
4. Plantation Working Circle
5. Bamboo Working Circle

7.6. Shri Ananta Tripathy's Scheme-1980-81 to 1989-90

7.6.1. This scheme was mainly having the object to improve the present irregular crop by suitable management combined with sound silvicultural practices. Since the measure portion of the forests were in plain it was subjected to encroachment. Hence choice for any system involving clear felling of the areas was very much restricted because of apprehension of encroachment. From silvicultural point of view and from the utilisation point of view since the market is nearer to the forests, coppice system would have been very much suitable to most of the blocks. But coppice system could not be adopted until the blocks were declared reserved. The following working circles were prescribed in the scheme:-

7.6.2. **Selection Working Circle:** This cover all the blocks which contain good number of matured and over matured trees and are not subjected to encroachment. The area allotted was 16,743.754 hectares.

7.6.3. **Rehabilitation Working Circle:** The rest of the blocks which are more or less degraded and not fit for inclusion in selection working circle were allotted to this circle. It was intended to retain this circle for a period of 10 years during which the improvement of stock would be done. Shri Tripathy also presumed that when there will be notification of reservation during the next revision most of these blocks can be worked under coppice or selection system. The area allotted to this working circle was 16,466.059 hectares.

7.6.4. **Bamboo Working Circle:** This working circle comprised of 3 blocks-Kandarpalam, Chilantikhol and Telkusum, which were allotted to Selection Working Circle. The area allotted was 5123.250 hectares. The result achieved by this scheme is very poor. The reason is the problem of protection. In the meanwhile 9 (nine) Nos. of D.P.F have been declared reserved and needs recasting of the circle.

7.7. Past System Of Management Of D.P.F Of Deogarh Division:

7.7.1. The Kandha and Bhuyan had in occupation of this tract. They were practicing shifting cultivation and during the Durbar administration when this evil of shifting cultivation was felt the adibasis were settled.

7.7.2. Prior to creation of protected forests the exploitation of forest materials over these Khesra forests was irregular and unrestricted. Sound trees were converted to railway sleeper during later half of nineteen century to the early 20th century without following any marking rules. The hollow and defective trees were allowed to rote. In 1952 National Forest Policy was enunciated. From that time more and more Khesra forests were demarcated, removal of timber was restricted; permits were issued by the forests staff to meet the requirement of the tenants.

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7.8. Shri S. N. Bohidar's Scheme-1971-72 to 1990-91:

7.8.1. This scheme was having the object mainly to improve the condition of the economic species of the depleted condition of the forests by natural regeneration bas well as by the artificial regeneration. The following working circle has been prescribed:-

7.8.2. **Selection-cum-improvement Working Circle:** It covers less accessively and hilly blocks like Jhadeswar, Hadmunda, Kundheigola and Kankarkhol. The area allotted was 11750.81 hectares (29086.5 acres).

7.8.3. **The Coppice with Standard Working Circle:** This consists of forests on easy slopes and nearer to thickly populated places to supply the local tenants with poles, fire-woods and building materials. The area allotted was 8505.23 hectares (21053.0 acres.)

7.8.4. **The Rehabilitation Working Circle:** The area allotted was 1256.76 hectares (3110.80 acres) includes all the inaccessible, unproductive and barren type of hilly blocks like Timi, Bhaluhuli and Bhuluka of Pallahara Range (Estate) and part of Kankarkhol block of Deogarh Range. The block Kankarkhol had been divided into four sub-blocks for convenience of allotment of different working circle by artificially demarcated lines on the ground. The rest blocks being small in size with same type vegetation over the entire block needed no division.

7.9. Past System Of Mangement Of Pallahara Forests:

7.9.1 **History of the Durbar administration:** The Pallahara ruling family claims to be of Rajput origin. The earliest ruler was Santosh Pal who established his authority overthe territory with the help of the Savars suppressing the Bhuyans and Kols. The Rajas assumed the title "Ganeswar Pal and Munipal" alternatively. In 1815, AD., the Raja of Keonjhar claimed the gadi of Pallahara, but was forced to withdraw by the interference of the British in 1825 A.D. The Raja Chakradhar Munipal rendered help in suppressing the Bhuyan rebellion and obtained the title of "Raj Bahadur" from the British Government. The hereditary title of 'Raja' was conferred in the year 1874. With the merger of the Princely States the State merged with the State of Orissa in1948. The forests were in Keonjhar Division till 1949 when they were tagged with Deogarh area.

7.9.2. **Early forest operations and forest conservancy:** Prior to 1905, the history of forest management is obscure, except that some logs were exported for revenue purposes. The inhabitants of the State used to cultivate land under the dahi system which caused great damage to the forest. In 1903, by the order of the Deputy Commissioner of Angul, the system was prohibited for all castes except the aboriginals. Taila lands were permanently settled. The Bhuyans paid rent of Re.1 per house per 20 seers' of Biri. Logs obtained from wind fallen trees and those from areas cleared for cultivation were exported on permit to the local people. Logs were collected at the 'ghats. Sales are arranged by a negotiation and the royalty was paid after the sale.

7.9.3. **Agency Forest Officers & initiation of reservation:** In 1905 Mr. Mee was appointed as the Special Forest Officer to make proposals for the management of the forests. Under his suggestion an area of 266 Sq. Miles consisting of Maiyagiri (145 Sq. Miles), Paburi (30 Sq. Miles), Makarchuan (24 Sq. Miles) and Chungmatia (16 Sq. Miles) was tentatively reserved though the demarcation was done long after the tentative approval of the suggestion. The inspection notes of the Agency Forest Officers stressed the demarcation of the RF and

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clearance of boundaries. New reserves were created. Steps were taken in 1930 to reserve areas in Paburi hills on the suggestion of Dr. Mooney. The first Nizgarh 'B' RF was created in 1924. Few more RF and 'B' RF have since been created and some areas are on the process of reservation now.

7.9.4. **Forest Cess:** Forest CESS was imposed in 1905 at the rate of 0-1-0-per acre of paddy, sugar cane and tobacco land and 0-0-6 for other kinds of land, against the suggestion of 0-2-0 per acre of cultivated land as suggested by Mee. The revenue expected was Rs. 1000 per year. The Bhu yans and other aboriginals were exempted from this tax along with Brahmottar, Debottar & service lands along with Mee's suggestion to increase the tax from Re.1 to 1-8-0 from Bhuyans family for 20 seers of Biri was not approved but was kept at 1-2-0 per house. The present revenue from cess amounts to Rs. 1,679 per annum at the rate of 0.06 per rupee of land revenue.

7.9.5. **Staffs:** On the suggestion of Mr. Mee staffs were increased. A Ranger, one Moharir and 12 Forest Guards were appointed.

7.9.6. **Forest Rule:** Forest rules came into force in 1905 with initiation of steps for forest conservancy

7.9.7. **Settlement of the aboriginals:** The Deputy Commissioner of Angul took the first step in 1905 to shift the Juangs from the Malyagiri hills to the plain forests. The step could not be taken in the case of Bhuyans who claimed feasible right on soil and the forests and it were anticipated to create trouble.

7.9.8. **First Working Plan:** The first working plan for the forest of Pallahara was prepared by Shri G. N.Mathur for the period from 1947 to 1957 which was extended for a period of another 10 years. Prior to this plan the forest has been exploited to the maximum extent for sleepers and the middle aged crop left needed removal of the congestion. Shri Mathur prescribed-

(i) Improvement felling Working Circle
(ii) Coppice Working Circle
(iii) Protection Working Circle

7.10. **Routray Plan-1968-69 to 1987-88:**

7.10.1. This plan was prepared by Shri B.Routray, Asst. Working Plans Officer, Sambalpur and had the following working circles:-

7.10.2. **Selection Working Circle:** This working circle includes better forests such as Malyagiri, Paburi, Makarchua, Tamkia, Saida, Kuladera blocks and also Danda, Biripal and Jambua blocks containing comparatively with poorer growth. The system prescribed was Selection-cum-Improvement with different exploitable girth to suit various conditions. This covered an area of 26,666.40 hectares (65,847 acres).

7.10.3. **Coppice Working Circle:** The forests allotted to this working circle were nearer to Talcher where there was steady demand for small timbers for Colliery. System prescribed was coppice with standards, the number of standards being 15 per acres. Rotation was fixed at 40 years for all felling series except 60 years rotation in Chargochhia felling series. The total area covered was 3,614.55 hectares (8924 acres).

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7.10.4. **Improvement Working Circle:** This working circle includes the sizeable Sal bearing patches of Kujam block containing most young coppice growth. This area we're worked under coppice in Mathur's plan. The prescription was improvement felling with a view to improving the existing Sal crop. 600 ha. (1481 acres) were allotted to this circle. It was stated in this plan that coppice working cannot be continued in the rest of the area of the coppice working circle of the Mathur's plan as the unwoked areas were either eroded or contain sparse growth and suitable area were not enjoined the equivalent legal status.

7.10.5. **Soil Conservation Working Circle:** The area of Kujam block has included under the Improvement Working Circle were allotted to this working circle. The areas were either eroded or contained stunted sparse growth. The prescription aimed at Minor Engineering methods and supplementary planting of suitable economic species for creating adequate forest cover, 860 hectares (2183 acres) was allotted to this working circle.

7.10.6. **Bamboo Working Circle:** This working circle includes the area having bamboos sufficient enough for economic exploitation. It over laps parts of Malyagiri, Makarchua and Banor felling series of the Selection Working Circle. Four years cutting cycle has been adopted, the area of the working circle was 15,920.40 ha. (37,313 acres).

7.10.7. **Miscellaneous Regulations:** No irregular felling of green timber was permitted except for Departmental works or for supply to fire affected persons. This was proposed to be met from the neighbouring village forests and in case of non-availability there, it was suggested to be met from incompletely worked or unworked coupes. No restriction was imposed on the removal of dead and dry trees of any species, dry firewood and all minor forest produce by the Divisional Forest Officer with the prior approval of the Conservator of Forests. The Divisional Forest Officer had the complete liberty to remove all dry first class trees wherever noticed and sale them. Grazing rules and fire protection measures were spelt out in clear terms under this. Developmental programmes like construction of roads, buildings and wells, etc. were planned. The silvicultural requirements of the crop which were specified in the plan were hardly observed. The developmental programmes were also not executed to the desired extent. The communication facilities however considerably developed rendering the forest produce economically exploitable. But still the communication system is in poor shape and necessitates a lot of attention. The bridges and culverts should be improved and surfacing of the roads should be better. Some buildings were constructed and some wells also dug during the currency of the plan. But boundary clearance and maintenance of pillars were very badly neglected.

7.11. Mr. Bhagirathi Behera's Plan- 1995-96 to 2014-15.

7.11.1. The objects of management of this plan was maintenance of environmental stability through preservation, conservation of existing natural Forest, encouraging of efficient utilization of forest produce and creating a massive people's movement with the involvement of women especially for achieving these objectives and to minimize pressure on existing forests. Mr. Behera prescribed the following Working Circles.

1. Selection Working Circle.
2. Rehabilitation-cum-Plantation Working Circle
3. Protection Working Circle
4. Bamboo (Overlapping) Working Circle
5. Wild Life (Overlapping) Working Circle
6. M.F.P (Overlapping) Working Circle

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7.11.2. This plan was approved by Ministry of Environment and Forests, Govt. of India vide their Letter No. 13-FOWP/OS-BAMARA, Dt. 14.05.1997 with "No Green Felling is allowed except removal of dead and wind fallen trees". The result of current revised working plan (1995-96 to 2014-15) is given below.

7.11.3. **Selection Working Circle:-** The forest area having crop density more than 0.4 was allotted to selection working circle with objective to enrich the quality of the crop by suitable scientific management. The total area allotted to this working circle is 78790.628 ha, which is divided into coupes for annual working. Now the selection composition of the crop is non-existent over extensive areas. Workings of all Selection Coupes were not taken up due to ban on green felling. In an average 20 % of coupes were worked out up to 2011-12. Also the tending operation like thinning, cleaning, climber cutting etc have not been done as per prescription. Details of coupe allotted for working and coupes worked out are given below.

Table No. 144

Details of Timber Coupe allotted for working and coupe worked out

Year		Area in ha	No. & Name of coupes worked out and Production in Cum.
1995-96	13	3605.213	Nil
1996-97	13	3532.191	Nil
1997-98	1.Pradhanpat SWC-III 2.Pravasuni SWC-III 3. Gogua SWC-III 4. Jhadeswar SWC-III 5. Kankarkhol SWC-III 6. Kundheigola SWC-III 7. Badatalla SWC-III 8. Pauri SWC-III 9.Barkote Extn. SWC-III 10. Malyagiri SWC-III 11. Makarchua SWC-III 12. Kuladera SWC-III 13. Banar Extn SWC-III	259.165 270.135 180.144 169.533 137.700 130.410 493.229 411.075 210.000 543.510 513.540 86.265 215.865	1. Badtaila SWC-III-36.438 cum 2.Pauri SWC-III -25.934 cum 3. Malyagiri SWC-III -216.659 cum (Total area =1447.814 ha)
1998-99	1.Pradhanpat SWC-IV 2.Pravasuni SWC-IV 3. Gogua SWC-IV 4. Jhadeswar SWC-IV 5. Kankarkhol SWC-IV 6. Kundheigola SWC-IV 7. Badatalla SWC-IV 8. Pauri SWC-IV 9.Barkote Extn. SWC-IV 10. Malyagiri SWC-IV 11. Makarchua SWC-IV 12. Kuladera SWC-IV 13. Banar Extn. SWC-IV	517.833 263.250 198.936 124.902 188.244 163.134 513.864 396.900 210.000 595.350 392.850 107.325 108.945	1. Malyagiri SWC-IV-53.765 cum. 2. Makarchua SWC-IV-216.659 cum (Total area = 988.2 ha)
1999-00	13	3517.438	Work order issued & started then stop due to Ban on felling
2000-01	13	3639.669	Nil
2001-02	13	3813.496	Nil
2002-03	13	3965.178	Nil
2003-04	13	4025.422	Nil

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2004-05	16	5596.449	Nil
2005-06	1. Khajuria SWC-XI	630.180	1. Malyagiri SWC-XI – 193.25
	2. Pravasuni SWC – XI (sirid)	313.945	2. Makarchuan SWC-XI – 308.50
	3. Malyagiri SWC – XI	496.125	3. Kuladera SWC-XI – 88.0
	4. Makarchuan SWC – XI	525.690	4. Pauri SWC-XI – 357.88
	5.Pradhanpat SWC – XI	312.984	5. Jhadeswar SWC-XI – 211.25
	6. Pravasuni SWC – XI	253.773	6. Pravasuni SWC-XI – 65.49
	7. Kansar SWC – XI	446.456	7. Pradhapat SWC-XI – 21.87
	8. Gogua SWC – XI	138.209	8. Panguli SWC-XI – 43.31
	9. Jhadeswar SWC – XI	161.514	
	10. Kankarkhol SWC XI	215.460	
	11. Kundheigola SWC – XI	212.058	(Total area = 2596.198 ha)
	12. Badataila SWC – XI	572.184	
	13. Pauri SWC – XI	384.750	
	14. Panguli SWC – XI	303.412	
	15 Kuladeara SWC – XI	157.950	
	16. Banar SWC XI	111.780	
2006-07	1.Lamdura-Kandarpa SWC – XII (Chilantikhol)	446.400	1. Lamdura-Kandarpa SWC – XII – 27.0543
			2. Pauri SWC – XII – 364.75
			3. Malyagiri SWC – XII – 30.82
	2. Pravasuni SWC – XII (sirid)	150.000	4. Makarchuan SWC – XII – 175.86
	3. Malyagiri SWC – XII	641.310	5. Kuladera SWC- XII – 160.0
	4. Makarchuan SWC – XII	358.830	6. Pravasuni SWC – XII – 26.293
	5.Pradhanpat SWC – XII	329.765	7. Pradhanpat SWC – XII – 19.734
	6. Pravasuni SWC – XII	297.675	8. Khajuria SWC-XI – 46.9737
	7. Kansar SWC – XII	410.130	
	8. Gogua SWC – XII	149.017	(Left out coupe of 2005-06)
	9. Jhadeswar SWC – XII	175.122	
	10. Kankarkhol SWC XII	226.800	
	11. Kundheigola SWC – XII	178.200	
	12. Badataila SWC – XII	391.636	(Total area = 3108.015 ha)
	13. Pauri SWC – XII	449.550	
	14. Panguli SWC – XII	292.452	
	15 Kuladeara SWC – XII	154.305	
	16. Banar SWC- XII	111.375	
	17. Khajuria SWC-XI (Left out coupe of 2005-06)	630.180	
2007-08	1.Lamdura-Kandarpa SWC – XIII (Chilantikhol)	435.500	1. Lamdura-Kandarpa SWC – XIII – 173.75
			2. Pauri SWC – XIII – 100.151
	2. Pravasuni SWC – XIII (sirid)	341.419	3. Malyagiri SWC – XIII – 69.25
			4. Makarchuan SWC – XIII – 741.86
	3. Malyagiri SWC – XIII	668.250	5. Kuladera SWC- XIII – 120.73
	4. Makarchuan SWC – XIII	697.005	6. Kansar SWC- XIII – 44.59
	5.Pradhanpat SWC – XIII	322.440	7. Pradhanpat SWC – XIII – 20.416
	6. Pravasuni SWC – XIII	238.707	8. Badtaila SWC – XIII – 18.121
	7. Kansar SWC – XIII	463.642	
	8. Gogua SWC – XIII	167.670	
	9. Jhadeswar SWC – XIII	161.514	(Total area = 3678.029 ha)
	10. Kankarkhol SWC XIII	220.968	
	11. Kundheigola SWC – XIII	195.331	
	12. Badataila SWC – XIII	485.312	
	13. Pauri SWC – XIII	437.400	
	14. Panguli SWC – XIII	300.750	
	15 Kuladeara SWC – XIII	168.480	
	16. Banar SWC XIII	128.385	
2008-09	1.Lamdura-Kandarpa SWC – XIV (Chilantikhol)	334.700	1. Lamdura-Kandarpa SWC – XIV – 90.25
			2. Pauri SWC – XIV – 252.36

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	2. Pravasuni SWC – XIV (sirid)	569.025	3. Malyagiri SWC – XIV – 488.75 4. Makarchuan SWC – XIV – 548.25
	3. Malyagiri SWC – XIV	603.450	5. Kuladera SWC-XIV – 20.00
	4. Makarchuan SWC – XIV	365.095	6. Kansar SWC-XIV – 37.39
	5.Pradhanpat SWC – XIV	364.144	7. Pravasuni SWC – XIV – 60.50
	6. Pravasuni SWC – XIV	254.907	
	7. Kansar SWC – XIV	437.081	
	8. Gogua SWC – XIV	130.434	
	9. Jhadeswar SWC – XIV	150.984	(Total area = 2567.093 ha)
	10. Kankarkhol SWC XIV	228.906	
	11. Kundheigola SWC – XIV	185.490	
	12. Badataila SWC – XIV	435.416	
	13. Pauri SWC – XIV	409.050	
	14. Panguli SWC – XIV	307.417	
	15 Kuladeara SWC – XIV	162.810	
	16. Banar SWC XIV	129.195	
2009-10	1.Kansar SWC-XV	765.318	1. Lamdura-Kandarpa SWC – XV – 111.75
	2.Chilantikhol SWC-XV	369.360	2. Pauri SWC – XV – 114.34
	3. Pradhanpat SWC-XV	355.104	3. Malyagiri SWC – XV – 162.00
	4. Pravasuni SWC-XV	272.646	4. Makarchuan SWC – XV – 164.87
	5. Gogua SWC-XV	130.434	5. Kuladera SWC-XV – Surrender by OFDC
	6. Jhadeswar SWC-XV	154.872	6. Kansar SWC-XV – 65.91
	7. kankarkhol SWC-XV	218.538	
	8.Kundheigola SWC-XV	189.540	
	9. Badataila SWC-XV	563.112	(Total area = 2579.718 ha)
	10. Pauri SWC-XV	433.350	
	11.Panguli SWC-XV	323.750	
	12. Malyagiri SWC-XV	417.150	
	13. Makarchua SWC-XV	390.015	
	14. Kuladera SWC-XV	204.525	
	15. Banar SWC-XV	233.118	
2010-11	1. Chilantikhol SWC – XVI	441.855	1. Lamdura-Kandarpa SWC – XVI – 59.74
	2. Pravasuni SWC – XVI	371.385	2. Pravasuni SWC – XVI – 70.36
	3. Malyagiri SWC - XVI	704.700	3. Malyagiri SWC – XVI – 137.5
	4. Makarchuan SWC – XVI	402.975	4. Makarchuan SWC – XVI – 1027.62
	5.Pradhanpat SWC – XVI	494.424	
	6. Pravasuni SWC – XVI	236.925	
	7. Addl Kansar SWC – XVI	660.000	(Total area = 1920.915 ha)
	8. Rambhadevi SWC – XVI	200.020	
	9. Jhadeswar SWC – XVI	186.138	
	10. kankarkhol SWC – XVI	203.634	
	11. Kundheigola SWC – XVI	212.220	
	12. Badataila SWC – XVI	424.440	
	13. Paudi SWC – XVI	429.300	
	14. Panguli SWC – XVI	309.825	
	15 Kuladeara SWC – XVI	104.712	
	16. Banar SWC – XVI	150.660	
2011-12	1.Pradhanpat, SWC-XVII	373.896	1. Sirid SWC-XVII – 54.75
	2. Pravasuni, SWC-XVII	109.325	2. Malyagiri SWC – XVII – 731.56
	3. Gogua SWC-XVII	201.000	3. Makarchua SWC – XVII- 464.74
	4.Jhadeswar SWC-XVII	170.586	
	5.Kankarkhol SWC-XVII	252.720	
	6.Kundheigola, SWC-XVII	181.440	(Total area = 1387.125 ha)
	7.Badataila SWC-XVII	250.857	
	8.Pauri , SWC-XVII	411.075	
	9. Barkote Extn. SWC-XVII	334.773	
	10. Malyagiri R.F SWC-XVII	658.125	
	11. Makarchua SWC-XVII	355.185	

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	12. Kuladera, R.F SWC-XVII 13. Banar Extn., SWC-XVII 14.Khjuria, SWC-XVII 15. Sirid, SWC-XVII	87.075 305.613 502.200 373.815	
2012-13	x	x	x
2013-14	x	x	x
2014-15	x	x	x
Total	243 Coupe	66236.478	49 Coupe ((Total area = 20473.107 ha)

7.11.4. Critical Analysis: Total 243 no of coupe (66236.478 ha) allotted to Seeletion Working circle from 1995-96 to 2011-12 but due to ban of green felling and non availability of marked trees 49 no of coupe (20473.107 ha) have been worked out up to 2011-12. Therefore 31 % of area allotted to Selection Working Circle is worked out as per pescripstion of the out going plan.

7.11.5. **Rehabilitation-cum-Plantation Working Circle:** The total area allotted to this working circle. Forest areas previously worked under coppice system were allotted to this working circle. Other degraded forests, completely eroded areas, sal rooted wastes unable to establish due to biotic interference etc were also included in this working circle. Though afforestation measures were taken up the other aspect of rehabilitation work like Soil Moisture Conservation (SMC), fire protection, thinning, grazing, climber cutting, cleaning etc were neglected to some extent.

7.11.6. Critical Analysis: An area of 26720.038 ha allotted to this Working circle. But an area of 28671.31 ha and 18.5 RKM have been worked out. Therefore 100 % of area allotted to Rehabilitation-cum-Plantation Working Circle is worked out as per pescripstion of the out going plan.

7.11.7. **Protection Working Circle:** Forest area having slope more than 50^0, ecotone area, catchments area & eco-sensitive area were allotted to this working circle. This working circle also includes prohibit felling in such areas where soil protection will be primary object and where every effort will be directed to towards retaining and improving as far as possible the vegetative cover. These areas will be strictly fire protected and all grazing animals will be prevented from entering these forest areas. But due to pressure of timber demand from adjoining industrial towns like Talcher, Rourkela, Angul etc with local need and lack of infrastructure like mobility, arms, ammunitions, staffs etc these area are not attended properly.

7.11.8. Critical Analysis: An area of 7404.677 ha allotted to this Working circle for Protecting from fire, grazing and felling. These area are not attended properly

7.11.9. **Bamboo (Overlapping) Working Circle:** Area of this working circle extends over 74819.566 ha. Working of bamboo coupes is done by OFDC Ltd. / BILT. Due to occurrence of Bamboo in patches and also in inaccessible hilly terrain extraction becomes prohibitive and sometimes the coupes are either surrendered fully or some portion of coupe is left leave unworked. It was observed during the field visit on dt.31.10.2011 and dt.01.11.2011 in Deogarh Division that a large portion of unproductive Bamboo Coues were found to be devoid of bamboo clumps which

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means that such areas did not qualify for inclusion in Bamboo Overlapping Working Circle. In the next working plan the area should be deleted from bamboo overlapping working circle and may be treated under rehabilitation working circle. Few patches were found to sustain bushy bamboo clumps containing malformed bamboos and are unfit for harvesting. The biotic interferences were not much in evidence. Subsidiary Silvicultural Operation carried out in previous years has shown encouraging result. Over all evaluation conveys the impression that the areas are essentially non bamboo bearing zone. However some of the areas like Pravasuni – A can be rehabilitated by extensive plantation of bamboo and silvicultural operation of degraded bamboo clumps. Details are given below

Table No. 145

Details of Bamboo Coupe allotted for working and coupes worked out.

Year	No. and Name of Coupes allotted	No. & Name of coupes worked out and Production		
		Name of Coupes worked	I.B in S.U	C.B in Nos.
1995-96	1. Pradhanpat B/C- A 2. Rambhadevi B/C- A 3. Kansar B/C- A 4. Pravasuni B/C- A 5. Gogua B/C-A 6. Badtalia B/C- A 7. Mandasila B/C-A 8. Panguli B/C- A 9. Thianal B/C- A 10. Paburi B/C- A 11. Tusula B/C- A 12. Pallahara B/C-A 13. Paudi B/C- A 14. Danda B/C-A 15. Khamar B/C-A	1.Kansar_B/C-A 2.Gogua_B/C-A 3.Pravasuni B/C-A 4.Pradhanpat B/C-A 5.Tusula B/C-A 6.Paudi B/C-A 7.Mandasila B/C-A 8.Old Paudi B/C-A 9.Pallahara_B/C-A	Total production 4406.00	Total production 4160
1997-98	1. Pradhanpat B/C- C 2. Rambhadevi B/C- C 3. Kansar B/C- C 4. Pravasuni B/C- C 5. Gogua B/C-C 6. Badtalia B/C- C 7. Mandasila B/C-C 8. Panguli B/C- C 9. Thianal B/C- C 10. Paburi B/C- C 11. Tusula B/C- C 12. Pallahara B/C-C 13. Paudi B/C- C 14. Danda B/C-C 15. Khamar B/C-C	1.Kansar B/C-C 2.Gogua B/C-C 3.Paudi B/C-C 4. Mandasila B/C-C 5.Pallahara_B/C-C 6.Old paudi_B/C-C	Total production 3350.92	Total production 18032

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1998-99	1. Pradhanpat B/C-D 2. Pravasuni B/C-D 3. Gogua B/C-D 4. Old Pauri B/C-D	1. Pradhanpat B/C-D 2. Pravasuni B/C-D 3. Gogua B/C-D 4. Old Pauri B/C-D	Total production 1433.13	Total production 9805
1999-00	1. Pradhanpat B/C- A 2. Rambhadevi B/C- A 3. Kansar B/C- A 4. Pravasuni B/C- A 5. Gogua B/C-A 6. Badtalia B/C- A 7. Mandasila B/C-A 8. Panguli B/C- A 9. Thianal B/C- A 10. Paburi B/C- A 11. Tusula B/C- A 12. Pallahara B/C-A 13. Paudi B/C- A 14. Danda B/C-A 15. Khamar B/C-A	1. Kansar B/C-A 2. Pravasuni B/C-A 3.Rambhadevi B/C-A 4. Pradhanpat B/C-A 5. Gogua B/C-A	Total production 1629.63	Total production 64245
2000-01	15 (not delivered)	x	x	x
2001-02	15 (not delivered)	x	x	x
2002-03	Working of 15 Bamboo coupes stopped vide PCCF, Odisha, Bhubaneswar No. 21900, Dt. 01.11.2002 due to writ petition No. 202/95 (Supreme Court)			
2003-04	1. Pradhanpat B/C- A 2. Rambhadevi B/C- A 3. Kansar B/C- A 4. Pravasuni B/C- A 5. Khajuria B/C-A 6. Sirid B/C-A 7. Kuchinda B/C-A 8. Gogua B/C-A 9. Badtalia B/C- A 10. Mandasila B/C-A 11. Panguli B/C- A 12. Thianal B/C- A 13. Paburi B/C- A 14. Tusula B/C- A 15. Pallahara B/C-A 16. Paburi B/C- A 17. Danda B/C-A 18. Khamar B/C-A	1.Kansar,B/C-A(P-I) Kansar,B/C-A(P-II) 2.Sind, B/C-A 3. Khajuria, B/C-A 4.Gogua,B/C-A 5.Old Paudi,B/C-A	381.81 455.17 293.55 139.24 218.76 82.61	7899 10000 - - - -

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2004-05	1. Pradhanpat B/C- B 2. Rambhadevi B/C-B 3. Kansar B/C-B 4. Pravasuni B/C- B 5. Khajuria B/C-B 6. Sirid B/C-B 7. Kuchinda B/C-B 8. Badtalla B/C- B 9. Mandasila B/C-B 10. Panguli B/C- B 11. Thianal B/C- B 12. Paburi B/C- B 13. Tusula B/C- B 14. Gogua B/C-B 15. Pallahara B/C-B 16. Paburi B/C- B 17. Danda B/C-B 18. Khamar B/C-B	1.Kansar, B/C-B 2. Sirid, B/C-B 3. Khajuria, B/C-B 4.Gogua, B/C-B	877.420 607.4936 203.997 408.074	1315 - - -
2005-06	1. Kuchinda B/C- C 2. Pradhanpat B/C- C 3. Rambhadevi B/C- C 4. Gogua B/C- C 5. Kansar B/C-C 6. Pravasuni B/C- C 7. Badtalla B/C- C 8. Mandasila B/C- C 9. Panguli B/C- C 10. Thianal B/C- C 11. Paburi B/C- C 12. Tusula B/C- C 13. Pallahara B/C-C 14. Paburi B/C- C 15. Danda B/C-C 16. Khamar B/C-C	1.Kansar, B/C-C 2.Gogua,B/C-C	680.386 482.154	1000 -
2006-07	1. Pradhanpat B/C-D 2. Rambhadevi B/C-D 3. Gogua B/C-D 4. Kansar B/C-D 5. Pravasuni B/C-D 6. Badtalla B/C-D 7. Mandasila B/C-D 8. Panguli B/C-D 9. Thianal B/C-D 10. Paburi B/C-D 11. Tusula B/C-D 12. Pallahara B/C-D 13. Paburi B/C-D 14. Danda B/C-D 15. Khamar B/C-D 16. Khajuria B/C-D 17. Sirid B/C-D 18. Kuchinda B/C-D	1.Kansar, B/C-D 2.Gogua,B/C-D 3.Kuchinda, B/C-D	952.37 262.29 308.41	1120 - -

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2007-08	1. Pradhanpat B/C- A 2. Rambhadevi B/C- A 3. Kansar B/C- A 4. Pravasuni B/C- A 5. Khajuria B/C-A 6. Sirid B/C-A 7. Kuchinda B/C-A 8. Gogua B/C-A 9. Badtalla B/C- A 10. Mandasila B/C-A 11. Panguli B/C- A 12. Thianal B/C- A 13. Paburi B/C- A 14. Tusula B/C- A 15. Pallahara B/C-A 16. Paburi B/C- A 17. Danda B/C-A 18. Khamar B/C-A	1. Kansar B/C-A – 2. Pravasuni B/C-A – 3. Kuchinda B/C-A – 4. Siridi B/C-A – 5. Gogua B/C-A –	655.20 103.47 143.97 266.39 267.60	1000 - - 1520 -
2008-09	1. Pradhanpat B/C- B 2. Rambhadevi B/C-B 3. Kansar B/C-B 4. Pravasuni B/C- B 5. Khajuria B/C-B 6. Sirid B/C-B 7. Kuchinda B/C-B 8. Badtalla B/C- B 9. Mandasila B/C-B 10. Panguli B/C- B 11. Thianal B/C- B 12. Paburi B/C- B 13. Tusula B/C- B 14. Gogua BC/-B 15. Pallahara B/C-B 16. Paburi B/C- B 17. Danda B/C-B 18. Khamar B/C-B	1. Kansar B/B-B 2. Gogua B/C-B	532.457 407.682	2100 ——
2009-10	1. Siridi B/C-C 2. Kuchinda B/C- C 3. Pradhanpat B/C- C 4. Rambhadevi B/C- C 5. Gogua B/C- C 6. Kansar B/C-C 7. Pravasuni B/C- C 8. Badtalla B/C- C 9. Mandasila B/C- C 10. Panguli B/C- C 11. Thianal B/C- C 12. Paburi B/C- C 13. Tusula B/C- C 14. Pallahara B/C-C 15. Paburi B/C- C 16. Danda B/C-C 17. Khamar B/C-C	1. Kansar B/C-C 2. Gogua B/C-C	521.12 248.97	1281 ——

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2010-11	1. Pradhanpat B/C-D 2. Rambhadevi B/C-D 3. Gogua B/C-D 4. Kansar B/C-D 5. Pravasuni B/C-D 6. Badtalla B/C-D 7. Mandasila B/C-D 8. Panguli B/C-D 9. Thianal B/C-D 10. Paburi B/C-D 11. Tusula B/C-D 12. Pallahara B/C-D 13. Paburi B/C-D 14. Danda B/C-D 15. Khamar B/C-D 16. Khajuria B/C-D 17. Sirid B/C-D 18. Kuchinda B/C-D	1. Kuchinda B/C -D 2. Kansar B/C-D – 3. Gogua B/C-D –	238.8 1487.84 175.21	---- 1500 ------
2011-12	1. Kansar B/C-A 2. Pravasuni B/C-A 3. Kuchinda B/C-A 4. Siridi B/C-A 5. Gogua B/C-A 6. Pradhanpat B/C-A 7. Badtalla B/C-A 8. Mandasila B/C-A 9. Panguli B/C-A 10. Thianal B/C-A 11. Paudi B/C-A 12. Tusula B/C-A 14. Danda B/C-A 15. Pallahara B/C-A 16. Old Pauri B/C-A 17. Khajuria B/C-A 18. Rambhadevi B/C-A	1. Kansar B/C-A - 2. Pravasuni B/C-A 3. Kuchinda B/C-A 4. Siridi B/C-A 5. Gogua B/C-A	655.20 103.47 143.97 266.39 267.60	1000 - - 1520 -
2012-13	x	x	x	x
2013-14	x	x	x	x
2014-15	x	x	x	x
Total	253	55	22221.7236	124977

7.11.10. Critical Analysis: Total 253 coupes allotted to this working circle but due to non availability of bamboo 55 no of coupe have been worked out. Therefore 22 % of Coupe have been worked out as per peserpation of the out going plan. The total production of I.B in S.U is 22221.7236 and the total production of C.B is 124977 nos.

7.11.11. **Wild Life (Overlapping) Working Circle:** As it is an overlapping working circle the area of this working circle extended over entire working plan area. Provision has been made to eliminate as far as possible all forms of forest exploitation and disturbance in the wild life sighting areas to keep the natural habitat for wild

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animals intact and also to make people aware of the need for wildlife conservation by massive campaign programmes through wildlife films, posters, etc. Some efforts have been made to conserve the flora & fauna of this division. There is no specific wild life sanctuary in this division. There is monkey menace in Deogarh Town still then people are aware of protection of wild life. Man animal conflict particularly Man-Elephant is a regular phenomenon in this division. There is movement of Elephant in certain pockets of forest block.

7.11.12. **Elephant Corridor:** The Range wise details of Elephant Corridor are given in the table below.

Table No. 146

Elephant Corridor

Sl. No.	Name of Range	Group	Route
1	Deogarh	1st	(i) Kadamdar to Kamamunda then Rambhadevi Sahi, Basudevpur, Jhatkiposi, Balanda. (ii) Kadamdar to Hadmunda, Jhaliamar, Sukhapadan, Deojhar, Amulpani, Konteikoli.
		2nd	(i) Badrama Centaury to Patrajhari , Belmara, Sado, Dangapathar, Palkudar, Dharamchandrapur, Bangalimunda, and back in same route.
		3rd	(i) Ludhar Deopani to Dimirkuda, Pohalamora, Sahajbahal, Budhikutuni, Ranigola, Ganga Jal, Gandam, Tikilijharan, Bhaluchuan, Khuludi, Pravasuni and backin same route. (ii) Ludhar to Deopani, Purunapani, Bhalughua, Raital, Tipirisingha, Parpose Tasarda and back in same route.
2	Reamal	1st	(i) Satgali to Sulia, Rengta, Shankarpur, Andharikhol, Malarbahal, Raijharan (Rambhadevi R.F), Siarimalia, Bhaluchaba, Nuadihi, Phuljhari, Gogua RF, Bhalukhol (Kankorkhol DPF), Mahasindhu, Tinkbir, Arjunjhari, Chandposi, Kirtanpali, Chingudijharan, Lulang, Rairkhol Division Thakaramal (Tarang DPF), Nursinghatailа, Sampali, Madhupali (Kankorkhol DPF), Badjharan, Bhalukhol, Chandposi, Tinkbir, Bardatnila, Amakhol, Chachupali, Banakalo, Gundiapali. (ii) Satgoli to gujahuli, Ratanpur, Ladiamb, Sindurkhol, Jharpadaand back through Hadamunda DPF.
		2nd	(i) Hariharpur village of Angul Division, Kankadajharan, Ambachuakhol, Para, Thiarul (Tamkia RF) Kundheigola DPF, Raijharan, and back through Poipani, Rairatanpur, Khandadhuan, Sadhubahal, Kapagola, Dalak Chhalak, the to Angul Division.

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3	Barkote	1st	Kulipos Range of Bonai Division, Jalisuan, Kallapal, Sarankote.
		2nd	Bonai Division to Mandasila RF, Chapbahal, Shibapali, Ratanpur, Rangamatia, Brahmanimal, Chhuriabahal and back.
		3rd	(i) Pallahara Range area to Thiamal RF, Pauri RF, Sarankote, Rugudakudar, Adayapurand back. (ii) Pallahara Range to Dehury Munda, Rajamunda, Golabandh, Sushab and back.
4	Khamar	1st	(i) Malyagiri Rf to Chargochhail RF, Khanatposi, Baliposi, Bhalabhadrapur,Sukdevpur, Danda, RF via Kardapal, Rengalmunda, Ditikrushnapur, Birpal RF via Pitta, Jharkilinda, (ii) Chargochhail RF to Badsada, Tambur, Kadaposi, Odash, Kuchiabeda, Kunjam, Sandharuaghot, Kaunsia, Rajdanga, Badarunda, then Mahavir Road Range of Dhenkanal Division (iii) Kunjam RF to Jambun RF via Satyabandh, Kalanda, Bhaluki, Kantiaposi, Purunapani, Panihara and Biripal RF.
		2nd	(i) Kuladera RF to Malyagiri RF via Hansala, Burubura, Sapjhara or Mahavir Road Range of Dhenkanal Division.
		3rd	(i) Chargochhail RF to Ghenakani, Badasada, Odasha Padaposi, Nuagaon, Malyagiri RF. (ii) Chargochhail to Ghenakani, Barkotia, Ramahuli KF, Hatibindha, Danda RF, Gurusulia RF via Banara, Kardapal.
5	Pallahara	1st	(i) From Keonjhar Division area to Malyagiri RF. Since their old corridor is blocked by construction of Rengali Dam the herd move around the area of Pallahara Range without any particular direction.
Sources - 1st PWPR.			

7.11.13. **Man animal Conflict**: The year wise Man animal Conflict is given in the table below.

Table No. 147

Man animal Conflict

Sl. No.	Year	No. of Human kill by Elephant	No. of Elephant died.
1	2008	06	03
2	2009	03	01
3	2010	02	04
4	2011	00	05

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7.11.14. **M.F.P (Overlapping) Working Circle:** This working circles over laps the entire working plan area of this division. In prescription importance were given to the method of collection of MFPs which may result in sustainable production. But as per Govt. policy most of MFP items are regulated by Gram Panchyats. There is no control over management of MFP items as the Gram Panchyat is not reporting the activities which need regular monitoring. The NTFP survey carried out during 2011-12 under 13th FC in Barkote and Pallahara Range of this division is given in the table below.

Table No. 148

NTFP Inventorisation.

Name of the Range	Forest Block	Area in Ha	Sampling intensity	No of different NTFPs found
Pallahara	Malyagiri R.F	6202.26	41 nos	Sal-1392 nos Kendu-99 nos Chara-124 nos Mohula-82 nos Harida-11 nos Bahada-18 nos Anantamula-82 nos Satabari-43 nos
	Old Paudi R.F	6898	13 nos	
	Makarchua R.F	1313	07 nos	
	Saida R.F	397.71	6 nos	
	Ranja DPF	221.697	02 nos	
	Jakapani DPF	291.43	01 no	
	Sarbeda DPF	277.02	03 nos	
	Bhaluhuli DPF	139	01 no	
	Timi DPF	422.658	02 nos	
	Tamkia DPF	513.54	01 no	
	Other KF		23 nos	
	Total	**16676.315**	**100 NOS**	
Barkote	Panguli R.F	2123.15	14 nos	Sal-120 nos Char-132 nos Mahul-91 nos Satabari-70 nos Kendu-50 nos Sidha-01 nos Sunari-05 nos Jamu-05 nos Kusum-01nos Palas-05 nos Kurei-06 nos Bahada-01 nos Bhalia-01 nos
	Thianal R.F	831.87	02 nos	
	Badataila R.F	8023.89	22 nos	
	Mandasila R.F	2856.47	05 nos	
	PaudiR.F	8215.40	17 nos	
	Banbira DPF	610.20	01 no	
	Tusula DPF	1185.55	06 nos	
	Pradhanpat R.F	10386.19	19 nos	
	Kansar R.F	162.0	01 nos	
	Khulandikudar K.F	247.47	02 nos	
	Other KF		11 nos	
	Total	**34642.19**	**100 NOS**	

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Table No. 149

NTFP Inventorisation : Report Generation

Name of the Range	Name of Species	Name of product	Total production In Qtl	Total consumption by collector	Total sold in Qtl
Pallahara	Mahua	Flower	2216	200	2016
		Seed	845	445	400
	Sal	Seed	988	88	900
		Leaf	248	00	248
		Resin	09	00	09
	Siali	Leaf	643	00	643
	Anantamula	Root	24.5	00	24.05
	Sarabari	Root	07	00	07
	Chara	Seed	09.5	04	05.5
	Harida	Fruit	02.5	00	02.5
	Bahada	Fruit	02.5	00	02.5
Barkote	Mahua	Flower	1350	05	1345
		Seed	26	26	00
	Sal	Seed	15	00	15
		Leaf	80	50	30
		Resin	01	0.25	0.75
	Siali	Leaf	300	00	300
		Fibre	02	0.5	01.5
	Amla	Fruit	01	0.5	0.5
	Harida	Seed	02	01	01
	Bahada	Seed	02	01	01
	Kendu	Leaf	100	00	100

Table No. 150

NTFP Inventorisation : market study

Name of Range	Name of product	Price per Unit (in Kg)	Name of local market
Pallahara	Mahua Flower	Rs.14.00	Pallahar, jamardihi, Cheliabeda,Raipal
	Mahua Seed	Rs.20.00	-Do-
	Sal seed	Rs.12.00	-do
	Sal leaf	Rs.10.00	-do-
	Siali Leaf	Rs.12.00	-do
	Anantamula	Rs.12.00	Jamardihi, Cheliabeda,Raipal

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	Satabari	Rs.40.00	-do-
	Sal resin	Rs.80.00	-do-
	Chara	Rs.60.00	-do-
	Harida	Rs.20.00	-do-
	Bahada	Rs.20.00	-do-
Barkote	Mahua flower	Rs.12.00	Kalla, Tainsira , Autal
	Sal Leaf	Rs.10.00	Kalla
	Siali Leaf	Rs.12.00	Dantaribahal, Ballam
	Satabari	Rs.40.00	Dantaribahal
	Char Seed	Rs.60.00	Kalla , Ballam
	Harida	Rs.20.00	Ballam, Kalla, Barkot
	Bahada	Rs.20.00	Ballam, Kalla, Dantaribahal
	Amla	Rs.40.00	Dantaribahal
	Sal resin	Rs.100.00	Ballam, Kalla, Dantaribahal , Thinal, Tainsira, Autol

7.12. Joint Forest Management:

7.12.1. The Orissa Village Forest Rules, 1985, envisage formation of Village Forest Committee for protection of Village Forest. The State Government vides resolution No.17240 dt.01.08.1988 and No.13638 dt.01.10.1988 introduced the concept of Joint Forest Management in the State for protection of Reserve Forests by the committee. Subsequently another resolution was issued by the Government vide No.29825 dt.11.12.1990, which envisages protection of Reserve Forests and Protected Forests by the community and enjoy the benefits as per section-24 of Orissa Forest Act 1972.

7.12.2. The concept of Participatory Forest Management was introduced vide Government resolution No.16700 dt.03.07.1993. Emphasis was laid on formation of Van Sangrakshyna Samiti in the villages adjoining to the Degraded Forest to protect and manage the Forest through Joint Forest Management. The Samiti has the right to collect royalty free small timber and firewoods, 100 % of the interim yield and 50 % of the final harvest.

7.12.3. Deogarh Division has 447 Vana Sangrakshyna Samities (VSS) as on 2012-13. An area of 59370.7708 ha has been allotted to VSS. The allotment of area to different committees has been made in Reserve Forests, Proposed Reserve Forests and Revenue Forests irrespective of any uniformity. There are 62 VSS registered under society Act 1862. The total area assigned to VSS is 47142.54 ha. The details of allotment of area of different VSS are given in the table below.

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Table No.151

List of VSS of Deogarh Forest Division

Sl. No.	Name of VSS/EDC	Area allotted in ha.
1	Amulpani	300
2	Asurkhol	160
3	Badbaliposi	136
4	Bhagamunda	126
5	Balanda	94
6	Bangalimunda	100
7	Baninkilinda	105
8	Barghat	106
9	Basudevpur	100
10	Bhaludari	120
11	Bijanali	83
12	Bileighati	100
13	Brahmasadhubahali	45
14	Budhikutuni	154
15	Bukhabeda	87
16	Chandiposi	90
17	Deopani	150
18	Dholpada	50
19	Dimirikuda	150
20	Dudhapasi	150
21	Gajaribani	70
22	Hetkhamar	84
23	Jaisandha	65
24	Jareikela	135
25	Jharagogua	158
26	Jharmunda	111
27	Kadalimunda	87
28	Kailash	108
29	Kalamati	83
30	Kalkath	40
31	Kaliakhamar	119
32	Kamamunda	98
33	Kamarmunda	70
34	Kanteikoli	252
35	Kapasira	90
36	Karadapal	40
37	Katang pani	90
38	Khalinali	81.5
39	Kharumunda	80
40	Kumurapali	120

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41	Kurad	150
42	Kureibahal	140
43	Kuspanga	52
44	Kutraposi	35
45	Laxmipur	141
46	Ludhar	149
47	Majhipali	115
48	Masinita (H)	80
49	Mengiribahal	150
50	Nalabandha	45
51	Niktimal	45
52	Nirgunipali	70
53	Nuabhuin	85
54	Pallunipada	223.5
55	Pravasuni	80
56	Podadihi	50
57	Similiguda & Tendakata	338.5
58	Sradhapur	60
59	Subarnapali	60
60	Suguda	120
61	Tainsar	147
62	Tileibani	150
63	Tikilijharan	150
64	Bhaluguha	103.8132
65	Pahalamara	146.4754
66	Hadamunda	200
67	Jhaliamura	152.0993
68	Kanteikuli	65
69	Gundeimara	181.927
70	Baragadia	81.4569
71	Pravasuni	92.4758
72	Jualibhanga	128.5805
73	Bilaighati	127.216
74	Sahajbahal	148.374
75	Purunapani	123.702
76	Amulpani	151.519
77	Belamara	100
78	Bhalukhol	100
79	Chilantikhol	100
80	Dangakhol	100
81	Desinkuli	100
82	Dharmachandrapur	100
83	Durijangal	

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84	Gailo	100
85	Kadamdarh Colony	100
86	Karadapal	100
87	Palakudar	100
88	Podapada	100
89	Budhibahal	100
90	Tasarda	100
91	Tileimal	100
92	Sukhapadan	100
93	Rukuda	86.428
94	Katei	105.242
95	Mandarmali	122.601
96	Indranijharan	47
97	Akhayasila	110.8
98	Amgaon	292
99	Baghamunda	126
100	Baidharnagar	82
101	Balanda	80
102	Balinali	36.5
103	Balipasi	85
104	Bamparda	186
105	Basaloi	106
106	Bhakta badkudar	70
107	Bhalupali	10.2
108	Bichhakani	40
109	Bijayanagar	160
110	Brahmanimal	150
111	Brundavanpur	96
112	Budhakharman	100
113	Chaitanpali	74
114	Chakadihi	150
115	Chakulia	331
116	Charimancha	100
117	Chasagurjang	66.96
118	Chhuriabahal	74
119	Dandasingha	86
120	Dehurimunda	40
121	Derapather	30
122	Dharipathar	80
123	Dharampur	50
124	Ghurudukhaman	80
125	Golabandha	100
126	Goppur	220

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127	Goudnali	24
128	Goyalmora	87
129	Gunduripasi	119
130	Gurusang	100
131	Harekrishnapur	407
132	Hariharpur	200
133	Jagannathpur	320
134	Jalisuan	35
135	Jhumpra	82
136	Kadopada	132
137	Kalla	124
138	Kantapal	40
139	Keshanpur	90
140	Khadinali	95
141	Khajuribahal	85
142	Khandamsahi	12
143	Khesla	250
144	Khulundikudar	208
145	Khuntabahal	48
146	Kishan gayalmara	48
147	Kolsura	100
148	Landijhari	26
149	Laxmipur	50
150	Mahupal	34
151	Makfarsonpur	178
152	Mandasila (B)	50
153	Mardang	45
154	Markandapaur	24
155	Masinita (K)	187
156	Nagdihi	106
157	Namgaon	185
158	Purukunda	41
159	Ragada	82
160	Rangamatia	360
161	Ranja	16
162	Ratab	50
163	Rengalbahal	120
164	Saida	176
165	Sanmanpur	10
166	Sarankhol	120
167	Sarankote	256
168	Sarasposi	40
169	Saruali	100

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170	Siarikatel	50
171	Sibapali	87
172	Singsal	300
173	Sirapali	92
174	Taisira	136
175	Talbahali	63
176	Thakurpali	95
177	Thiansl	50
178	Utuniamunda	46
179	Gopalpali	66.1665
180	Kausibahal	132.1729
181	Kelda	105.0031
182	Salohi	70.9493
183	Masinita(A)	91.2792
184	Ghantiposi	88.8294
185	Nuakesaala	69.2759
186	Gopapur	100.8939
187	Kalinpal	149.5883
188	Talabahali	153.6827
189	Jayapichhula	151.3953
190	Netrabahal	130.2666
191	Brahmanidei	89.481
192	Chakrapali (T)	89.7229
193	Barbahal	98.6282
194	Kusumkata	51.7348
195	Kudaguda	70.3281
196	Adyapur	100
197	Chakulia	100
198	Chapbahal	100
199	Damita	100
200	Dangapal	100
201	Dimiripasi	100
202	Kamchhada	100
203	Kansar	100
204	Makarmunda	100
205	Pacheripani	100
206	Rugudkudar	100
207	Tusula	100
208	Ramachandrapur	100
209	Ratanpalli	100
210	Baishnabapali	70.091
211	Beteijharan	102.815
212	Sirigida	175.627

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213	Rambhei	163.644
214	Talkholi	136.951
215	Adash	100
216	Akhabuda	36.8
217	Andhari	87
218	Arkhapal	87
219	Badabahal	14.6
220	Badkuanarkhol	85
221	Baghbar	275
222	Baradanali	150
223	Begunianali-Basantapur	66.58
224	Belamunda	159
225	Bhaliapal	87
226	Bhaluchaba	150
227	Bhaluchua	70
228	Bilaeghati	65
229	Brahmanipali	88
230	Budhikhutuni	75
231	Budido	58
232	Chadeimora	40
233	Chandrapur	170
234	Chirgunikudar	229.86
235	Dangakhol	240
236	Darjimunda	30
237	Dasgharia	200
238	Dehuripal	104
239	Ghamamunda	104
240	Ghodapaka	72
241	Godamal	40
242	Gundiapali	78
243	Gujahuli	58
244	Hariharpur-Khandamunda	95
245	Iswarpali	57
246	Jadagola	140
247	Jhimpabira	30
248	Kamarpal	65
249	Kankarkhol	40
250	Kantabahal	349.98
251	Kendughat	16.8
252	Khairrandha	98
253	Khandadhuan	113
254	Khilei	260.8
255	Koradaposi	20

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256	Laxmipur	340.51
257	Malarbahal	150
258	Malichuan	150
259	Naktabahal	135
260	Naulipara	55
261	Palsama	120
262	Paramunda	35.58
263	Phuljhari	63
264	Poipani	127
265	Pudapada	107
266	Rairatanpur	107
267	Rampali	71
268	Ratanpur Khalinali	55
269	Reamal	80
270	Rutanali	67.4
271	Sadhubahali	150
272	Sanghapasi	250
273	Satkiari	45.45
274	Siaria	164
275	Siarimalia	133
276	Similoi	125
277	Surangipal	50
278	Talkundi	35
279	Tarang	60
280	Tinkibir (A)	40
281	Tinkibir (B)	45
282	Udaypur	64
283	Kaunsitoila	14.4
284	Timur	162.5258
285	Medinipur	128.9983
286	Similta	83.9793
287	Kadalipal	51.3937
288	Kapagola	130
289	Deojharan	111.0343
290	Similihota	126.6211
291	Sunaripara	144.5205
292	Kirtanpali	109.7084
293	Chingurijharan	111.6008
294	Lulang	138.5521
295	Burbuda	127.6813
296	Pitasika	60.4007
297	Panchamahala	82.3593
298	Nuadihi	52.675

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299	Deojharan(Rengalbeda)	100
300	Kainsar	100
301	Kaunsipal	100
302	Khandiamunda	100
303	Kurudkhol	100
304	Kuskulia	100
305	Danardanpali	100
306	Telimunda	100
307	Jambunali	100
308	Jharjhari	100
309	Dangaghat(Bada)	100
310	Kantimal	100
311	Haladiakhol	106.079
312	Jharpara	79.937
313	Sindurkhol	99.508
314	Sankarpur	99.095
315	Atalanka, Mohanpur	365
316	Asanpani	30
317	Balim	322
318	Barnamuhan	375
319	Batisuan	271.5
320	Bhimakanda	492
321	Dalo Rajamunda	30
322	Dimiria	60
323	Dudipani	775
324	Illisuan & Badjhar	305
325	Jamara	332
326	Jamardihi	58.74
327	Janakapani	372
328	Jharalo	183
329	Jharbeda Namposi	16
330	Jhariakhaman Jharabahal	25
331	Jhimiripali & Bagdari	320.8
332	Jolunda	134.66
333	Kadalibari & Talbahali	190
334	Kamparkela	198
335	Kantala	340
336	Kantanali	130
337	Kardapal	200
338	Kerjang	150
339	Khulodi	280
340	Kulipal	210
341	Kumbhibahal	285

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342	Kuturia Pravasini	30
343	Laxmipriyapur	44
344	Makarchuan	100
345	Meherapani	218
346	Muktapur	246
347	Nagira	365
348	Patamundi	120
349	Phapasil Balipasi	119
350	Rajpal	302
351	Ranjana	71.06
352	Ranjo Nuasahi	86
353	Rugudibi	245
354	Samal Rayadibi	415
355	Siaria	345
356	Sibida	285
357	Seegarh	460
358	Sreerampur	72.2
359	Susabauli	20
360	Tabhapal	104
361	Tampar	248
362	Tirib	45
363	Vejipada	40
364	Krutibaspur	129.3153
365	Kerjenga	122.3444
366	Kantanali	63.8601
367	Sairha	129.4932
368	Similipal	95.8015
369	Kamparkela	56.6281
370	Gudapada	65.2077
371	Namgaon	117.5507
372	Taptajharan	70.5554
373	Bhandhabhuin	158
374	Bhimakand	160
375	Iti	178
376	Kadalibari	154
377	Kolipali	164
378	Naikanipali	138
379	Nuguda	176
380	Sambala	138
381	Timi	145
382	Pechamundi	166
383	Aluri	274
384	Arjunjhari	150

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385	Badsada	100
386	Bahadakani	284
387	Barkalapal	370
388	Bankholi	106
389	Barkotia	80
390	Besalia	150
391	Bhojpur	395
392	Biralmunda	205
393	Chungmatia	394
394	Deybahali	40
395	Hansla	260
396	Hatibindha	380
397	Injidi	219
398	Jambua	360
399	Jaymal	318
400	Jenapada	275
401	Jharkilinda	72
402	Kalanda	104.8
403	Karadapal	70
404	Khamar	287
405	Kochiabeda	134
406	Kutarimunda	390
407	Kunjam	416
408	Laxmipur	206
409	Mundiribeda	86.61
410	Nuagaon	367
411	Odash	93.55
412	Padaposi	341
413	Parachhat	215
414	Paramanandapur	180
415	Patatangar	285
416	Priyambadapur	35
417	Purunapani	309
418	Rangiapal	225
419	Ranja	80
420	Rohila	40
421	Sahargurjang	407
422	Sanda & Raghunathpur	320
423	Sankhamur	260
424	Satyabandha	390
425	Tambur	280
426	Kurumulla	99.791
427	Bhetia	87.6058

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428	Rohira	148.685
429	Basudevpur	48.9258
430	Khantapasi	100.3471
431	Dongapala	63.5465
432	Sandhaurangoth	113.3183
433	Paimshia	131.3209
434	Hatibindha	108.0722
435	Pita	80
436	Barbara	138
437	Magarmuhan	148
438	Malabeda	157
439	Balabhadrapur	163
440	Sukadebpur	152
441	Sapadhara	125
442	Tandibemi	162
443	Birlamunda	142
444	Chakradharpur	144
445	Chhanchunia	95.83
446	Padiamunda	59.99
447	Madhupur	98.836
	Total	59370.7708
Sources - Divisional Forest Officer, Deogarh.		

7.13. Odisha Forestry Sector Development Project (OFSDP):

7.13.1. The Odisha Forestry Sector Development Project has been launched in this division in 4th batches. The details of allotment of area of different VSS from 1st batch to 4th batch to OFSDP are given in the table below.

Table No. 152

Allotment of area from 1st batch to 4th batch VSS to OFSDP

Sl No	Range	Batch	VSS	Forest	Assigned area	Treatment area
1	Pallahara	1 st	Jolunda	Paudi RF (Old)	44	44
2	Pallahara	1 st	Oudipani	Paudi RF (Old)	135	64.5
3	Pallahara	1 st	Rugudidihi	Paudi RF (Old)	85	79.5
4	Pallahara	1st	Makarchuan	Makarchuan RF	100	65.5
5	Pallahara	1 st	Kardapal	Tamkia RF	131	65.5
6	Pallahara	1st	Ill isuan	Malyagiri RF	102	64.5
7	Pallahara	1st	Tamper	Malyagiri RF	84	64.5
8	Pall ahara	1 st	Jamara	Malyagiri RF	94	80.5
9	Reamal	1st	Pudapada	Kansar RF Part	107	78
10	Reamal	1st	Rampali	Kansar RF Part	71	71
11	Reamal	1st	Andhari	Kansar RF Part	87	78
12	Reamal	1st	Khairandha	Kansar RF Part	98	78
13	Reamal	1st	Malichuan	Kansar RF Part	150	78

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14	Reamal	1st	Ghanamunda	Kansar RF Part	104	74
15	Reamal	1st	Iswarpali	Kansar RF Part	57	57
16	Reamal	1st	Badkumarkhol	Kansar RF Part	85	78
17	Reamal	1st	Phuljhari	Gogua RF	63	71
18	Reamal	1st	Siarimalia	Gogua RF	133	75
19	Reamal	1st	Bhaluchaba	Gogua RF	150	87
20	Reamal	1st	Laxmipur	Gogua RF	135	78
21	Reamal	1st	Brahmanipali	Gogua RF	88	76
22	Reamal	1st	Chirgumikudar	Gogua RF	113	80
23	Reamal	1st	Baradanali	Gogua RF	ISO	78
24	Reamal	1st	Sadhubahali	Kundheigola OPF	150	76
25	Reamal	1st	Khandadhuan	Kundheigola OPF	113	77
26	Reamal	1st	Poipani	Kundheigola OPF	127	74
27	Reamal	1st	Arkhapal	Kundheigola DPF	87	78
28	Reamal	1st	Rairatanpur	Kundheigola DPF	107	74
29	Deogarh	1st	Kumurapali	Kansar RF	1:0	61.5
30	Deogarh	1st	Nirgandipali	Kansar RF	150	83
31	Deogarh	1st	Kal iakhamar	Kansar RF	119	63.5
32	Deogarh	1 st	Mengiribahal	Kansar RF	150	80
33	Deogarh	1st	Bijanali	Kansar RF	83	61.5
34	Deogarh	1st	Kumarmunda	Rambhadevi part	98	83
35	Deogarh	1 st	Balanda	Rambhadevi part	94	78
36	Deogarh	1 st	Masinita	Rambhadevi part	80	78
37	Deogarh	1 st	Bhuksbeda	Jhadeswar DPF	87	76
38	Deogarh	1 st	Kailash	Pravasuni RF	108	78
39	Deogarh	1 st	Kharumunda	Pradhanpat RF	80	78
40	Deogarh	1 st	Tainsar	Pradhanpat RF	147	83
41	Deogarh	1st	Badabaliposi	Pradhanpat RF	136	78
42	Deogarh	1st	Kureinbahal	Pradhanpat RF	140	83
43	Deogarh	1 st	Dimirikuda	Khajuria RF	150	83
44	Deogarh	1st	Oudhapasi	Khajuria RF	150	79
45	Deogarh	1 st	Ocopani	Khajuria RF	150	78
46	Deogarh	1 st	Ludhar	Khajuria RF	149	78
47	Khamar	1 st	Sahar gurjang	Gurusulei RF	107	78
48	Khamar	1 st	Tambur	Malyagiri RF	130	78
49	Khamar	1st	Baladakani	Malyagiri RF	84	78
50	Khamar	1 st	Padapasi	Malyagiri RF	141	88
51	Khamar	1 st	Nungaon	Malyagiri RF	67	67
52	Khamar	1 st	Arjunjhari	Malyagiri RF	66	66
53	Khamar	1 st	Aluri	Malyagiri RF	94	65.5
54	Khamar	1 st	Jambua	Jambua RF	58	68
55	Khamar	1st	Besalia	Jambua RF	150	88
56	Khamar	1 st	Hansla	Kuladera RF	60	55
57	Khamar	1st	Bankholi	Kuladera RF	106	73.5
58	Barkote	1st	Brahmna Imal	Pradhanpat RF	150	80.5
59	Barkote	1st	Brundavanpur	Pradhanpat RF	96	78

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60	Barkote	1st	Chaitanpali	Pradhanpat RF	74	74
61	Barkote	1st	Nagdihi	Pradhanpat RF	106	65.5
62	Barkote	1st	Chhariabahal	Pradhanpat RF	74	64
63	Barkote	1 st	Basalei	Pradhanpat RF	106	65.5
64	Barkote	1st	Utun lamunda	Pradhanpat RF	46	46
65	Barkote	1st	Chakadihi	Badtaila RF	150	65.5
66	Barkote	1st	Gundaripasi	Badtaila RF	119	63.5
67	Barkote	1st	Bagharmunda	Badtaila RF	126	65.5
68	Barkote	1 st	Sibapali	Badtaila RF	87	65.5
69	Barkote	1st	Sirapali	Badtaila RF	92	65.5
70	Barkote	1st	Kadopada	Badtaila RF	132	75.5
71	Barkote	1st	Masinita	Badtaila RF	97	65.5
72	Barkote	1st	Singsal	Panguli RF	150	98
73	Barkote	1st	Akharasila	Panguli RF	102	85.5
74	Barkote	1st	Harekrushnapur	Panguli RF	86	61.5
75	Barkote	1st	Jagannathpur	Panguli RF	114	82.5
76	Barkote	1st	Goyalmora	Banbira OPF	87	63.5
77	Barkote	1st	Laxmipur	Banbira OPF	50	54
				Sub Total	8251	5617
78	Deogarh	2nd	Bhaluguha	Khajuria RF	103.813	93
79	Deogarh	2nd	Poha Irnara	Khajuria RF	146.475	121
80	Deogarh	2nd	Hadamunda	Hadamunda OPF	106.333	81
81	Deogarh	2nd	J hal iarnara	Jhadeswar OPF	152.099	103
82	Deogarh	2nd	Kanteikoli	Pravasuni RF	65.000	66
83	Deogarh	2nd	Gundeimara	Pravasuni RF	181.927	100
84	Deogarh	2nd	Bargadia	Pravasuni RF	81.457	86
85	Deogarh	2nd	Pravasuni	Pravasuni RF	92.476	94
86	Deogarh	2nd	J ual i bhanga	Jhadeswar OPF	128.581	93
87	Deogarh	2nd	Bileighati	Pravasuni RF	127.216	125
88	Deogarh	2nd	Sahajbahal	Khajuria RF	148.374	143
89	Deogarh	2nd	Purusapani	Khajuria RF	123.702	88
90	Deogarh	2nd	Amulpani	Pravasuni RF	151.519	112
91	Barkote	2nd	Gopalpali	Badtaila RF	66.167	63
92	Barkote	2nd	Kaunsibahal	Badtaila RF	132.173	92
93	Barkote	2nd	Kelda	Badtaila RF	105.003	105
94	Barkote	2nd	Salohi	Mandaila RF	70.949	76
95	Barkote	2nd	Masinita(A)	Panguli RF	91.279	121
96	Barkote	2nd	Ghantiposi	Panguli RF	88.829	66
97	Barkote	2nd	Nuakesala	Panguli RF	69.276	69
98	Barkote	2nd	Gopapur	Panguli RF	100.894	98
99	Barkote	2nd	Kalinpal	Panguli RF	149.588	149
100	Barkote	+nd	Talabahali	Panguli RF	153.683	141
101	Barkote	2nd	Jaypichhula	Badtaila RF	151.395	116
102	Barkote	2nd	Netrabahal	Paudi RF	130.267	135
103	Barkote	2nd	Brahmanidei	Badtaila RF	89.481	84
104	Barkote	2nd	Chakrapali	Badtaila RF	89.723	89

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105	Barkote	2nd	Barbahal	Pradhanpat RF	98.628	53
106	Barkote	2nd	Kusumkata	Pradhanpat RF	51. 735	45
107	Barkote	2nd	Kudagada	Panguli RF	70.328	62
108	Reamal	2nd	Tirnur	Kansar RF	162.526	110
109	Reamal	2nd	Medinipur	Kansar RF	128.998	120
110	Reamal	2nd	Similita	Kankarkhol DPF	83.979	103
111	Reamal	2nd	Kadalipal	Gogua RF	51.394	37
112	Reamal	2nd	Deojharan	Kundheigola DPF	111.034	97
113	Reamal	2nd	Similihota	Kankarkhol DPF	126.621	91
114	Reamal	2nd	Sunaripada	Kankarkhol DPF	144.521	106
115	Reamal	2nd	Kirtanpali	Kankarkhol DPF	109.708	83
116	Reamal	2nd	Chingudijharan	Kankarkhol DPF	111.60 1	97
117	Reamal	2nd	Lulang	Kankarkhol DPF	138.552	103
118	Reamal	2nd	Burbuda	Kankarkhol DPF	127.681	75
119	Reamal	2nd	Pitasika	Kundheigola DPF	60.40 1	45
120	Reamal	2nd	Panchmahala	Kundheigola DPF	82.359	75
121	Reamal	2nd	Nuadihi	Gogua RF	52.675	53
122	Pallahara	2nd	Krutibaspur	Makarchuan RF	129.315	125
123	Pallahara	2nd	Kerjenga	Malyagiri RF	122.344	105
124	Pallahara	2nd	Kantanali	Saida RF	63.860	79
125	Pallahara	2nd	Saida	Saida RF	129.493	125
126	Pall ahara	2nd	S imi l ipal	Saida RF	95.802	95
127	Pallahara	2nd	Kamparkela	Tamkia RF	56.628	55
128	Pall ahara	2nd	Gudapada	Malyagiri RF	65.208	65
129	Pallahara	2nd	Namgaon	Malyagiri RF	117.55 1	119
130	Pallahara	2nd	Taptijharan	Malyagiri RF	70.555	69
131	Khamar	2nd	Kururmula	Malyagiri RF	99.791	90.0
132	Khamar	2nd	Bhetia	Malyagiri RF	87.606	62.0
133	Khamar	2nd	Rohira	Malyagiri RF	148.685	1 15.0
134	Khamar	2nd	Basudevpur	Malyagiri RF	48.926	41.0
135	Khamar	2nd	Khamaposi	Malyagiri RF	100.347	95.0
136	Khamar	2nd	Dangapal	Kunjam RF	63.547	63.0
137	Khamar	2nd	Sandhauraghot	Kunjam RF	113.318	107.0
138	Khamar	2nd	Paunsia	Kunjam RF	131.321	102.0
139	Khamar	2nd	Hatibindha	Chargochhia RF	108.072	108.0
				Sub Total	6562.790	5684.0
140	Deogarh	3rd	Belamara	Jhadeswar DPF	102	80
141	Deogarh	3rd	Bhalukhol	Pravasuni RF	166.483	120
142	Deogarh	3rd	Chilantikhol	Chilantikhol DPF	113.181	90
143	Deogarh	3rd	Dangakhol	Pravasuni RF	149.258	120
144	Deogarh	3rd	Desinkuli	Telikusum DPF	97.828	90
145	Deogarh	3rd	Dharmachandrapu	Kansar RF	59.37	58
146	Deogarh	3rd	Durijangal	Chilantikhol DPF	120.968	100
147	Deogarh	3rd	Gailo	Pravasuni RF	117.294	100
148	Deogarh	3rd	Kadamdarh	Rambhadevi part	78.502	76
149	Deogarh	3rd	Karadapal	Pravasuni RF	172.166	120

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ISO	Deogarh	3rd	Katanggani	Bangalimunda DPF	54.433	54
151	Deogarh	3rd	Palakudar	Kansar RF	101.534	80
152	Deogarh	3rd	Podapada	Pradhanpat RF	83.216	75
153	Deogarh	3rd	Rukuda	Chilantikhol DPF	86.428	80
154	Deogarh	3rd	Tasarda	Chilantikhol DPF	125.318	90
155	Deogarh	3rd	Tileinal	Chilantikhol DPF	165.118	120
156	Deogarh	3rd	Deojharan(Rengal	Hadamunda part	96.938	80
157	Deogarh	3rd	Silkhapadan	Jhadeswar DPF	118.143	100
158	Deogarh	3rd	Asurkhol	Pravasuni RF	70.801	67
159	Deogarh	3rd	Bangalimunda	Kansar RF	84.745	75
160	Deogarh	3rd	Katei	Rambhadevi part	105.242	85
161	Deogarh	3rd	Mandarnali	Pravasuni RF	122.601	105
162	Deogarh	3rd	Budibahal	Chilantikhol DPF	49.927	49
163	Barkot	3rd	Adyapur	Palldi RF	160.08	120
164	Barkot	3rd	Chakulia	Badtaila RF	61.133	59
165	Barkot	3rd	Chaphahal	Mandasila RF	156.621	120
166	Barkot	3rd	Damita	Palldi RF	118.508	100
167	Barkot	3rd	Dangapal	Badtaila RF	89.664	80
168	Barkot	3rd	Dimiripasi	Pradhanpat RF	147.791	118
169	Barkot	3rd	Karnchhada	Badtaila RF	75.085	73
170	Barkot	3rd	Kansar	Kansar RF	140.685	120
171	Barkot	3rd	Baisnabpali	Pradhanpat RF	70.091	69
172	Barkot	3rd	Pacheripani	Paudi RF	83.831	80
173	Barkot	3rd	Rugudkudar	Paudi RF	135.308	115
174	Barkot	3rd	Tilslila	Pradhanpat RF	66.15	65
175	Barkot	3rd	Indranijharan	Panguli RF	147.927	120
176	Barkot	3rd	Beteijharan	Pradhanpat RF	102.815	90
177	Barkot	3rd	Siegida	Badtaila RF	175.627	120
178	Barkot	3rd	Mandasila(B)	Thianal RF	105.347	95
179	Barkot	3rd	Rambhei	Badtaila RF	163.644	120
180	Barkot	3rd	Ramachandrapur	Pangulli DPF	111.523	100
181	Barkot	3rd	Ratanpalli	Mandasila RF	78.644	76
182	Barkot	3rd	Talkholi	Pradhanpat RF	136.951	115
183	Reamal	3rd	Kaansar	Kankarkhol DPF	71.206	70
184	Reamal	3rd	Kaunsipal	Kundheigola DPF	123.08	100
185	Reamal	3rd	Khandiamunda	Kankarkhol DPF	81.07	75
186	Reamal	3rd	Kurudkhol	Kankarkhol DPF	65.486	64
187	Reamal	3rd	Kuskulia	NaikIIIDPF	53.506	52
188	Reamal	3rd	Sulia	Rambbadevi RF	132.354	110
189	Reamal	3rd	Telimunda	Kankarkhol DPF	99.62	87
190	Reamal	3rd	Haladiakhol	Kundheigola DPF	106.079	95
191	Reamal	3rd	Jharpara	Hadamunda DPF	79.937	77
192	Reamal	3rd	Sindurkhol	Hadamunda DPF	99.508	90
193	Reamal	3rd	Sankarpur	Rambhadevi RF	96.095	90
194	Reamal	3rd	Jambunali	Kundheigola DPF	72.394	70
195	Reamal	3rd	Jharjhari	Kansar RF	102.18	90

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196	Pallahara	3rd	Bhandhabhuin	Paudi RF	186.54	120
197	Pallahara	3rd	Bhimakand	Paudi RF	99.137	90
198	Pallahara	3rd	Ini	Makarchuan RF	149.358	120
199	Pallahara	3rd	Kadalibari	Malyagiri RF	149.033	120
200	Pallahara	3rd	Kolipali	Makarchuan RF	176.6408	120
201	Pallahara	3rd	Naikanipali	Makarchuan RF	165.21	120
202	Pallahara	3rd	Nuguda	Malyagiri RF	149.442	120
203	Pallahara	3rd	Sambala	Malyagiri RF	185.518	120
204	Pallahara	3rd	Timi	Makarchuan RF	90.856	80
205	Pallahara	3rd	Pechamundi	Sarbeda OPF	140.478	120
206	Khamar	3rd	Balabhadrapur	Chargochhia RF	123.784	105
207	Khamar	3rd	Burbura	Kuladera RF	146.704	120
208	Khamar	3rd	Magarmuhan	Kuladera RF	106.617	95
209	Khamar	3rd	Malarbeda	Kuladera RF	90.353	85
210	Khamar	3rd	Pitta	Oanda RF	187.262	120
211	Khamar	3rd	Sapajhara	Malyagiri RF	125.069	110
212	Khamar	3rd	Sukadevpur	Chargochhia RF	136.326	120
213	Khamar	3rd	Tandibemi	Kuladera RF	122.63	110
214	Khamar	3rd	Biralamunda	Kuladera RF	149.524	120
215	Khamar	3rd	Chakradharpur	Chargochhia RF	149.841	120
216	Khamar	3rd	Madhupur	Kuladera RF	98.836	90
				Sub Total	8880.5928	7364
217	Deogarh	4th	Hetkhamar	Bangalimunda OPF	84	82
218	Deogarh	4th	Chandiposi	Chilantikhol OPF	90	87
219	Deogarh	4th	Jharmunda	Jharmunda KF	111	107
220	Deogarh	4th	Laxmipur	Pravasuni RF	141	138
221	Deogarh	4th	Tikilijharan	Pravasuni RF	150	145
222	Deogarh	4th	Kalarnati	Pradharpat RF	83	80
223	Deogarh	4th	Jaisandha	Jaisandha KF	68	65
224	Deogarh	4th	Jharagogua	Pravasuni RF	158	150
225	Deogarh	4th	Budhikutuni	Pravasuni RF	154	150
226	Deogarh	4th	Kadalimunda	Kadalimunda VF	87	85
227	Barkote	4th	Taimira	Paudi RF	136	130
228	Barkote	4th	Ragada	Badtaila RF	82	80
229	Reamal	4th	Reamal	Kansar RF	80	78
230	Reamal	4th	Kapagola	Kundheigola DPF	130	127
231	Reamal	4th	Dehuripal	Ghodapaka RF	104	101
232	Rea 111 a	4th	Bhuliapal	Ghodapaka RF	87	82
233	Rearmal	4th	Darjimunda	Kansar RF	30	29
234	Reamal	4th	Budido	Budido VF	58	56
235	Reamal	4th	Belamunda	Gogua RF	159	150
236	Pallahara	4th	Tabhapal	Makarchuan & Tabhapal	104	100
237	Pallahara	4th	Patamund	Patamund RF	120	115
				Sub Total	2216	2137
				Grand Total	25910.584	20802.0

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7.13.2. Plantation has been taken up under OFSDP program through different VSS of Deogarh Division. The total area plantated is 21157.00 ha. The details of plantation taken up in different VSS under OFSDP is given in the table below.

Table No. 153

Plantation taken up under OFSDP

Year of Plantation	Name of the Scheme	Name of the District	Name of the Range	Location of the Plantation	Area Planted in Ha.	Name of VSS if Involved
2008-09	OFSDP (JICA)	Deogarh	Barkote	Pradhanpat RF	65.50	Brahmnimal-
				Pradhanpat RF	78.00	Brundavanpur
				Pradhanpat RF	74.00	Chaitanpali
				Pradhanpat RF	65.50	Nagdihi
				Pradhanpat RF	64.00	Chhuriabahal
				Pradhanpat RF	65.50	Basaloi
				Pradhanpat RF	46.00	Utuniamunda
				Badtaila RF	65.50	Chakadihi
				Badtaila RF	63.50	Gundaripasi
				Badtaila RF	65.50	Baghamunda
				Badtaila RF	65.50	Sibapali
				Badtaila RF	65.50	Sirapali
				Badtaila RF	65.50	Kadopada
				Badtaila RF	65.50	Masinia (kadopada)
				Panguli RF	68.00	Singsal
				Panguli RF	60.50	Akhayasila
				Panguli RF	61.50	Harekrushnapur
				Panguli RF	62.50	Jagannathpur
				Banbira DPF	63.50	Goyalmora
				Banbira DPF	49.00	Laxmipur
				Banbira DPF	10.00	Departmentally
2008-09	OFSDP (JICA)	Angul	Pallahara	Paudi RF (Old)	44.00	Jolunda
				Paudi RF (Old)	64.50	Dudipani
				Paudi RF (Old)	64.50	Rugudidihi
				Makarchuan RF	65.50	Makarchuan
				Tamkia RF	65.50	Kardapal
				Malyagiri RF	64.50	Illisuan
				Malyagiri RF	64.50	Tampar
				Malyagiri RF	65.50	Jamara

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		Deogarh	Reamal	Kansar RF Part	78.00	Pudapada
				Kansar RF Part	71.00	Rampali
				Kansar RF Part	78.00	Andhari
				Kansar RF Part	78.00	Khairandha
				Kansar RF Part	78.00	Malichuan
				Kansar RF Part	74.00	Ghamamunda
				Kansar RF Part	57.00	Iswarpali
				Kansar RF Part	78.00	Badkuanarkhol
				Gogua RF	61.00	Phuljhari
				Gogua RF	75.00	Siarimalia
				Gogua RF	77.00	Bhaluchaba
				Gogua RF	78.00	Laxmipur
				Gogua RF	76.00	Brahmanipali
				Gogua RF	75.00	Chirgunikudar
				Gogua RF	78.00	Baradanali
				Kundheigola DPF	76.00	Sadhubahali
				Kundheigola DPF	77.00	Khandadhuan
				Kundheigola DPF	74.00	Polpani
				Kundheigola DPF	78.00	Arkhapal
				Kundheigola DPF	74.00	Rairatanpur
				Kankarkhol DPF	25.00	Departmentally
2008-09	OFSDP (JICA)		Deogarh	Kansar RF	61.50	Kumurapali
				Kansar RF	78.00	Nirgundipali
				Kansar RF	63.50	Kaliakhamar
				Kansar RF	80.00	Mengiribahal
				Kansar RF	61.50	Bijanali
				Rambhadevi part	78.00	Kamamunda
				Rambhadevi part	78.00	Balanda
				Rambhadevi part	78.00	Masinita
				Jhadeswar DPF	76.00	Bhukabeda
				Pravasuni RF	78.00	Kailash
				Pradhanpat RF	78.00	Kharumunda
				Pradhanpat RF	78.00	Tainsar
				Pradhanpat RF	78.00	Badabaliposi
				Pradhanpat RF	78.00	Kureinbahal
				Khajuria RF	78.00	Dimirikuda
				Khajuria RF	74.00	Dudhapasi

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				Khajuria RF	78.00	Deopani
				Khajuria RF	78.00	Ludhar
		Angul	Khamar	Gurusalei RF	78.00	Sahargurjang
				Malyagiri RF	78.00	Tambur
				Malyagiri RF	78.00	Bahadakani
				Malyagiri RF	78.00	Padapasi
				Malyagiri RF	67.00	Nuagaon
				Malyagiri RF	66.00	Arjunjhari
				Malyagiri RF	65.50	Aluri
				Jambua RF	58.00	Jambua
				Jambua RF	78.00	Besalia
				Kuladera RF	55.00	Hansla
				Kuladera RF	65.50	Bankholi
2009-10	OFSDP (JICA)	Deogarh	Deogarh	Khajuria RF	88	Bhaluguha
				Khajuria RF	121	Pahalamara
				Hadamunda DPF	61	Hadamunda
				Jhadeawar DPF	103	Jhaliamura
				Pravasuni RF	65	Kantelkuli
				Pravasuni RF	100	Gundeimara
				Pravasuni RF	81	Baragadia
				Pravasuni RF	84	Pravasuni
				Jhadeswar DPF	93	Jualibhanga
				Pravasuni RF	115	Bilaighati
				Khajuria RF	143	Sahajbahal
				Khajuria RF	88	Purunapani
				Pravasuni RF	103	Amulpani
			Barkote	Badtaila RF	63	Gopalpali
				Badtaila RF	92	Kaunsibahal
				Badtaila RF	105	Kelda
				Maodasila RF	61	Salohi
				Panguli RF	91	Masinita(A)
				Panguli RF	66	Ghantiposi
				Panguli RF	69	Nuakesaala
				Panguli RF	98	Gopapur
				Panguli RF	149	Kaliapal
				Panguli RF	141	Talabahali
				Badtaila RF	116	Jayapichhula
				Paudi RF	130	Netrabahal
				Badtaila RF	84	Brahmanidei
				Badtaila RF	89	Chakrapali
				Pradhanpat RF	53	Barbahal
				Pradhanpat RF	45	Kusumkata
				Panguli RF	62	Kudaguda
			Reamal	Kansar RF	100	Timur

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				Kansar RF	105	Medinipur
				Kankarkhol DPF	83	Similta
				Gogua RF	37	Kadalipal
				Kundheigola DPF	97	Deojharan
				Kankarkhol DPF	81	Similihota
				Kankarkhol DPF	106	Sunaripara
				Kankarkhol DPF	83	Kirtanpali
				Kankarkhol DPF	97	Chingurijharan
				Kankarkhol DPF	103	Lulang
				Kankarkhol DPF	75	Burbuda
				Kundheigola DPF	45	Pitasika
				Kundheigola DPF	60	Panchamahala
				Gogua RF	43	Nuadihi
		Angul	Pallahara	Makarchuan RF	125	Krutibaspur
				Malyagiri RF	105	Kerjenga
				Saida RF	64	Kantanali
				Saida RF	125	Sairha
				Saida RF	95	Similipal
				Tamkia RF	55	Kamparkela
				Malyagiri RF	65	Gudapada
				Malyagiri RF	104	Namgaon
				Malyagiri RF	69	Taptajharan
			Khamar	Malyagiri RF	90	Kurumulla
				Malyagiri RF	62	Bhetia
				Malyagiri RF	115	Rohira
				Malyagiri RF	41	Basudevpur
				Malyagiri RF	95	Khantapasi
				Kunjam RF	63	Dongapala
				Kunjam RF	107	Sandhauragoth
				Kunjam RF	102	Paurshia
				Chargochhia RF	108	Hatibindha
		Deogarh	Deogarh	Bangalimunda DPF	80	Departmentally
			Barkote	Badtaila RF	25	Departmentally
		Angul	Pallahara	Nizgarh RF	20	Departmentally
			Khamar	Danda RF	75	Departmentally
2010-11	OFSDP (JICA)	Deogarh	Deogarh	Jhadeswar DPF	80	Belamara
				Pravasuni RF	120	Bhalukhol
				Chilantikhol DPF	90	Chilantikhol
				Pravasuni RF	120	Dangakhol
				Telikusum DPF	90	Desinkuli
				Kansar RF	58	Dharmachandrap
				Chilantikhol DPF	100	Durijangal

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				Pravasuni RF	100	Gailo
				Rambhadevi part	76	Kadamdarh
				Pravasuni RF	120	Karadapal
				Bangalimunda DPF	54	Katangpani
				Kansar RF	80	Palakudar
				Pradhanpat RF	75	Podapada
				Chilantikhol DPF	80	Rokuda
				Chilantikhol DPF	90	Tasarda
				Chilantikhol DPF	120	Tileimal
				Hadamunda part	80	Deojharan
				Jhadeswar DPF	100	Sukhapadan
				Pravasuni RF	67	Asurkhol
				Kansar RF	75	Bangalimunda
				Rambhadevi part	85	Katei
				Pravasuni RF	105	Mandarmali
				Chilantikhol DPF	49	Budibahal
			Barkote	Paudi RF	120	Adyapur
				Badtaila RF	59	Chakulia
				Mandasila RF	120	Chapbahal
				Paudi RF	100	Damita
				Badtaila RF	80	Dangapal
				Pradhanpat RF	118	Dimiripasi
				Badtaila RF	73	Kamchhada
				Kansar RF	120	Kansar
				Pradhanpat RF	69	Baisnabpali
				Paudi RF	80	Pacheripasi
				Paudi RF	115	Rugudkudar
				Pradhanpat RF	65	Tusula
				Panguli RF	120	Indranijharan
				Pradhanpat RF	90	Beteijharan
				Badtaila RF	120	Sirgida
				Thianal RF	95	Mandasila(B)
				Badtaila RF	120	Rambbei
				Pangulli DPF	100	Ramachandra
				Mandasila RF	76	Ratanpalli
				Pradhanpat RF	115	Talkholi
2010-11	OFSDP (JICA)		Reamal	Kankarkhol DPF	70	Kainsar
				Kundheigola DPF	100	Kaunsipal
				Kankarkhol DPF	75	Khandiamunda
				Kankarkhol DPF	64	Kurudkhol
				NaikulDPF	52	Kuskulia

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				Rambhadevi RF	110	Sulia
				Kankarkhol DPF	87	Telimunda
				Kundheigola DPF	95	Haladiakhol
				Hadamunda DPF	77	Jharpara
				Hadamunda DPF	90	Sindurkhol
				Rambhadevi RF	90	Sankarpur
				Kundheigola DPF	70	Jambunali
				Kansar RF	90	Jharjhari
			Pallahara	Old Paudi RF	120	Bhandhabhuin
				Old Paudi RF	90	Bhimakand
				Makarchuan RF	120	Itti
				Malyagiri RF	120	Kadalibari
				Makarchuan RF	120	Kolipali
				Makarchuan RF	120	Naikanipali
				Malyagiri RF	120	Nuguda
				Malyagiri RF	120	Sambala
				Makarchuan RF	80	Timi
				Sarbeda DPF	120	Pechamundi
		Angul	Khamar	Chargochhia RF	105	Balabhadrapur
				Kuladera RF	120	Burbura
				Kuladera RF	95	Magarmuhan
				Kuladera RF	85	Malarbeda
				Danda RF	120	Pitta
				Malyagiri RF	110	Sapajhara
				Chargochhia RF	120	Sukadevpur
				Kuladera RF	110	Tandibemi
				Kuladera RF	120	Biralamunda
				Chargochhia RF	120	Chakradharpur
				Kuladera RF	90	Madhupur
		Deogarh	Deogarh	Bangalimunda DPF	70	Departmentally
			Reamal	Kansar RF	30	Departmentally
		Angul	Khamar	Kunjam RF	20	Departmentally
2010-11	OFSDP (JICA) Addl. Area for 2008-09 & 2009-10	Deogarh	Deogarh	Nirgunipali KF	5	Nirgunipali
				Kureinbahal KF	5	Kureinbahal
				Tainsar KF	5	Tainsar
				Kharumunda KF	5	Kharumunda
				Dimirikuda KF	5	Dimirikuda
				Dudhaposi KF	5	Dudhaposi
				Amulpani KF	10	Amulpani
				Hadamunda KF	20	Hadamunda

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					Bileighati KF	10	Bileighati
					Bargadia KF	5	Bargadia
					Pravasuni KF	10	Pravasuni
					Bhaluguha KF	5	Bhaluguha
				Reamal	Chirgumikudar KF	5	Chirgumikudar
					Bhaluchaba KF	10	Bhaluchaba
					Phuljhari KF	10	Phuljhari
					Similibota KF	10	Similibota
					Nuadihi KF	10	Nuadihi
					Kansar RF	15	Medinipur
					Similita KF	20	Similita
					Panchmahala KF	15	Panchmahala
					Timur KF	10	Timur
				Barkote	Pradhanpat RF	15	Brahmanimal
					Aksharsila KF	25	Aksharsila
					Jagannathpur KF	20	Jagannathpur
					Badtaila RF	10	Kadopada
					Singsal KF	30	Singsal
					Banbira DPF	5	Laxmipur
					Salohi KF	15	Salohi
					Masinita KF	30	Masinita (A)
					Netrabahal KF	5	Netrabahal
			Angul	Pallahara	Jamara KF	15	Jamara
					Rugudidihi KF	15	Rugudidihi
					Kantanali KF	15	Kantanali
					Namgaon KF	15	Namgaon
				Khamar	Malyagiri RF	10	Padaposi
					Jambua RF	10	Jambua
					Jambua RF	10	Besalia
					Kuladera RF	8	Bankhoti
	2011-12	OFSDP (JICA)	Deogarh	Deogarh	Bangalimunda DPF	82	Hetkhamar
				Deogarh	Chilantikhol DPF	87	Chandiposi
				Deogarh	Jharmunda KF	107	Jharmunda
				Deogarh	Pravasuni RF	138	Laxmipur
				Deogarh	Pravasuni RF	145	Tikilijharan
				Deogarh	Pradhanpat RF	80	Kalamati
				Deogarh	Jaisandha KF	65	Jaisandha
				Deogarh	Pravasuni RF	150	Jharagogua
				Deogarh	Pravasuni RF	150	Budhikutuni
				Deogarh	Kadalimunda VF	85	Kadalimunda
				Barkote	Paudi RF	130	Taimira
				Barkote	Badtaila RF	80	Ragada

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			Reamal	Kansar RF	78	Reamal
			Reamal	Kundheigola DPF	127	Kapagola
			Reamal	Ghodapaka RF	101	Deburipal
			Reamal	Ghodapaka RF	82	Bhalipal
			Reamal	Kansar RF	29	Darjimunda
			Reamal	Budido VF	56	Budido
			Reamal	Gogua RF	150	Belamunda
		Angul	Pallahara	Makarchuan & Tabhapal	100	Tabhapal
			Pallahara	Patamund KF	115	Patamund
				Total	21157	

7.13.3. **Forest Development Agency** (FDA): Forest Development Agency is a registered society. There is specific byelaw for the society. Regional Chief Conservator of Forest, Rourkela Circle is the Chairperson and Divisional Forest Officer, Deogarh is the Member Secretary of the society. The general body of the society contains 16 Ex-officio members, 01 woman member from each VSS, President of all VSS and member secretary of all VSS. The executive body of the FDA contains 14 Ex-officio members, 15 woman representatives of VSS, 5 presidents of the VSS and 5 member secretary of the VSS. The transparency maintained in the financial aspect is that the money released to the VSS will be kept in the joint passbook and subsequently by the joint signature of the president and member secretary of the VSS it will utilize.

7.13.4. Plantation has been taken up under national afforestation program through different VSS of Deogarh Division. The total area covered under AR is 350.00 ha, ANR is 2470.00 ha and Bamboo is 290 ha. The details of plantation taken up in different VSS under NAP is given in the table below.

Table No. 154

Plantation taken up under NAP

Year of Plantation	Name of the Scheme	Name of the District	Name of the Range	Location of the Plantation	Area Planted in ha.	Name of VSS if Involved
2004-05	National Afforestation Programme- ANR-200, AR-100, Bamboo-100	Angul	Pallahara	Jhimirtipali Badbagdari KF	20	Jhimirtipali Badbagdari
				Dimiria KF	8	Dimiria
				Sree Rampur KF	15	Sree Rampur
				Jharbeda Namposi KF	10	Jharbeda Namposi
				Ranjo Nuasahi KF	10	Ranjo Nuasahi
				Batisuan KF	15	Batisuan
				Ranjana KF	5	Ranjana
			Khamar	Kalanda KF	20	Kalanda
				Odasa KF	15	Odasa

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				Barkotia KF	15	Barkotia
		Deogarh	Deogarh	Khalinali KF	15	Khalinali
				Majhipali KF	12	Majhipali
				Similiguda KF	25	Similiguda
				Pallunipada KF	15	Pallunipada
			Reamal	Satkiari KF	15	Satkiari
				Begunianali-Basantapur KF	16	Begunianali-Basantapur
				Naulipara KF	10	Naulipara
				Hariharpur-Khandamunda	12	Hariharpur-Khandamunda
				Kankarkhol KF	14	Kankarkhol
				Kamarpal KF	10	Kamarpal
				Sanghapasi KF	10	Sanghapasi
			Barkote	Mardang KF	10	Mardang
				Bhakta badkudar KF	13	Bhakta badkudar
				Markandapur KF	8	Markandapur
				Rengalbahal KF	22	Rengalbahal
				Budhakhaman KF	12	Budhakhaman
				Saruali KF	10	Saruali
				Siarikatei KF	10	Siarikatei
				Kishan gayalmara KF	8	Kishan gayalmara
				Dandasingha KF	10	Dandasingha
				Purukunda KF	10	Purukunda
2006-07	National Afforestation Programme- ANR-600, AR-200, Bamboo-170	Angul	Pallahara	Jhimirtipali Badbagdari KF	130	Jhimirtipali Badbagdari
				Ranjo Nuasahi KF	30	Ranjo Nuasahi
				Batisuan KF	45	Batisuan
				Ranjana KF	25	Ranjana
			Khamar	Kalanda KF	60	Kalanda
				Odasa KF	25	Odasa
				Barkotia KF	45	Barkotia
		Deogarh	Deogarh	Khalinali KF	40	Khalinali
				Majhipali KF	15	Majhipali
				Similiguda KF	9	Similiguda
				Pallunipada KF	25	Pallunipada
			Reamal	Satkiari KF	30	Satkiari
				Begunianali-Basantapur KF	8	Begunianali-Basantapur
				Naulipara KF	18	Naulipara
				Hariharpur-Khandamunda KF	30	Hariharpur-Khandamunda
				Kamarpal KF	20	Kamarpal
				Sanghapasi KF	145	Sanghapasi
			Barkote	Mardang KF	20	Mardang
				Bhakta badkudar KF	57	Bhakta badkudar
				Rengalbahal KF	59	Rengalbahal

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				Budhakhaman KF	28	Budhakhaman
				Saruali KF	50	Saruali
				Siarikatei KF	4	Siarikatei
				Dandasingha KF	21	Dandasingha
				Purukunda KF	31	Purukunda
2007-08	National Afforestation Programme- ANR-500, AR-50, Bamboo-20	Angul	Pallahara	Tirib KF	45	Tirib
				Raipal KF	10	Raipal
				Laxmipriyapur KF	25	Laxmipriyapur
			Khamar	Purunapani KF	30	Purunapani
				Jharkilinda KF	50	Jharkilinda
				Mundiribeda KF	35	Mundiribeda
		Deogarh	Barkote	Dehurimunda KF	30	Dehurimunda
				Dharampur KF	55	Dharampur
				Bamparada KF	95	Bamparada
			Reamal	Udaypur KF	20	Udaypur
				Ratanpur Khalinali KF	10	Ratanpur Khalinali
				Rutanali KF	20	Rutanali
			Deogarh	Brahma-Sadhubahali KF	45	Brahma-Sadhubahali
				Barghat KF	70	Barghat
				Ambulpani KF	30	Ambulpani
2008-09	National Afforestation Programme	Deogarh	Deogarh	Kardapal	10	Kaldapal VSS
2009-10	National Afforestation Programme	Deogarh	Deogarh	Kutrapori KF	35	Kutrapori
				Kardapal KF	25	Kardapal
				Niktimal KF	45	Niktimal
			Barkote	Bamparada KF	60	Bamparada
				Balinali KF	15	Balinali
				Derapathar KF	30	Derapathar
				Dehurimunda KF	5	Dehurimunda
				Khalinali KF	70	Khalinali
			Reamal	Kuradposi KF	20	Kuradposi
				Akhabuda KF	20	Akhabuda
		Angul	Pallahara	Balim KF	25	Balim
				Vejipada KF	45	Vejipada
			Khamar	Mundiribeda KF	35	Mundiribeda
				Rohila KF	40	Rohila
				Kuchiabeda KF	20	Kuchiabeda
				Parachhat KF	70	Parachhat
2011-12	National Afforestation Programme	Deogarh	Barkote	Charimancha KF	50	Charimancha
			Barkote	Kantapal KF	40	Kantapal
			Barkote	Bichhakhani KF	28	Bichhakhani
			Reamal	Surangipal KF	50	Surangipal
			Reamal	Jhimpabira KF	30	Jhimpabira
			Reamal	Gudamal KF	25	Gudamal
		Angul	Khamar	Priyambadapur	35	Priyambadapur
			Khamar	Chhanchunia KF	50	Chhanchunia
			Khamar	Ranja KF	75	Ranja

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			Pallahara	Jhariakhaman Jharabahal KF	25	Jhariakhaman Jharabahal
			Pallahara	Jankapani KF	32	Jankapani
			Pallahara	Susabnali KF	20	Susabnali
		Deogarh	Deogarh	Tileibani KF	40	Tileibani
			Deogarh	Kalkath KF	40	Kalkath
			Deogarh	Sradhapur KF	60	Sradhapur
				Total	3119.00	

7.14. Special Work of Improvement Taken:

7.14.1. **Fire Protection:** The forests of this tract are continuously affected by annual fire during the month from January to April. The reason of forest fire is purely intentional. Mainly for production of Kendu leaves and collection of Mahua flower, the people of forest fringe villages are setting fire in the forests. The average annual expenditure made for prevention of forest fire during the Plan period was Rs. Rs.30000.00. The vast continuous forest belt cannot be prevented from fire with the small amount allotted to this division. The annual expenditure made for prevention of forest fire had not made any impact on fire during the Plan period.

7.14.2. The annual expenditure for fire protection from 2004-05 to 2013-14 was enhanced. During the year 2011-12, forest fire was reduced to a great extent. The success was achieved due to the combined effort of staff and local people. Also nature and active participation of the VSS members played a great role to save the ground flora from forest fire. The expenditure made to control forests fire from 2004-05 to 2013-14 is given in the table below.

Table No. 155

Expenditure made to control forests fire after the expiry of the plan

Sl. No.	Year	Allotment in Rs.	Expenditure in Rs.
1	2004-05	112000	112000
2	2005-06	121000	121000
3	2006-07	30000	30000
4	2007-08	30000	30000
5	2009-10	125000	125000
6	2010-11	427500	427500
7	2011-12	23000	23000
8	2012-13	1474000	1474000
9	2013-14	1785000	1785000

Sources - Divisional Forest Officer, Deogarh.

7.14.3. **Plantation:** Plantation activities have been taken up since 1961-62 to increase the growing stock of the forest area. As per record the area covered under plantation in different period with respect to the out going Plan, in separate blocks is given in the table below.

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Table No. 156

Name of block	Plantation activities taken			
	Period of plantation and its area in ha			Species planted
	Before Plan	During Plan	Total	
Kansar	688.72	2039.5	2728.22	Teak, Bamboo, Gambhar, Sisu, Acasia, Nimba etc.
Kunjam	125.47	377.0	502.47	Bamboo, Gambhar, Sisu, Acasia, Nimba etc.
Badtaila	349.91	1842.5	2192.41	Teak, Bamboo, Gambhar, Sisu, Acasia, Nimba etc.
Danda	24.28	210.0	234.28	Karanja, Bamboo, Gambhar, Sisu, Acasia, Nimba etc.
Prabhasuni	04.05	2036.0	2040.05	Karanja, Bamboo, Gambhar, Sisu, Acasia, Nimba etc.
Bhaluhuli	30.36	00	30.36	Chakhunda, Karanja, Sisu, Gambhar, Acasia, Nimba etc.
Pauri	97.11	780.0	877.11	Chakhunda, Karanja, Bamboo, Gambhar, Acasia, Nimba etc.
Pradhanpat	39.02	1635.5	1674.52	Chakhunda, Karanja, Sisu, Gambhar, Acasia, Nimba etc.
Ranja	40.09	75.0	115.09	Chakhunda, Karanja, Bamboo, Gambhar, Acasia, Nimba etc.
Banbira	08.09	187.5	195.59	Teak, Bamboo, Gambhar, Sisu, Acasia, Nimba etc.
Kaunsibahal	60.00	00	60.00	Teak, Bamboo, Gambhar, Sisu, Acasia, Nimba etc.
Kakharua	64.00	50.00	114.00	Teak, Chakhunda, Gambhar, Sisu, Acasia, Nimba etc.
Rambhadevi	59.00	880.0	939.00	Sirisa, Chakhunda, Gambhar, Sisu, Acasia, Nimba etc.
Nizgarh A	50.00	25.0	75.00	Sirisa, Teak, Gambhar, Sisu, Acasia, Nimba etc.
Kankarkhol	307.00	978.0	1285	Sirisa, Teak, Chakhunda, Sisu, Acasia, Nimba etc.
Malyagiri	50.00	1913.00	1963.00	Sirisa, Teak, Gambhar, Sisu, Acasia, Nimba etc.
Kansar A	27.00	00	27	Sirisa, Teak, Chakhunda, Sisu, Acasia, Nimba etc.
Nizgarh B	15.00	30.0	45.00	Teak, Bamboo, Gambhar, Sisu, Acasia, Nimba etc.
Total	2039.10	13059.00	15098.10	

Sources - 1st PWPR.

7.15. Soil and Moisture Conservation Measure:

7.15.1. **Soil:** Immature soil, which has not reached the stage of development that might be expected under existing weathering and biological processes, is affected by heavy wind flow or by rainwater. Mature soil, on the other hand, which has reached the full development that might be expected under existing weathering and biological processes and is in equilibrium with environment, is not affected by ordinary rainwater.

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7.15.2. **Water**: The water is found in the soil in the deeper layers including the underlying rocks and in the upper layers of the soil. The water in the deeper layers and the underlying rocks is referred to as ground water. This water, sometimes, rises to a certain height under the influence of capillary force and is then known as capillary fringe. The water in the upper layers remains in different conditions and is, accordingly, called gravitational water, capillary and hygroscopic water.

7.15.3. **Moisture Conservation Measure**: As per record no special attempts were made to conserve the soil and water during the Plan period. But in the planting site, construction of check dams on the sloppy area and in small rills and gully areas has done for soil conservation works.

7.15.4. **Climber Cutting**: Climbers are a menace not only in the young regeneration areas but also in the established forest crops as they seriously affect the growth of young plants and trees. The damage caused by climbers has already been discussed. Therefore they have to be kept under control always by cutting or uprooting in regeneration areas with every regeneration operation cleaning and by cutting them at these places in the forest crops during markings and cultural operation. But as per prescribed prescription of the out going plan, attempt had not been made to cut the climber in the worked out coupes. In the field, it is seen that trees are under the pressure of climbers having girth 45 cm above 1 meter from ground level. The growth of the trees and its clear bole are being affected by climber, which resulted decrease in growing stock and increase in defect ness of timber. In some places, the local people are cutting trees for collection of Siali leaves and fiber if it cannot be collected easily.

7.16. Improvement in Communication:

7.16.1. **Road**: Improvement works had been taken up in all the existing forest roads during the Plan period. But due to shortage of fund flow all forest roads in its total length were not improved in each year. This results a very bad condition of the existing forest road at the end of the Plan. The maintenance works taken up in forest roads for improvement of communication is given in the table below.

Table No. 157

Year wise expenditure incurred in Rs. from 1994-95 to 2001-02

Name of forest road	Length in Km	1994-95	1995-96	1996-97	1997-98	1998-99	1999-20	2000-01	2001-02
Pathargarh - Kailash	04.00	10000	0	5000	5000	10000	0	0	30000
Kansar – Hairan	09.00	10000	10000	0	0	0	8500	0	70000
Suguda – Gundiapali	13.00	13000	10000	50000	19020	0	18240	0	67500
Badbahal - Laimura	04.00	0	0	0	0	0	0	0	0
Jharpur – Laimura	04.00	0	0	0	0	0	0	0	0

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Kholdehi – Goilo	04.00	0	0	0	0	0	0	0	0
Khairipali – Palsama	03.00	0	0	0	0	0	0	0	30000
Kailash Goilo	03.00	0	0	0	0	0	0	0	0
Chhuriabaha l – Tusula	19.00	0	0	0	0	0	0	0	0
Thianal – Autal	17.00	20000	20000	0	0	30000	6600	0	60000
Bamparada – Kadalidihi	02.25	20000	10000	25000	1995	0	1650	0	0
Kadalidihi - Jalisuan	07.00	12000	10000	0	0	0	0	0	50000
Tusula – Parpos	12.00	10000	0	0	0	0	0	0	50000
Daminta – Pacheripani	03.50	0	0	0	0	0	0	0	0
Bamparada - Netrabahal	02.50	0	0	0	0	0	0	0	0
Jamardehi - Nagira	13.5	15000	25000	0	31955	0	0	0	30000
Charigochhi a – Turaghati	05.00	0	0	0	0	0	0	0	0
Bankdarh – Jamardihi	09.00	0	0	0	0	0	0	0	0
Kuchiabeda – Raipal	15.00	15000	20000	20000	8045	0	35010	0	30000
Dimiria – Ranja	01.50	0	50000	0	0	0	30000	0	10000
Total=19 nos	151.25								
Sources - Divisional Forest Officer, Deogarh.									

7.16.2. Critical Analysis:

7.16.2.1. **Very High Frequency**: To check the illegal transportation of forest produces, it has been proposed to develop a communication system during 8th five year plan in the forest department to meet the need and importance of speedy communication system in the forest sector particularly with regard to forest protection in the changing situation where both forest and forest land suffer from constant threat. Accordingly on dt.20.07.1992 an agreement signed between the Principal Chief Conservator of Forests, Orissa, and M/s Applied Communication and Control, Delhi, for installation and commissioning of the stations for implementation of three tire network of communication system in each and every Forest Division of Odisha. The Principal Chief Conservator of Forests, Orissa, has instructed all the Divisional Forest Officer on dt.25.08.1989 to look at place of peripheral station and to intimate the number of mobile units required for peripheral station.

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Table No. 158				
Installation of VHF sets				
Sl.No.	Name of Place	Type of station	Height of mast in ft.	Type of mast
1	DFO, Res,Deogarh	Fixed	100 feet	Fixed
2	RangeOffice,Pallahara	Fixed	Under 100 feet	Fixed
3	RangeOffice,Reamal	Fixed	Under 100 feet	Fixed
4	RangeOffice,Khamar	Fixed	Under 100 ft	Fixed
5	RangeOffice,Barkote	Fixed	Under 100 ft	Fixed
6	ForesterQuarter,Kundheigola	Fixed	Under 100 ft	Fixed
7	ForesterQuater, Tileibani	Fixed	Under 100 ft	Fixed
8	Check gate,Ka	without tower	Under 100 ft	without tower
9	ForesterQuater, Kansar	with out tower	Under 100 ft	without tower
10	ForesterQuater, Palasama	With out tower	Under 100 ft	without tower
11	Range Office, Deogarh	Fixed	Under 100 ft	Fixed
Sources - Divisional Forest Officer, Deogarh. N.B- All the VHF sets are not functioning .				

7.16.2.2. The number of VHF sets received since installation are given in the table bellow.

Table No. 159				
Number of VHF sets received				
Sl. No.	Date of received	Received from	Name of company	Details of VHF sets
1	29.11.1998	P.C.C.F Odisha	SIMCO Tele communication	Not-functioing.
2	x	x	ELLOT	Base-8
3	x	x	SIMCO	Base-11
Sources - Divisional Forest Officer, Deogarh.				

7.16.3. **Amenities to Staff**: The cadre strength of this division as on dt.30.09.2013 is 197 of different category, which includes 101 numbers of field staff and 96 numbers of ministerial staff. The details of amenities supplied to the field staff for protection of the forest from bio-interference has been given in the table below.

Table No. 160			
Amenities supplied to the Staff			
Sl.No	Year	R.C.M in Rs.	Clothing in Rs.
1	2007-08	1,65,000/-	2,00,000/-
2	2008-09	10000/-	2,00,000/-
3	2009-10	60,000/-	2,00,000/-
4	2010-11	37,000/-	1,95,000/-
5	2011-12	40,000/-	1,50,000/-
6	2012-13	51,961/-	1,89,000/-
7	2013-14	1,50,000/-	2,59,000/-
Sources - Divisional Forest Officer, Deogarh.			

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7.16.3.1. **Arms and Ammunition:** The following arms and ammunition have been supplied to the field staff for use the same during patrolling. The details of arm and ammunition available in this division are given in the table bellow.

Table No. 161

Arms and Ammunition available in this Division

Sl.No.	Name of article	Number
1	Gun	10 Nos
2	Rifle	Nil
3	Revolver	02 Nos
4	Gun cartridge	400 Nos
5	Rifle cartridge	Nil
6	Revolver cartridge	42 Nos
7	Medium Lathi	------

Sources - Divisional Forest Officer, Deogarh.

7.17. Past Yield, Revenue and Expenditure:

7.17.1. **Yield, Revenue and Expenditure in out going Plan period:** The year wise Revenue, yield and expenditure during the last out going Plan period 1995-96 to 2014-15 is given in the table below.

Table No. 162

Revenue and Expenditure in out going Plan period

Sl. No.	Year	Yield		Revenue in Rs.	Expenditure in Rs.
		Unit	Royalty in Rs.		
1	1995-96	xx	xx	5212031	9431266
2	1996-97	xx	xx	28490907	9276066
3	1997-98	1299.811	874600.00	5263245	9042173
4	1998-99	2553.853	2734200.00	9257195	11038735
5	1999-00	xx	xx	8345220	14322796

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6	2000-01	xx	xx	24058207	13397771
7	2001-02	xx	xx	3520015	11430188
8	2002-03	xx	xx	8083249	12782978
9	2003-04	xx	xx	2085408	12862369
10	2004-05	xx	xx	7497352	14721983
11	2005-06	1289.55	1310184.00	8160606	17743105
12	2006-07	1535.25	1807437.00	4679014	25689457
13	2007-08	1651.09	1535516.00	6321250	33995131
14	2008-09	1497.50	1557400.00	2532047	40970062
15	2009-10	1618.87	1748380.00	11447007	47170098
16	2010-11	1295.22	1470075.00	11512958	53428428
17	2011-12	1251.05	1501260.00	17472451	47014442
18	2012-13	1666.71	2160056.00	10054112	57870268
19	2013-14	2441.00	3385667.00	9758829	65421442
20	2014-15			3554225	38797005
Sources - Divisional Forest Officer, Deogarh.					

7.17.2. **Yield, Revenue and Expenditure During the Revision Period**: The revision of the out going Plan is taken up in time. The year wise yield, revenue and expenditure during the revision of this Plan period 2012-13 to 2014-15, along with average of the out going Plan period is given in the table given below.

Table No. 163

Yield Revenue and Expenditure During the Revision Period

Year	Revenue		Expenditure	
	Head	Amount in Rs.	Head	Amount in Rs.
2012-13	0406-Revenue	10054112	Plan & Non Plan	57870268
2013-14	0406-Revenue	9758829	Plan & Non Plan	65421442
2014-15	0406-Revenue	3554225	Plan & Non Plan	38797005
Sources - Divisional Forest Officer, Deogarh.				

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7.17.3. Revenue : Revenue during the plan period is given below.

Table No. 164

Revenue during the Plan period

Year	Expected revenue of different items in Rs. hundred thousands (lakh)							
	Timber	Firewood	Bamboo	NTFP	Grazing	House rent	Fine	Total
1995-96	29.92053	1.008	0	11.50406	0.16288	0.67362	8.85122	52.12031
1996-97	30.02997	20.004	0	8.30811	0.16497	0.71586	225.68616	284.90907
1997-98	20.00387	5.00	0	15.73912	0.28583	0.72722	10.87641	52.63245
1998-99	45.6141	12.254	0	8.63182	0.27179	0.70725	25.09299	92.57195
1999-00	15.57363	4.5011	0	14.25958	0.30367	1.77180	47.04242	83.4522
2000-01	53.0218	12.00	0	9.92649	0.29806	1.96223	163.37349	240.58207
2001-02	7.18095	3.82565	0	0.75730	0.28787	2.08611	21.06227	35.20015
2002-03	55.05878	1.00	3.37478	1.53735	0.28575	1.98366	17.59217	80.83249
2003-04	0.80244	0	0	0.49479	0.27597	1.88130	17.39958	20.85408
2004-05	44.71006	0	0	0.12989	0.24559	1.83730	28.05248	74.97532
2005-06	55.74677	0	0	0.11435	0.21422	1.66450	23.86622	81.60606
2006-07	23.56638	0	0	0.16451	0.01132	1.56595	21.48198	46.79014
2007-08	50.23234	0	0	0.56761	0	1.68560	10.72695	63.2125
2008-09	11.17681	0	0	0.63048	0	1.45539	12.05779	25.32047
2009-10	86.35566	0	0	0.95102	6	1.36420	25.79919	114.47007
2010-11	101.02778	0	0	0.77553	0	1.55560	11.77067	115.12958
2011-12	147.00703	0	0	0.19757	0	1.61575	25.90416	174.72451
2012-13	78.86827	0	0.056	0.13887	0	1.48910	19.98888	100.54112
2013-14	71.95104	0	0	0.03	0	1.5023	24.10495	97.58829
2014-15	24.14042	0	0	0	0	0.9657	10.43613	35.54225

Sources - DFO, Deogarh.

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CHAPTER - VIII

STATISTICS OF GROWTH and VOLUME

8.1. Statistics of Growth:

8.1.1. **Past Statistics** - The growth rate and yield of the growing stocks of a particular patch of forest is affected by different parameters like the geology, climatic factor, position of ground water table, mineral content of soil and biomass on the particular patch. Soil formation on the earth's surface is a slow continuous process, taking ages. Even changing climatic factors like temperature, light, rainfall, wind etc. is bound to exert considerable impacts upon the growth rate of the growing stocks thereby affecting yield statistics of that particular patch of forest. Therefore at the time of assessment of growth and yield of growing stock, a localized patch needs to be considered and all research works needs to be focused on that patch to curb the impacts of the above said factors. But unfortunately the detailed methods of volume determination and yield calculation of major species by different authors are as under.

8.1.2. **Experimental Plot** – Deogarh Forest Division does not have any experimentation wings to assess the growth rate and yield of the forest crop on a regular basis. The Silviculture and Research wings of Forest Department have not undertaken any research works within the jurisdiction of Deogarh Division. No research station of the Government or by any private agency exists within the division from where information's and data on the growth rate and yield of species in different site quality could be obtained. Under these circumstances the Writer does not have the scope of getting up dated data on research within this division. The accurate relationship between height and diameter with respect to time period of principal species cannot be prepared. The most predominant species sporadically distributed in this area of revision are Sal, Bija, Asan, Kurum, Dhaura, Mai etc. In absence of any statistical data for the area of this revision, the following Indian forest records for sal and other species can be referred to, which has been given in the table below.

Table No. 165

Data according to Indian forest records

Sl No.	Name of the book	Name of the author	Topic	Species
1	Indian forest record. (New series) Vol. 4 (a) No.4 (1943)	A.L.Griffith and Baskhi Santh Ram	Yield and stand table for sal high forest	Sal
2	Indian forest records. Vol. XXI, part IV, 1926	H.S.Haward	Yield table for cleared felled sal coppice.	Sal
3	Indian Forest Records (Silvicultural series) Vol. XII – Part-I, 1925.	H.S.Haward	Volume and outturn tables for sal	Sal
4	Indian Forest records (Silvicultural series) Vol.X Part 6, 1924.	S.H. Haward	General Volume table for sal	Sal

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5	Indian Forester Volume- 84, 1958.	G.S. Mathanda	The uneven aged Sal forest of Ramnagar Forest Division, Uttar Pradesh, their condition, rate of growth, etc. along with empirical yield and stand table for selection type of sal crop	Sal
6	Indian Forester Volume X Part III 1923.	Smithys and Howard	Yield table for sal for the united province	Sal
7	Indian forest recods,Vol-X, part-VI, 1924	Howard	General volume table for sal	Sal
8	I.F.R (N.S), 12(13), 1972	A.N Chaturbedi	General volume table for sal	Sal
9	Bija standard and commercial volume table	S.N. Debraj, P.K. Bhattacharya, Tarlok Singh and D.S. Rawat	Volume table for Piasal	Piasal
10	Indian forest records (New series) silviculture volume IX No.-4, 1959	x	Yield table and stand table for teak	Teak
	Indian Forest records (Silviculture series) Vol-II No. 2, 1936.	M.A.Kazi	Standard and commercial volume table for sisoo	Sisoo
11	Forest bulletin No. 52, (Silviculture) 1925.	S.H.Howard	Preliminary yield table for sisoo	Sisoo
12	I.F.R. (New series) Silviculture 12 (7), 1973	Chaturvedi	General standard Volume Tables for simul	Simul
13	Indian Forest Records. (Silviculture series) Volume XV, Part – IV, 1932.	L.D.Mahendru	Volume table and diameter growth for simal	Simul
14	Indian forest records (New series) Vil-4A, No.5, 1947	Griffith and Santh Ram	Asan General standard and commercial volume table for asan	Asan
15	I.F.R. (New) series silviculture Vol-12,No.4 1971.	A.N Chaturbedi and P.K.Bhattarya	General standard volume tables for asan	Asan
16	Indian, Forest Records, New series Volume IV C No.5, 1945.	A.L.Griffith, Bakshisantra Ram, and Jagadamba Prasad	General standard and commercial volume table for asan	Asan
17	General standard volume table for Haldu	Chatuvedi, Bhattacharya and Rawat	x	Haldu

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18	UP forest leaflet No.6	E.C.Mobbs	An approximate volume table for halanda	Haldu
19	Indian forest records (New series) Silviculture Volume – II, No.7	Sri Dabaral and D.C. Sharma	Standard volume for moi	Moi
20	Indian forest records new series silviculture volume-II, No. 4, and 1964.	S.N. Debral, P.K.Bhatarya and P.S.Payal	Standard volume tables for jamu	Jamu
21	Standard and commercial volume table	S.N.Babral, P.K Bhatacharya, Tailok Singh, and R.C. Jain	Standard and commercial volume table for karada	Karada
Sources - Indian Forest Records.				

8.1.3. All the research papers shown above pertain to the volume table, which are antic. These have been used in the preparation of the volume table at the National level based on research data from different localities out side Orissa. As such it is not wise to directly use such data and statistics to calculate the yield of different species in this division. Therefore it is wise to develop and devise volume and yield tables locally for this division independently.

8.1.4. **Mean Annual Increment** - Owing to the absence of any research activities for assessment of rate of growth of different species and other aforesaid reasons it would be very difficult to assess the mean annual increment as the past enumeration data, year wise for last 20 years are not available. Illicit felling is regular features in most forest blocks. As such illicit removal of timber from the forest would make the calculation of M.A.I. even more difficult task.

8.1.5. **Local Volume Equation** - The Forest Survey of India has developed local volume equation for different forest species both principal and secondary species taking the forest of Phulbani, Sambalpur and Koraput District as per their sampling for Orissa state. The 'Report on Resources Survey of Phulbani Forest Catchments (Orissa) prepared by Forest Survey of India, Dehradun, 1982 has been referred for relevant local volume equation for determination of volume and yield in this Plan. In these equation 'V' denotes under bark round timber volume in cum and "D" denotes over bark diameters in meters at breast height, where D = 7g / 22 and "g" denotes over bark girth in meter at breast height. All other species including fruit bearing species like Mahul, Kendu, Mango, Gambhar, Siris,and Kusum etc. have been categorized as other miscellaneous species. The local volume equations for different species used in this Working Plan are shown in the table below.

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Table No. 166		
Local Volume Equation		
Sl. No.	Species	Local volume regression equation to be adopted
1	Sal	$V = 0.109884 - 1.804754\ D + 10.297714\ D^2$
2	Piasal	$V = 0.058424 - 1.233468\ D + 9.433633\ D^2$
3	Sisoo	$V = 0.00965 + 0.58546\ D - 2.5605\ D^2 + 24.34215\ D^3$
4	Simuli	$V = 0.136196 - 2.076740\ D + 10.156600\ D^2$
5	L.Moi	$V = 0.057424 - 1.153088\ D + 8.542648\ D^2$
6	Mundi	$V = 0.08444 - 1.26801\ D + 8.75274\ D^2$
7	Kasi	$V = 0.035142 - 0.839708\ D + 8.157614\ D^2$
8	Dhaura	$V = 0.015731 - 1.020606\ D + 9.656667\ D^2$
9	Asan	$V = 0.103171 - 1.684599\ D + 10.107586\ D^2$
10	Bandhan	$V = 0.057424 - 1.153088\ D + 8.542648\ D^2$
11	Jamu	$V = 0.08444 - 1.26801\ D + 8.75274\ D^2$
12	Kuruma	$V = 0.08507 - 0.19669\ D + 7.16812\ D^2$
13	Sidha	$V = 0.07199 - 1.25923\ D + 9.28416\ D^2$
14	Mahul	$V = 0.030925 - 0.567067\ D + 5.709471\ D^2$
15	Salai	$V = (-)\ 0.188655 + 3.021335\ D$
16	Bahada	$V = 0.035142 - 0.839708\ D + 10.107586\ D^2$
17	Kendu	$V = 0.06728 + 4.06351\ D - 0.99816\ \square D$
18	Misc.	$V = 0.088074 - 1.449236\ D + 8.760534\ D^2$
Sources - Forest Survey of India, Dehradun		

8.1.6. **Quality Class** – The quality class for sal as laid down in All India yield and stand table is adopted. The relationship between quality class of sal and crop height have been given in the table below.

Table No. 167			
Relationship between quality class of sal and crop height			
Quality class	Crop age in year	Crop height in meter	
		As per all India Yield and Stand	As per yield table for Indian species
Q-I	120	> 33.00	39.60
Q-II	120	27.00 to 33.00	32.30
Q-III	120	21.00 to 27.00	25.30
Q-IV	120	15.00 to 21.00	18.30
Q-V	120	< 15.00	< 18.3
Sources - All India Yield and Stand Table.			

8.1.7. **Growth of Sal** – The growth rate of sal has been recorded in a regenerate area in Sarguja District of Chhattisgarh, which has been published in the Indian Forester, Volume – 130, July 2004. The recorded data has been given in the table below.

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Table No. 168

Growth rate of sal Indian Forester, Volume – 130, July 2004

Tree No.	1994			1995			1998		
	Basal girth in cm	G.B.H in cm	Height in mt	Basal girth in cm	G.B. H in cm	Height in mt	Basal girth in cm	G.B.H in cm	Height in mt
1	52	17	7.6	56	40	7.9	62	49	12.0
2	52	42	9.1	54	42	9.80	55	42	9.8
3	24	14	2.70	24	14	2.70	26	16	2.7
4	40	28	7.1	42	11	7.4	77	56	12.5
5	47	34	7.3	49	38	7.55	53	40	12.5
6	36	24	6.2	37	25	5.8	37	25	3.0
7	41	27	7.75	41	28	8.15	41	29	7.5
8	32	21	2.9	32	21	3.8	33	25	5.5
9	24	16	3.64	33	24	5.6	38	28	6.2
10	32	23	6.0	33	23	4.6	61	46	12.5
11	46	32	7.8	46	35	8.65	74	61	13.0
12	32	22	5.7	33	23	5.5	40	29	7.5
13	50	29	8.5	50	41	8.7	58	42	10.0
14	45	35	7.5	45	36	8.3	70	57	1.6
15	32	20	4.7	32	23	3.5	32	27	3.8
16	23	14	2.35	23	14	2.5	57	46	12.0
17	48	38	9.25	48	38	9.95	52	42	10.1
18	39	30	7.75	41	31	7.7	46	34	8.5
19	25	14	2.5	26	14	2.55	28	15	2.1
20	38	29	6.60	38	31	6.7	51	40	11.5
21	48	34	7.5	49	35	7.5	73	44	12.0
22	30	19	6.1	30	20	6.75	65	31	13.0
23	35	19	6.1	35	20	6.15	73	28	7.0
24	30	18	5.75	33	19	6.1	39	33	11.0
25	27	15	5.05	27	15	5.05	49	28	11.0
26	27	23	3.65	37	24	3.9	38	45	6.5
27	35	22	5.75	37	23	5.5	58	24	9.0
28	46	21	4.65	46	22	5.4	51	40	1.7
29	32	23	3.3	32	28	4.00	51	33	10.0
30	35	27	6.7	36	37	7.05	38	30	6.0
31	37	32	6.8	37	33	7.050	41	38	4.5
32	45	27	8.25	45	30	8.5	48	34	7.0
33	36	30	7.9	39	32	7.75	44	38	9.5
34	43	29	8.2	44	32	8.3	46	49	10.0
35	44	21	7.2	44	24	7.8	63	39	11.5
36	32	22	3.25	32	24	3.4	57	47	11.0
37	31	19	2.5	36	21	2.75	55	45	12.0
38	32	13	2.4	32	14	2.6	57	23	11.5
39	23	27	3.45	23	27	3.95	23	34	5.5
40	30	20	1.95	31	27	2.1	39	29	2.5
41	32	27	2.9	34	28	3.1	46	29	3.4

Sources - Indian Forester, Volume - 130, July 2004

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8.1.8. Sal is the main principal species in this division. Therefore local volume table for sal in the area allotted to Selection Working Circle is given below.

Table No. 169

Local Volume for sal in SWC

Name of the block	Volume in cubic mt. of different girth class in cm.				
	60 to < 90	90 to < 120	120 to < 150	150 to < 180	180 above
Panguli RF	0.2	0.39	0.6	0.86	1.0
Old Pauri RF	0.18	0.44	0.71	0.97	1.1
Khajuria RF	0.09	0.35	0.64	1.09	1.3
Malyagiri RF	0.19	0.38	0.66	1.13	1.4
Pravasuni RF	0.05	0.35	0.69	1.06	1.2
Badtaila RF	0.19	0.36	0.58	0.90	1.1
Pradhanpat RF	0.2	0.39	0.6	0.86	1.0
Kansar RF	0.18	0.44	0.71	0.97	1.1
Pravasuni RF	0.09	0.35	0.64	1.09	1.3
Rambhadevi RF	0.19	0.38	0.66	1.13	1.4
Mandaila RF	0.05	0.35	0.69	1.06	1.2
Pauri RF	0.19	0.36	0.58	0.90	1.1
Gogua RF	0.2	0.39	0.6	0.86	1.0
Tamkia RF	0.18	0.44	0.71	0.97	1.1
Saida RF	0.09	0.35	0.64	1.09	1.3
Chargochia RF	0.19	0.38	0.66	1.13	1.4
Mankarchua RF	0.05	0.35	0.69	1.06	1.2
Kuladera RF	0.19	0.36	0.58	0.90	1.1
Jhadeswar PRF	0.2	0.39	0.6	0.86	1.0
Hadamunda PRF	0.18	0.44	0.71	0.97	1.1
Kankarkhol PRF	0.09	0.35	0.64	1.09	1.3
Kundheigola PRF	0.19	0.38	0.66	1.13	1.4
Naikul PRF	0.05	0.35	0.69	1.06	1.2
Kulundikudar PRF	0.19	0.36	0.58	0.90	1.1
Tusuta PRF	0.2	0.39	0.6	0.86	1.0
Kardapal PRF	0.18	0.44	0.71	0.97	1.1
Bankhol PRF	0.09	0.35	0.64	1.09	1.3
Chilantikhol PRF	0.19	0.38	0.66	1.13	1.4
Kandarpa-Lambdura PRF	0.05	0.35	0.69	1.06	1.2
Ludhar-Deopani PRF	0.19	0.36	0.58	0.90	1.1
Salohi-Laimura PRF	0.2	0.39	0.6	0.86	1.0
Sargidih PRF	0.18	0.44	0.71	0.97	1.1

Sources - WPO, Keonjhar.

8.2. Study of Growth and Yield in this Plan:

8.2.1. In this Working Plan advanced technologies has not applied to make an assessment of the growing stock of the forest of this division. Satellite remote sensing and GIS based methods have been operationally employed to provide Working Plan inputs in various forest divisions across the Country such as Assam, Andhra Pradesh, Madhya Pradesh and Karnataka. These efforts have demonstrated that significant reductions in cost and time can be achieved by relying on stratified sampling methods based on mapping forest canopy density and forest type using satellite remote sensing.

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8.2.2. For perparation of Working plan 5 % enumeration in SWC area & 1% enumeration in the rest area has been done. Sample enumeration has been done in the size of each plot is 40 mt x 25 mt and rest is strip. There are1148 sample plots taken at the size of 40 mt x 25 mt & the rest is strip. Total area covered for sample enumeration is 4821.54 ha, out of which 5 % enumeration is 4729.694 ha & 1 % enumeration is 91.846 ha.. The number of tree per ha in different blocks is given in the table below.

Table No.170

Tree Per ha in RF

Sl. No.	Name of RF	No. of Tree per ha. in the girth class 30 cm to < 120 cm.	No. of Tree per ha. in the girth class 120 cm to < 150 cm	No. of Tree per ha. in the girth class 150 cm & above
1	Pradhanpat	518	243	21
2	Kansar	548	155	12
3	Pravasuni(P)	604	134	15
4	Rambhadevi(P)	606	139	13
5	Panguli	358	71	9
6	Mandasila	325	167	11
7	Paburi	395	102	14
8	Badtaila	424	93	8
9	Gogua	564	101	17
10	Malyagiri	388	138	22
11	Old Puri	390	122	17
12	Tamkia RF	269	123	18
13	Saida	255	68	12
14	Chargochhia	103	40	4
15	Mankarchua	196	67	24
16	Kuladera	302	97	9
17	Khajuria	280	122	12
18	Thianal	634	45	6
19	Nizgarh A	105	3	1
20	Nizgarh B	0	4	5
21	New pauri	497	58	9
22	Kansar B	876	4	0
23	Rengalmunda	218	34	5
24	Kunjam	461	5	0
25	Jambua	152	14	0
26	Chumgamatia	110	30	0
27	Biripal	545	150	10
28	Danda	324	84	1
29	Kansar A	469	0	0
30	Gurusulei	346	176	57

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Table No. 171

Tree Per ha in PRF

Sl. No.	Name of PRF	No. of Tree per ha. in the girth class 30 cm to < 120 cm.	No. of Tree per ha. in the girth class 120 cm to < 150 cm	No. of Tree per ha. in the girth class 150 cm & above
1	Jhadeswar	476	125	19
2	Hadamunda	325	93	18
3	Kankarkhol	596	69	13
4	Kundheigola	477	161	11
5	Naikul	404	93	6
6	Kulundikudar	230	108	3
7	Tusula	227	80	7
8	Kardapal	183	41	8
9	Bankhol	332	84	11
10	Chilantikhol	337	130	13
11	Kandarpa-Lambdura	486	100	18
12	Ludhar-Deopani	270	142	9
13	Salohi-Laimura	292	108	13
14	Sargidihi	351	104	17
15	Rajamunda	192	3	3
16	Kalkath	147	8	1
17	Tirib	201	3	0
18	Tarang	353	81	6
19	Banbira	471	5	0
20	Talabahali	369	5	3
21	Kakharua	484	88	8
22	Kalamjuangsahi	380	66	5
23	Ranjo	469	3	5
24	Atonaka	757	59	4
25	Jolonda-Jankpani	577	73	9
26	Sarbeda	95	39	8
27	Timi	21	6	0
28	Jharkhaman	664	50	6
29	Priyambadapur	610	4	0
30	Rangiapal	114	6	1
31	Bhaluhuli	503	17	0
32	Bhulaka	235	64	13
33	Sanda	397	26	0
34	Badasada	21	0	0
35	Nuagaon	20	0	0
36	Injidi	583	4	0

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37	Tumkia PRF	409	26	1
38	Bangalimunda	86	2	0
39	Telikusum	430	58	5
40	Ghodapaka	615	145	10
41	Kaunshibahal	150	0	0

Table No. 172

Tree Per ha in PF

Sl. No.	Name of PF	No. of Tree per ha. in the girth class 30 cm to < 120 cm.	No. of Tree per ha. in the girth class 120 cm to < 150 cm	No. of Tree per ha. in the girth class 150 cm & above
1	Balibahal	101	29	0

8.3. Methodology Adopted:

8.3.1. An outline of the methodology adopted for assessment of the growing stock and yield in Deogarh Forest Division is as under.

8.3.2. **Preparation of Infrastructure layer** (Base layer) - Two infrastructure layers namely (i) the administrative layer having details like roads, rivers, administrative boundaries of the division, Ranges, Sections and Beats (ii) the Management layer showing all the forest blocks covered under the revised Plan have been prepared by digitizing hard copy maps on 1:50,000 scale.

8.3.3. **Crown Density:** The forest of this division is classified into the following canopy density classes such as < 10 % crown cover, 10 to < 25 % crown cover, 25 to < 40 % crown cover, 40 and above crown cover. The crown density layer of this division has been completed with various rounds of field check and quality. The distribution of the crown density classes for the entire division is given in the table below.

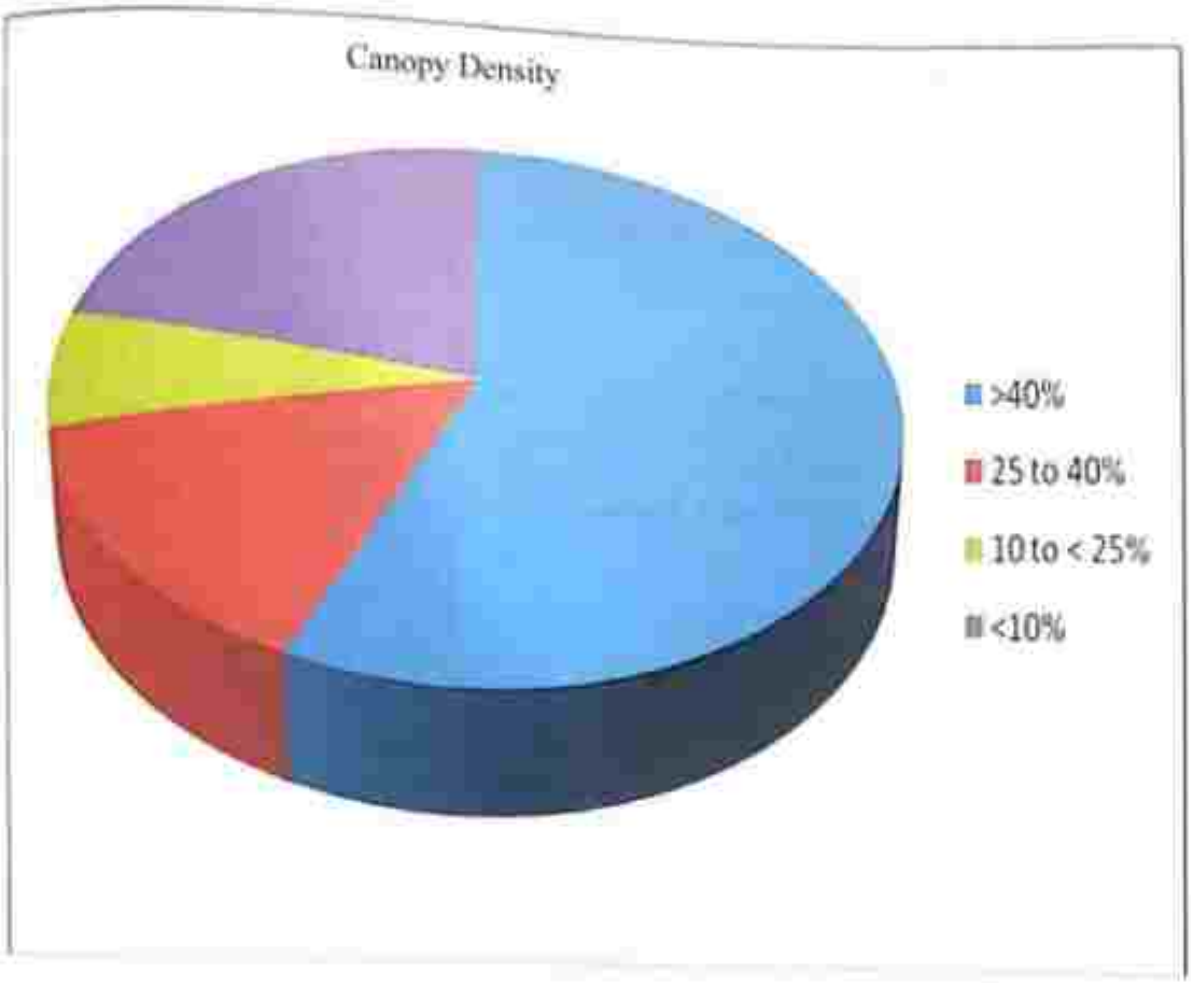
Table No. 173

Distribuition of area in different canopy density

Range	Canopy density and its extent of area in ha.				Total area in ha.
	>40%	25 to 40%	10 to < 25%	<10%	
Deogarh	25458.174	6707.721	3124.645	8654.805	43945.345
Reamal	11979.00	3155.00	1469.00	4664.063	21267.063
Barkote	18718.00	4930.00	2296.00	7623.606	33567.606
Pallahara	9733.00	2563.00	1193.00	4873.4914	18362.4914
Khamar	8984.00	2366.00	1102.00	3012.214	15464.214
Total	74872.174	19721.721	9184.645	28828.1794	132606.7194

Sources - Field Staff of WPO, Keonjhar.

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8.4. **Sampling Design:**

8.4.1. The objective of field inventory was to provide estimates of the growing stock of economically important species. Inventory design was based on a stratified random sampling design which was followed based on the forest canopy density and forest type layers. A pre-inventory was first carried out to assess the variability within and across strata.

8.4.2. Sampling intensity, inventory point allocation at the compartment / block level have been done by the field staff. The Range wise distribution of sample points is as under.

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Table No.174			
Range wise distribution of sample plots			
Range	Sample plots in RF	Sample plots in PRF	Total
Deogarh	170	60	230
Reamal	156	64	220
Barkote	160	72	232
Pallahara	170	66	236
Khamar	155	75	230
Total	811	337	1148
Sources - Field Staff Of WPO, Keonjhar.			

8.4.3. The entire division was divided into Selection Working Circle (SWC), Rehabilitation Working Circle (RWC) and Miselanious Regulation Working Circle based on historical information of growing stock. Accordingly it was planned to generate stand and stock and yield information at blocks, compartment and coupe level for the Selection Working Circle (SWC) areas and only growing stock information at forest block level for RWC areas. Based on this suitable sampling design and estimation procedures were followed to address the requirements of SWC and RWC areas.

8.4.4. An optimal sampling design with high precision in the estimate was adopted to address the large variability of forest composition and stock in the division. The precision of the sample estimate of the population depends not only on the size of the sample but also on the variability in the population. When the variability in the population was very high, then dividing the population into number of homogenous vegetation strata and then selecting the inventory points randomly reduced the sample variance. This procedure is called as stratified random sampling. Therefore to optimize the intensity of ground inventory and enhance the precision of the estimates, stratified random sampling procedure was adopted for growing stock assessment.

8.4.5. One of the major information requirements for the SWC areas is the growing stock and yield levels of Sal, Asan, Moi, Dhaura, Bija and other species. In addition the forest crown density, which serves as surrogate for growing stock, was used to further subdivide the each forest type class into two crown density classes. The area of these strata at different management and administrative units were then generated for the subsequent use in sampling design and estimation.

8.4.6. The precise sample estimates are generated based on adequate sample size and its distribution pattern and finally estimation procedure followed against a defined error, time and cost limits. Sample size and distribution was determined in consonance with spatial variability in the strata distribution and growing stock conditions. There were 1148 number of sample points and strip enumeration have been done based on type stratification and were distributed randomly across the entire division and as per inventory points to understand the spatial trends in the variability of growing stock and estimate the sample size of 0.1 ha (40 mt x 25 mt) & strip. However considering the details required for SWC and RWC areas, the sampling intensity is limited to 5% for SWC area & 1% for RWC area.

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8.5. Forest Inventory:

8.5.1. The field inventory was carried out by field staff of WPO, Keonjhar Division. The locations of sample points and plot enumeration details are given in volume II. The sample point location maps along with latitude and longitude positions were prepared. A field inventory workshop and orientation camp was organized for all the field Officers to train them about the methodology, use of GPS and different types of maps and maintain uniform methodology across the teams. Field inventory manual detailing all the steps of data collection was provided to field Officers.

8.5.2. **Collection of Inventory Data** - The enumeration sheets given to field staff. The field staff are recording enumeration result of different forest species of a particular point within 0.1 ha area beyond the girth class of 30 cms. Bamboo enumeration is also done. The growth of the bamboo, circumference of the clump in meters, culms height in mtrs and number of culms existing in clump in 1st Year, 2nd Year, 3rd Year, 4th Year and above. Data generated by the field inventory crews were entered into the inventory database. The data collected through point enumeration were complied and analysed.

8.6. Data Analysis and Outputs:

8.6.1. After completion of the inventory, the total inventory data was overlaid on the forest type / crown density intersected layer. For the estimation of growing stock, the crown density map was collapsed into four major classes such as <10 % and > 40 % crown density class.

8.6.2. As a first step, timber volume was computed for each inventory point for the identified economic species as well as for miscellaneous category. The timber volume was computed using the local volume equation.

8.6.3. **Stand** (number of trees) - The predominance of Sal, Kendu, Asan and other miscellaneous species in the respective forest area can be very well observed. This indicates the role of stratification in controlling the growing stock estimation with reference to species predominance. The distribution of different species as per the field enumeration data is given. The total estimated trees in this division are 76104628 numbers. The summary of total tree based on girth class is as under.

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Table No. 175				
Summary stand table				
Name of Range	30 cm to <120	120 cm to <150	150 to above	Total
Pallahara	6700833	1953567	309422	8963822
Khamar	5199204	1446130	196647	6841981
Barkote	13572160	3703582	360177	17635919
Deogarh	21738485	6486595	638220	28863300
Reamal	11231425	2311864	256317	13799606
Total	58442107	15901738	1760783	76104628
Avg total unit	29221053.50	15901738.00	2641174.50	47763966.00
Sources - Field Staffs of WPO, Keonjhar.				

8.6.4. **Tree number in each block**: The predominance of Sal, Kendu, Asan and other miscellaneous species in the respective forest area can be very well observed. This indicates the role of stratification in controlling the growing stock estimation with reference to species predominance. The distribution of trees in each block rangewise as per the field enumeration data is as under.

Table No. 176				
Rangewise No. of Tree in each block				
S.No	Block	Status	Range	Total No. of Tree
1	Malyagiri	RF	Pallahara	3190985
2	Old Puri	RF	Pallahara	3588605
3	Tamkia RF	RF	Pallahara	210553
4	Saida	RF	Pallahara	133234
5	Mankarchua	RF	Pallahara	377182
6	Nizgarh A	RF	Pallahara	30433
7	Nizgarh B	RF	Pallahara	792
8	New pauri	RF	Pallahara	714024
9	Kakharua	PRF	Pallahara	96591
10	Atonaka	PRF	Pallahara	132734
11	Jolonda-Jankpani	PRF	Pallahara	192058
12	Sarbeda	PRF	Pallahara	39337
13	Timi	PRF	Pallahara	11413
14	Jharkhaman	PRF	Pallahara	47473
15	Bhaluhuli	PRF	Pallahara	73289
16	Balibahal	PF	Pallahara	19370
17	Ranjo	PRF	Pallahara	105749
		Total	**Pallahara**	**8963822**
1	Malyagiri	RF	Khamar	3092386
2	Chargochhia	RF	Khamar	77793

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3	Kuladera	RF	Khamar	912620
4	Kardapal	PRF	Khamar	122355
5	Bankhol	PRF	Khamar	521987
6	Rengalmunda	RF	Khamar	22274
7	Kunjam	RF	Khamar	474180
8	Jambua	RF	Khamar	40935
9	Kalamjuangsahi	PRF	Khamar	67948
10	Priyambadapur	PRF	Khamar	30786
11	Rangiapal	PRF	Khamar	49651
12	Bhulaka	PRF	Khamar	72733
13	Sanda	PRF	Khamar	188685
14	Badasada	PRF	Khamar	4137
15	Nuagaon	PRF	Khamar	2573
16	Injidi	PRF	Khamar	43267
17	Chungamatia	RF	Khamar	2181
18	Biripal	RF	Khamar	308367
19	Danda	RF	Khamar	582007
20	Gurusulei	RF	Khamar	225116
		Total	**Khamar**	**6841981**
1	Pradhanpat	RF	Barkote	3178311
2	Panguli	RF	Barkote	1407146
3	Mandasila	RF	Barkote	1436802
4	Paburi	RF	Barkote	4198083
5	Badtaila	RF	Barkote	5331271
6	Kulundikudar	PRF	Barkote	160975
7	Tusula	PRF	Barkote	526092
8	Thiangl	RF	Barkote	559555
9	Kansar B	RF	Barkote	85645
10	Banbira	PRF	Barkote	567543
11	Talabahali	PRF	Barkote	24124
12	Kaunshibahal	PRF	Barkote	89084
13	Kansar A	RF	Barkote	71288
		Total	**Barkote**	**17635919**
1	Pradhanpat	RF	Deogarh	4943589
2	Kansar	RF	Deogarh	6977600
3	Pravasuni(P)	RF	Deogarh	8343579
4	Rambhadevi(P)	RF	Deogarh	1756270
5	Khajuria	RF	Deogarh	2073350
6	Jhadeswar	PRF	Deogarh	1716468
7	Hadamunda	PRF	Deogarh	74056
8	Chilantikhol	PRF	Deogarh	1111973
9	Kandarpa-Lambdura	PRF	Deogarh	1006505
10	Ludhar-Deopani	PRF	Deogarh	359762

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11	Salohi-Laimura	PRF	Deogarh	122104
12	Sargidihi	PRF	Deogarh	43968
13	Rajamunda	PRF	Deogarh	49429
14	Kalkath	PRF	Deogarh	39210
15	Tirib	PRF	Deogarh	17483
16	Bangalimunda	PRF	Deogarh	26293
17	Telikusum	PRF	Deogarh	201661
		Total	**Deogarh**	**28863300**
1	Kansar	RF	Reamal	1744400
2	Rambhadevi(P)	RF	Reamal	1469137
3	Gogua	RF	Reamal	2452148
4	Hadamunda	PRF	Reamal	172801
5	Kankarkhol	PRF	Reamal	3912358
6	Kundheigola	PRF	Reamal	2293885
7	Naikul	PRF	Reamal	978531
8	Tarang	PRF	Reamal	431849
9	Tamkin PRF	PRF	Reamal	219233
10	Ghodapaka	PRF	Reamal	125264
		Total	**Reamal**	**13799606**
		Grand Total		**76104628**

8.7. Yield Calculation:

8.7.1. The yield will be regulated by area with a percentage check on the removal of exploitable trees as calculated by Smythies' safeguarding formula. This formula is also known as U.P safeguarding formula. Smythies evolved it for the Sal forests of Uttar Pradesh for sustainable yield. The formula is based on the following assumptions, which holds true for the forest blocks allotted to Selection Working Circle.

8.7.2. The exploitable (Selection) trees already exist and are being recruited almost throughout the area (and not in any particular compartments) and that felling passes regularly through the forests in consecutive annual coupes in a felling cycle of 10 or 20 years. The basic objective of management is to ensure, as far as possible, sustained yield of exploitable trees and volume above the exploitation limit at every felling cycle. The middle aged and younger diameter classes are well represented and the present rate of recruitment into the two highest diameter classes (I and II) is not likely to decrease in the near future. Sustained yield of Selection trees is adequately safeguarded, if in any area, the number that may be felled is limited to the number that will pass up from below by the time felling comes round again.

8.7.3. **Smythies' Safeguarding Formula** – The yield available during the felling cycle as the number of trees of the next lower class (class-II) hereafter referred to as approach class that can be expected to grow to exploitable size (class-I) during the period of the felling cycle is determined by following tree formula. The annual yield is then expressed as a percentage of the selection trees present in the coupe at the time of marking.

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8.7.4. **Formula** - $Y = (X / (I + X/2)\ 100 + A$, (where Y = Annual yield expressed as percentage, X = The number of class-II trees (approach class) that survive and enter into class-I trees (exploitable class) during the felling cycle, I = The number of selection trees as enumerated, A = An arbitrary fraction for rounding of the value of Y).

8.7.5. The value of X can be calculated by the formula given below.

$$X = (II - Z\ \%\ \text{of}\ II)\ F/T.$$

Where F = The felling cycle, T = The average period that the class-II trees will take to enter into Class – I, II = The number of class-II trees enumerated in felling series and Z = The mortality percentage (% of class-II trees disappear in T years)

8.7.6. But there is no any data available for ' T '. So out going plan is taken into consideration to determine the value of ' T '. Incase of sal it appears that 105 cm girth at breast height takes 36 years to attend 120 cm girth. Basing on this data ' T ' has been fixed to 36 years. From yield and stand table for sal of quality IV, the value of Z is determined and fixed to 35, corresponding to approach girth 90 cm and exploitable girth 120 cm. Now with the help of above data, the value of X is calculated as follows.

$$\begin{aligned} X &= (II - Z\ \%\ \text{of}\ II)\ F / T \\ &= II\ (1 - 35/100)\ 10/36 \\ &= II\ (0.65)\ 5/18 \\ &= 0.18\ II \end{aligned}$$

8.7.7. Now with the help of X, the annual yield Y is further modified as follows.

$$\begin{aligned} Y &= 100\ X / (1 + X/2) + A. \\ &= 100\ (0.18\ II) / (1 + 0.18\ II / 2) + A. \\ &= 18\ II / (1 + 0.09\ II) + A. \end{aligned}$$

8.7.8. The details of calculation of yield felling series wise is given in the chapter on Selection Working circle in Part II. The values for trees and volume of the approach and exploitable class of trees is provided. The average number of trees that can be removed for all species is 0.88 per ha. Depending on the present condition of the forest, 85284 nos of tree will be removed during the plan period. Therefore 76019344 numbers of trees have been retained agnaist 76104628 trees as a safeguard measure against biotic pressure and for conservation purpose. The yield estimated per hector is given in the table below.

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Table No. 177				
Range and Block wise Estimated yield per hector				
S.No	Name of the Block	Status	Range	Yield per ha
1	Malyagiri	RF	Pallahara	0.72
2	Old Puri	RF	Pallahara	0.78
3	Tamkia RF	RF	Pallahara	0.76
4	Saida	RF	Pallahara	0.68
5	Mankarchua	RF	Pallahara	0.4
1	Malyagiri	RF	Khamar	0.72
2	Chargochhia	RF	Khamar	0.95
3	Kuladera	RF	Khamar	0.98
4	Kardapal	PRF	Khamar	0.63
5	Bankhol	PRF	Khamar	0.81
1	Pradhanpat	RF	Barkote	1.02
2	Panguli	RF	Barkote	0.83
3	Mandasila	RF	Barkote	1.15
4	Paburi	RF	Barkote	0.79
5	Badtaila	RF	Barkote	1.02
6	Kulundikudar	PRF	Barkote	1.53
7	Tusula	PRF	Barkote	1.01
1	Pradhanpat	RF	Deogarh	1.02
2	Kansar	RF	Deogarh	1.08
3	Pravasuni(P)	RF	Deogarh	0.89
4	Rambhadevi(P)	RF	Deogarh	0.98
5	Khajuria	RF	Deogarh	0.96
6	Jhadeswar	PRF	Deogarh	0.74
7	Hadamunda	PRF	Deogarh	0.63
8	Chilantikhol	PRF	Deogarh	0.95
9	Kandarpa-Lambdura	PRF	Deogarh	0.67
10	Ludhar-Deopani	PRF	Deogarh	1.17
11	Salohi-Laimura	PRF	Deogarh	0.86
12	Sargidihi	PRF	Deogarh	0.71
1	Kansar	RF	Reamal	1.08
2	Rambhadevi(P)	RF	Reamal	0.98
3	Gogua	RF	Reamal	0.7
4	Hadamunda	PRF	Reamal	0.63
5	Kankarkhol	PRF	Reamal	0.65
6	Kundheigola	PRF	Reamal	1.14
7	Naikul	PRF	Reamal	1.16

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8.8. Enumeration and Analysis of Bamboo:

8.8.1. Bamboo enumeration has been taken up during sample point enumeration in the field. The bamboo clumps available inside the main plot have been enumerated simultaneously with the tree enumeration with detail of clump circumference, culms height and age of culms like 1st Year, 2nd Year, 3rd Year and 4th Year and above.

8.8.2. **Quality Class of Bamboo** - Unlike the quality class of the sal, the bamboo has been classified into three quality classes as per the culms height as shown in the table below.

Table No.178

Quality Class of Bamboo

Sl. No.	Quality	Height of culms in mt.
1	Class-I	09 and above
2	Class-II	06 to < 09
3	Class-III	< 06

Sources- Out going Scheme

8.8.3. **Statistics of Growing Stock of Bamboo** - Effort has been made to estimate the growing stock of the bamboo. For this it is necessary to first calculate the total number of clumps per hector, this when multiplied by the total bamboo producing area of the division gives the total number of clump in entire division. Similarly when total number of clumps multiplied with the average number of culms per clump gives the total numbers of culms in the division.

8.8.4. **Estimation of Sale Units (SU)** - Efforts have also been made to estimate the entire production of bamboo of the division in terms of sale units (SU). As such the average height of the culms of each bamboo bearing block has been calculated separately basing on the inventory data.

8.8.5. **Running Meter of Culms and Sale Unit** - Total numbers of culms of bamboo in the division multiplied by mean height of the culms gives the total length of bamboo. Sale Unit is the total running meter of bamboo culms in the division divided by 2400. This gives the total sale unit of the bamboo of the division. Where as 2400 running metre is taken as one standard sale unit of bamboo, which is equal to 01 metric tone.

8.8.6. Detailed felling series wise estimates of growth and yield of bamboos in the division has been covered in Part-II of the Plan in the chapter on Bamboo (overlapping) Working Circle. An estimate of the total number of culms and clump in the division is as under.

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Table No. 179									
Rambeo Enumeration Data per ha.									
Block	No. of Clump	Clump girth in Mtr.	Clump hight in Mtr	No. of Culms in each year				Total	Culm to be cut
				1st year	2nd	3rd	4th		
Pradhanpat RF	1	5	6.5	7	8	6	4	25	3
	2	4	6	3	2	2	2	9	0
	3	4	7	2	4	3	1	10	0
	4	4.5	6.5	6	5	3	2	16	0
	5	6	7	9	11	4	8	32	3
	6	5.5	6	8	6	3	4	21	0
	7	4.5	6	5	2	2	1	10	0
	8	4	6	4	4	2	2	12	0
	9	4.5	6	3	2	1	0	6	0
	10	4	6.5	2	2	1	0	5	0
	11	4.5	6.5	3	3	1	0	7	0
	12	6	7	4	2	2	1	9	0
	13	5.5	6	3	3	0	1	7	0
	14	4.5	6	3	4	1	1	9	0
	15	5.5	6	3	4	3	2	12	0
			Total	**65**	**62**	**34**	**29**	**190**	**6**
Rambhadevi RF	1	4.5	6.5	8	6	3	4	21	0
	2	6	6	5	2	2	1	10	0
	3	5.5	7	4	4	2	2	12	0
	4	4.5	6.5	6	5	3	2	16	0
	5	5.5	7	8	5	4	3	20	0
	6	4	6	3	3	1	0	7	0
	7	4	6	4	2	2	1	9	0
	8	4.5	6	3	2	2	2	9	0
	9	6	6	11	6	3	3	23	0
	10	5.5	6	6	5	3	2	16	0
	11	4.5	6	9	11	4	8	32	3
	12	4.5	6.5	8	6	3	4	21	0
	13	5.5	6	5	2	2	1	10	0
	14	5	6.5	6	5	4	2	17	0
			Total	**86**	**64**	**38**	**35**	**223**	**3**
Pravasuni RF	1	5	6	5	7	3	2	17	0
	2	4.5	6.5	5	6	2	3	16	0
	3	4	7	3	4	2	2	11	0
	4	4	6.5	4	5	2	0	11	0
	5	4	7	3	5	1	1	10	0
	6	4.5	6	5	5	2	1	13	0
	7	4.5	6.5	4	5	2	3	14	0

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	8	5	7	5	3	2	0	10	0
	9	5	7	6	6	2	1	15	0
	10	4	7	3	6	3	1	13	0
	11	6	8	6	9	4	2	21	0
	12	6	6.5	5	10	3	1	19	0
	13	4	7	4	6	2	0	12	0
			Total	**58**	**77**	**30**	**17**	**182**	**0**
Khajuria RF	1	4	6	6	7	3	1	17	0
	2	4	6.5	4	6	2	1	13	0
	3	4.5	6	5	5	2	0	12	0
	4	5	7	3	5	2	1	11	0
	5	6	6.5	3	4	4	2	13	0
	6	5	6.5	5	3	3	3	14	0
	7	5.5	5	5	6	1	0	12	0
	8	4.5	5.5	4	7	0	2	13	0
	9	4	5.5	5	5	3	1	14	0
	10	4	6.5	4	6	1	0	11	0
	11	4.5	6.5	3	5	2	2	12	0
	12	5	6.5	7	3	2	2	14	0
	13	5	7	6	4	3	3	16	0
	14	5	6.5	5	6	1	1	13	0
	15	4.5	6	4	3	2	1	10	0
			Total	**69**	**75**	**31**	**20**	**195**	0
Kansar RF	1	5	7	6	8	4	2	20	0
	2	6	7	5	6	3	1	15	0
	3	5.5	6	4	8	3	2	17	1
	4	6	6.5	5	6	3	2	16	0
	5	5	6	4	7	2	2	15	0
	6	5	5.5	10	8	4	2	24	0
	7	4	7	5	7	5	3	20	3
	8	5	7	7	12	4	2	25	0
	9	5.5	6.5	5	6	3	2	16	0
	10	5	6	6	7	3	1	17	0
	11	5.5	7	5	8	2	0	15	0
	12	5	6.5	7	4	2	0	13	0
	13	4	6.5	5	7	3	1	16	0
	14	4.5	6	6	8	4	2	20	0
	15	5.5	6	6	7	3	2	18	0
	16	4	5.5	5	5	4	1	15	0
	17	5.5	6	4	11	2	3	20	1
	18	6	6.5	5	6	4	2	17	1
	19	5	6	6	6	2	2	16	0
	20	5	5.5	4	7	4	2	17	2

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	21	4	7	6	6	4	3	19	1
	22	5	7	5	5	3	1	14	0
	23	5.5	6.5	6	8	4	2	20	0
	24	5	6	5	6	3	1	15	0
	25	5.5	7	8	8	4	2	22	0
	26	5	6.5	5	6	3	2	16	0
	27	4	6.5	4	7	2	2	15	0
	28	4.5	6	10	8	4	2	24	0
	29	4	5.5	5	7	5	3	20	3
	30	5	6.5	4	5	4	2	15	0
	31	4.5	6	5	6	3	2	16	0
	32	4	6	6	7	3	1	17	0
	33	5	6	4	5	2	3	14	0
	34	5	5.5	5	6	4	2	17	1
	35	4	7	6	6	2	0	14	0
	36	5	7	4	7	4	2	17	2
	37	5.5	6.5	9	6	3	3	21	0
	38	5	6	5	9	3	1	18	0
	39	5.5	7	6	8	2	2	18	0
	40	5	6.5	5	6	3	1	15	0
	41	5	6.5	4	8	3	2	17	1
	42	4.5	7	5	13	5	2	25	2
	43	5	6	4	7	2	2	15	0
	44	4	6.5	6	6	2	0	14	0
	45	4	7	4	7	4	2	17	2
	46	5	7	7	9	4	2	22	0
	47	5.5	6.5	5	6	3	2	16	0
	48	5	6	6	8	4	2	20	0
	49	5.5	7	5	6	3	1	15	0
	50	5	6.5	4	8	2	2	16	0
	51	4	6.5	5	6	3	2	16	0
	52	4.5	6	4	7	2	2	15	0
	53	5.5	6	6	9	2	2	19	0
	54	4	5.5	4	7	4	2	17	2
	55	4.5	6	5	6	4	3	18	2
			Total	**297**	**389**	**176**	**99**	**961**	**24**
Kandarpa- Lambdura PRF	1	3	6.5	2	2	3	1	8	0
	2	3	6	3	4	1	1	9	0
	3	3.5	6	0	2	1	0	3	0
	4	3.5	7	1	3	2	0	6	0
	5	4	6.5	3	5	3	1	12	0
	6	2.5	6	1	3	0	1	5	0
	7	2	6.5	1	4	0	0	5	0

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	8	2.5	6	0	6	0	0	6	0
	9	3.5	6.5	4	4	3	2	13	0
	10	4	6	3	4	2	1	10	0
	11	3.5	6	3	3	2	6	14	0
	12	3.5	5	2	5	4	2	13	0
			Total	**23**	**45**	**21**	**15**	**104**	**0**
Chilantikhol PRF	1	4	7	2	4	3	1	10	0
	2	4.5	6.5	6	5	3	2	16	0
	3	6	7	9	11	4	8	32	3
	4	5.5	6	8	6	3	4	21	0
	5	4.5	6	5	2	2	1	10	0
	6	4	6	4	4	2	2	12	0
	7	4.5	6	3	2	1	0	6	0
	8	4	6.5	2	2	1	0	5	0
	9	4.5	6.5	3	3	1	0	7	0
	10	6	7	4	2	2	1	9	0
	11	5.5	6	3	3	0	1	7	0
	12	4.5	6	3	4	1	1	9	0
			Total	**52**	**48**	**23**	**21**	**144**	**3**
Telikusm PRF	1	3	4	1	4	3	1	9	0
	2	4	5	5	4	2	2	13	0
	3	2.5	4.5	2	2	1	0	5	0
	4	3	5	1	3	0	0	4	0
	5	3.5	6	4	2	1	1	8	0
	6	2	5	1	3	0	1	5	0
	7	2.5	5	1	4	0	0	5	0
	8	2.5	6.5	3	2	0	1	6	0
			Total	**18**	**24**	**7**	**6**	**55**	**0**
Gogus RF	1	4	6	6	7	3	1	17	0
	2	4	6.5	4	6	2	1	13	0
	3	4.5	6	5	5	2	0	12	0
	4	5	7	3	5	2	1	11	0
	5	6	6.5	3	4	4	2	13	0
	6	5	6.5	5	3	3	3	14	0
	7	5.5	5	5	6	1	0	12	0
	8	4.5	5.5	4	7	0	2	13	0
	9	4	5.5	5	5	3	1	14	0
	10	4	6.5	4	6	3	0	13	0
	11	4.5	6.5	3	5	3	2	13	0
	12	5	6.5	7	3	5	2	17	0
	13	5	7	6	4	5	3	18	2
	14	5	6.5	5	6	1	1	13	0
	15	2.5	4.5	6	2	1	2	11	0

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	16	3	5	5	3	2	2	12	0
	17	3.5	6	5	2	2	3	12	0
	18	2	5	4	3	3	1	11	0
	19	2.5	5	3	4	1	2	10	0
	20	2.5	6.5	3	2	2	1	8	0
	21	4	5.5	5	5	3	1	14	0
	22	4	6.5	4	6	4	1	15	0
	23	4.5	6.5	3	5	2	2	12	0
	24	5	6.5	7	3	3	2	15	0
	25	5	7	6	4	3	3	16	0
	26	5	6.5	5	6	4	2	17	1
	27	4.5	6.5	3	5	2	2	12	0
	28	5	6.5	7	3	2	2	14	0
	29	5.5	5	5	6	3	2	16	0
	30	4.5	5.5	4	7	0	2	13	0
			Total	**140**	**138**	**74**	**49**	**401**	**3**
Kankarkhol PRF	1	4	5.5	5	5	3	1	14	0
	2	2.5	6.5	4	6	1	0	11	0
	3	4.5	6.5	3	5	2	2	12	0
	4	5	6.5	7	3	2	2	14	0
	5	5	7	6	4	3	3	16	0
	6	5	6.5	5	6	1	1	13	0
	7	3.5	6.5	3	5	2	2	12	0
	8	5	6.5	7	3	3	2	15	0
	9	5	7	6	4	3	3	16	0
	10	5	6.5	5	7	3	2	17	0
	11	3	6.5	3	5	2	2	12	0
	12	5	6.5	7	3	2	2	14	0
			Total	**61**	**56**	**27**	**22**	**166**	**0**
Naikul PRF	1	4	6	6	7	3	1	17	0
	2	4	6.5	4	6	2	1	13	0
	3	4.5	6	5	5	1	0	11	0
	4	5	7	5	5	2	1	13	0
	5	6	6.5	3	4	2	2	11	0
	6	5	6.5	5	3	3	3	14	0
	7	5.5	5	5	6	1	0	12	0
	8	4.5	5.5	4	3	0	2	9	0
	9	4	5.5	5	5	3	1	14	0
	10	5.5	6	3	4	1	0	8	0
	11	4.5	5.5	4	3	2	2	11	0
	12	4	5	6	2	3	3	14	0
	13	4	6	4	6	2	1	13	0
			Total	**59**	**59**	**25**	**17**	**160**	**0**

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Tamkia PRF	1	5	5	4	2	2	1	9	0
	2	3	6.5	3	4	2	0	9	0
	3	5.5	4	3	3	2	2	10	0
	4	5	6	2	3	4	1	10	0
	5	5.5	6.5	2	3	3	1	9	0
	6	6	5.5	4	3	1	0	8	0
	7	5.5	5	2	2	1	0	5	0
	8	5	5.5	3	4	2	1	10	0
	9	5	5.5	4	3	2	1	10	0
				27	**27**	**19**	**7**	**80**	**0**
Badtaila RF	1	3	4	1	4	3	1	9	0
	2	4	5	6	1	4	2	13	0
	3	2.5	4.5	2	2	1	0	5	0
	4	3	5	1	3	0	0	4	0
	5	3.5	6	4	2	1	1	8	0
	6	2	5	1	3	0	1	5	0
	7	2.5	5	1	4	0	0	5	0
	8	2.5	6.5	3	2	0	1	6	0
	9	3	6	2	4	1	2	9	0
	10	2.5	5.5	3	2	2	1	8	0
	11	2	5	6	3	2	3	14	0
	12	2	5.5	2	3	3	2	10	0
	13	2.5	4	1	2	1	1	5	0
	14	3	5	2	4	3	1	10	0
	15	3	5	1	3	2	0	6	0
	16	3.5	5.5	2	2	1	0	5	0
			Total	**38**	**44**	**24**	**16**	**122**	**0**
Mandasila RF	1	3	6.5	2	2	3	1	8	0
	2	3	6	1	4	1	1	7	0
	3	3.5	6	0	2	1	0	3	0
	4	3.5	7	1	1	0	0	2	0
	5	4	6.5	4	2	3	1	10	0
	6	2.5	6	1	3	0	1	5	0
	7	2	6.5	1	4	0	0	5	0
	8	2.5	6	0	2	0	0	2	0
	9	3.5	6.5	7	4	3	2	16	0
	10	4	6	3	2	2	1	8	0
	11	3.5	6	3	3	2	6	14	0
	12	3.5	5	5	5	1	2	13	0
	13	4	6	7	6	2	4	19	0
	14	3	5	2	4	3	1	10	0
	15	3.5	5.5	3	2	2	1	8	0
			Total	**40**	**46**	**23**	**21**	**130**	**0**

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Panguli RF	1	3.5	6	3	7	5	0	15	0
	2	2.8	6	2	3	2	1	8	0
	3	3	6.5	4	4	6	0	14	0
	4	3	6	2	5	3	2	12	0
	5	2.5	6.5	1	4	2	1	8	0
	6	3	5.5	2	7	1	1	11	0
	7	3.5	5	5	5	3	0	13	0
	8	3	6	2	3	4	1	10	0
	9	3	6.5	3	2	5	1	11	0
	10	3.5	6	5	6	3	0	14	0
	11	3	6	2	4	2	1	9	0
	12	4	6	3	6	3	1	13	0
			Total	**34**	**56**	**39**	**9**	**138**	**0**
Thianal RF	1	4	7	7	4	3	2	16	0
	2	5	5	3	2	2	1	8	0
	3	4	6	3	3	2	6	14	0
	4	4	7	2	5	4	2	13	0
	5	5	7	4	6	5	4	19	0
	6	5	6	2	4	3	1	10	0
			Total	**21**	**24**	**19**	**16**	**80**	**0**
Paburi RF	1	4	6	4	4	3	1	12	0
	2	2.5	6	2	5	2	2	11	0
	3	3	6	3	2	2	1	8	0
	4	3	5.5	2	3	1	1	7	0
	5	2.5	6	1	4	0	2	7	0
	6	2.5	5	4	3	2	2	11	0
	7	3	6	3	3	2	0	8	0
	8	3	6	2	2	0	0	4	0
	9	2	5.5	4	3	2	2	11	0
	10	3	6	2	2	1	0	5	0
	11	2.5	5.5	1	3	3	2	9	0
	12	3	6	0	3	3	2	8	0
	13	3	5	3	2	0	2	7	0
	14	3	6	2	4	4	1	11	0
	15	4	5.5	5	3	2	1	11	0
	16	3	6	3	3	3	1	10	0
	17	3	6	3	5	3	2	13	0
			Total	**44**	**54**	**33**	**22**	**153**	**0**
Tusula PRF	1	3	6	2	2	1	0	5	0
	2	2.5	5.5	1	3	3	2	9	0
	3	3	6	0	3	3	2	8	0
	4	3	5	3	2	0	2	7	0
	5	3	6	2	4	4	1	11	0

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	6	4	5.5	5	3	2	1	11	0
	7	3	6	3	3	3	1	10	0
	8	3	6	4	5	2	2	13	0
			Total	**20**	**25**	**18**	**11**	**74**	**0**
Mankarchua RF	1	6	7	12	16	5	8	41	1
	2	5	6.5	9	12	8	12	41	11
	3	5	6	11	13	7	6	37	2
	4	6	7	10	8	6	7	31	3
	5	5.5	6	8	10	9	4	31	5
			Total	**50**	**59**	**35**	**37**	**181**	**22**
Tamkia RF	1	4.5	6	7	9	5	2	23	0
	2	5	7	8	5	4	3	20	0
	3	4	6.5	6	5	3	1	15	0
			Total	**21**	**19**	**12**	**6**	**58**	**0**
Old Pauri RF	1	0.5	1	1	0	0	0	1	0
	2	0.5	1	0	0	1	1	2	0
	3	0.5	1	1	0	0	1	2	0
	4	0.5	1	1	0	0	0	1	0
	5	0.5	3	0	1	0	0	1	0
	6	0.5	1	0	0	1	0	1	0
	7	0.5	1	0	0	0	1	1	0
	8	0.5	2	1	1	1	1	4	0
	9	0.5	1	0	0	1	0	1	0
	10	0.5	1	1	1	0	0	2	0
	11	0.5	1	0	0	0	1	1	0
	12	0.5	1	1	0	0	0	1	0
			Total	**6**	**3**	**4**	**5**	**18**	**0**
Malyagiri RF	1	5	7	6	8	4	5	23	3
	2	6	7	5	6	3	4	18	2
	3	5.5	6	4	8	3	3	18	2
	4	6	6.5	5	6	3	3	17	1
	5	5	6	4	7	2	2	15	0
	6	5	5.5	10	8	4	2	24	0
	7	4	7	5	7	5	3	20	3
	8	5	7	7	12	4	2	25	1
	9	5.5	6.5	5	6	3	2	16	0
	10	5	6	6	7	3	5	21	2
	11	5.5	7	5	8	4	2	19	1
	12	5	6.5	7	4	3	3	17	0
	13	4	6.5	5	7	3	1	16	0
	14	4.5	6	6	8	4	2	20	0
	15	5.5	6	6	7	3	2	18	0
	16	4	5.5	5	5	4	3	17	2

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	17	5.5	6	4	11	2	3	20	1
	18	6	6.5	5	6	4	4	19	3
	19	5	6	6	6	2	4	18	0
	20	5	5.5	4	7	4	4	19	4
	21	4	7	6	6	4	3	19	1
	22	5	7	5	5	4	2	16	1
			Total	**121**	**155**	**75**	**64**	**415**	**27**
Danda RF	1	4.5	6.5	3	5	2	2	12	0
	2	5	6.5	7	3	2	2	14	0
	3	5	7	6	4	3	3	16	0
	4	5	6.5	5	6	1	1	13	0
	5	3.5	6.5	3	5	2	2	12	0
	6	5	6.5	7	3	3	2	15	0
	7	5	7	6	4	3	3	16	0
			Total	**37**	**30**	**16**	**15**	**98**	**0**
Biripal RF	1	4.5	5.5	4	3	0	2	9	0
	2	4	5.5	5	5	3	1	14	0
	3	5.5	6	3	4	1	0	8	0
	4	4.5	5.5	3	4	2	2	11	1
	5	4	5	5	3	3	3	14	1
	6	4	6	4	6	2	1	13	0
	7	4	6.5	5	7	3	1	16	0
	8	4.5	6	6	8	4	2	20	0
	9	5.5	6	6	7	3	2	18	0
	10	4	5.5	5	5	4	3	17	2
	11	5.5	6	4	11	2	3	20	1
	12	6	6.5	5	6	4	4	19	3
				55	**69**	**31**	**24**	**179**	**8**
Jambua RF	1	4	6	6	7	3	1	17	0
	2	4	6.5	4	6	2	1	13	0
	3	4.5	6	5	5	1	0	11	0
	4	5	7	5	5	2	1	13	0
	5	6	6.5	3	4	2	2	11	0
	6	5	6.5	5	3	3	3	14	0
	7	5.5	5	5	6	1	0	12	0
	8	4.5	5.5	4	3	0	2	9	0
	9	4	5.5	5	5	3	1	14	0
	10	5.5	6	3	4	1	0	8	0
	11	4.5	5.5	4	3	2	2	11	0
	12	4	5	6	2	3	3	14	0
	13	5	6.5	5	3	3	3	14	0
	14	5.5	5	5	6	1	0	12	0
	15	4.5	5.5	4	3	0	2	9	0

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	16	4	5.5	5	5	3	1	14	0
			Total	74	70	30	22	196	0

Table No.180

Estimate for production of bamboo

Items	Name of forest blocks						
	Kanisar	Gogua	Mahagiri	[illegible]	Prabhanani	Jambua	Total
Bamboo area in ha.	12198.6	3595.325	11466.006	10356.063	11080.449	246.6	48973.243
Enumerated area in ha.	609.93	179.78	573.30	519.30	554.02	12.33	2448.66
Clumps enumerated	33546	5393	12613	7790	7202	197	66741
Average clumps/ ha	55	30	22	15	13	16	x
Culms enumerated	570282	70109	227034	93475	100832	2367	1064099
Culms per clumps	17	13	18	12	14	12	x
Average height	6.36	6.05	6.36	6.33	6.76	5.84	x
Total sale unit	775.83	27.20	820.40	164.36	0	0	1787.79

Sources- Field staff of WPO, Keonjhar

8.9. Capital Value of the Forest:

8.9.1. For estimation of capital value of the forest and the value of growing stock the following assumptions has been made. (i) The data about growing stock has been estimated by analyzing inventory data collected from the field by sample point enumeration. (ii) The growing stock of the entire division has been converted in shape of round timber, firewood and bamboo. (iii) The quantum of firewood obtained from the growing stock above 30 cm gbh is only 20% of total volume and rest 80% is timber. The volume of growing stock below 30 cm gbh is calculated by deducting the volume of timber 30 cm and above from the total growing stock of the division and firewood obtained from the growing stock below 30 cm gbh is 50% of the total volume of trees in below 30cm gbh. (iv) One metric tone of firewood is equal to 3 cum, as one standard stack of firewood size is 12' x 3' x 3' = 108 cft. or 3 cum. (v) The entire stock of bamboo is calculated as if converted to industrial bamboo. (vi) The felled materials is disposed off at the stump site and the cost of production is only towards felling and conversion which has to be deducted from selling price to arrive at in-situ capital value of forest. (vii) All the collected materials are disposed off through the OFDC Ltd. (viii) The capital value includes the value of environmental services i.e. ecological value rendered by forest.

8.9.2. The measure of the capital value of the forest of this Forest Division can be broadly categorized in to the following two measure heads. (i) In-situ capital value of the growing stock of the forest (Value of biomass). (ii) Capital value of the environmental services provided by these forests.

8.9.3. Capital Value of the Forests can be estimated basing upon the following parameters such as (i) Value of the forest from yield of timber. (ii) Value of the forest from the yield of bamboo. (iii) Value of the forest from the yield of kendu leaves. (iv) Value of the forest from the sale of the NTFP. (v) Value of the forest from sale of firewood.

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8.9.4. This Forest Division comprises of 30 Reserve Forest Blocks, 4 Proposed Reserve Forests & 01 Protected forests which are stretching over an area of 132606.7194 ha. In all these forest blocks, the forest type, crop composition and density vary. It is quite essential to arrive at the details of the total growing stock of all the constituent forest blocks for the estimation of capital value of the forests. The sample enumeration exercise @ 5% in SWC area & @ 1% in RWC area conducted in all forest blocks of the division. The analysis is done for the sample enumerated blocks and in the rest of the areas the details of growing stock are collected through law of average and through reconnaissance surveys. So the capital value of the forests is calculated from the field exercises.

8.9.5. For the estimation of the capital value of the forest certain facts have formed the basic data. (i) The total area enumerated is 4821.534 ha, which is 5 % of the total forest area to be managed in SWC and 1% of RWC area of this Plan. (ii) Enumeration has been done in all 72 forest blocks. (iii) The criteria for enumeration have been fixed to 5% of the forest areas of SWC and 1% of RWC area. The GPS coordinates for sample points were recorded by the field staff. As a result stock mapping of the growing stock has been carried out for the entire division.

8.9.6. Comparison of such enumeration data with previous data could not be feasible because of different methodology adopted and non-availability of complete enumeration data. Local volume equations, which are developed by FSI based on their inventory conducted in different parts of Orissa, have been used in estimating the volume of the growing stock. Thus the capital value of the forest for timber and firewood is calculated for all the forest blocks. The unit volume of timber has been calculated by the method as prescribed by the office of the Principal Chief Conservator of Forests, Orissa vide Memo No. 12224(4) / 5F S.T. -20/81 dt 07.06.1982 and Memo No. 5F.S.T.- 2083 – 17544 dated 04.19.87. As per the directions in these circular the ratio for conversion into unit volume is given in the table below.

Table No. 181

The ratio for conversion into unit volume

Girth Class in Cm.	Class species		
	1st Class	2nd Class	3rd Class
Les than 60 Cm.	0.25	0.12	0.06
60 to 89 Cm.	0.50	0.25	0.12
90 to 119 Cm.	1.00	0.50	0.25
120 to 149 Cm.	2.00	1.00	0.50
150 to 179 cm.	4.00	2.00	1.00
More than 180 Cm.	6.00	3.00	1.50
1st Class species	Sal, Piasal, Sisoo, Bandhan, Gambhar, Halnda		
2nd Class species	Kasi, Asan, Mango, Kendu, Jamu,		
3rd Class species	All others except Teak, and sandalwood.		

Sources - Memo No. 12224(4) / 5F S.T. -20/81 dt 07.06.1982 and Memo No. 5F.S.T.-2083 – 17544 dated 04.19.87 of PCCF, (O).

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8.9.7. **Unit Price** - Unit price of the forest value is a variable, which depend upon the (i) Availability of forest produces in the market. (ii) Fluctuating market demand and supply. (iii) Rate of inflation in the market. These parameters are responsible for raising/dropping of the unit price of forest produce such as timber, and NTFP. Owing to the closure of coupe working in different forest divisions by the State Govt. from 1992-93 onwards the unit price structure is not readily available however we have to rely upon the unit price of the previous years to calculate the average unit price of the timber and other NTFP forest produce. The rate of timbers of previous years i.e. 1995-96 to 2014-15 is given in the table below.

Table No. 182

The rate of timbers of previous years i.e. 1995-96 to 2014-15

Year	Timber received during out going Plan period.				
	In unit	In cft	Royalty in Rs.	Unit rate in Rs.	% of raise
1995-96	xx	xx	xx	x	x
1996-97	xx	xx	xx	x	x
1997-98	1299.811		874600.00	673	x
1998-99	2553.853		2734200.00	1071	x
1999-00	xx	xx	xx	x	x
2000-01	xx	xx	xx	x	x
2001-02	xx	xx	xx	x	x
2002-03	xx	xx	xx	x	x
2003-04	xx	xx	xx	x	x
2004-05	xx	xx	xx	x	x
2005-06	1289.55	11910.48	1310184.00	1016	x
2006-07	1535.25	15537.90	1807437.00	1177	x
2007-08	1651.09	16862.34	1535516.00	930	x
2008-09	1497.50	18897.25	1557400.00	1040	x
2009-10	1618.87	17274.00	1748380.00	1080	x
2010-11	1295.22	15364.94	1470075.00	1135	x
2011-12	1251.05	23119.58	1501260.00	1200	x
2012-13	1666.71	24582.70	2160056.00	1296	x
2013-14	2441.00	30703.63	3385667.00	1387	x

Sources - Divisional Forest Officer, Deogarh.

8.9.8. **In Situ Capital Value of Trees**- Arriving at the total number of units value for each girth class (as per the average rate of increase) X total number of trees of different girth class. This total unit is multiplied with average unit rate, derived for the current year, to get the capital value of timber above 30 cm girth class.

8.9.9. **Capital Value of Firewood for Trees below 30 cm Girth**- This item is calculated on the basis of the following assumed projection. (i) Volume of firewood for the trees below 30 cm girth has been assumed to be 50% of the total volume of trees available < 30 cm gbh girth class. (ii) The weight of firewood in M.T has been calculated by multiplying the volume with average specific gravity of the timber of

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various species. In the instant case this varies from 0.33 for Simuli to 0.745 for Sal and the average is taken as 0.5 for the whole lot for simple calculation. (iii) The present value of Firewood is taken as Rs.10000/- per metric tone. The value of firewood has not been calculated in this revision as the value of the trees is calculated on the basis of unity (1 unity = 8 cft).

8.9.10. **In-situ capital value of Bamboo** - The enumeration of the bamboo crop was done in the sample plots on the bamboo bearing area. The details of enumeration are shown in Bamboo (overlapping) Working Circle. The average clumps per ha in the enumerated blocks are 36, the average culms per clump is 23, the quality class of bamboos varies from Q-III to Q-I and the average height of bamboo culms is taken as 7.52 meters. The total sale units in 06 forest blocks are calculated. The average rate of royalty is Rs.500.00 for the year 2004-05. It may increase during subsequent years due to inflection of price index of the market. However for sake of calculation the rate of 2004-2005 can be taken into account. The Sale units of Bamboo = Total harvestable bamboo for each coupe X 7.52 Mts. / 2400 Mtrs.

8.9.11. **Kendu Leaves** - In this area Kendu leaf is produced in all Ranges under Deogarh and Angul (KL) Division. In 2011-12, the production of Kenduleaves was 154.86 Qtls and the sale value was Rs. 2698.45 lakh. On average, selling rate per quintal is Rs. 1742.44 thousand. The production and sale value of kendu leaf from the year 2003-04 to 2006-07 is given in the table below. The average production of KL from 2000-01 to 2006-07 comes to 27203.00 quintal.

Table No. 183

Kendu leaves production

Year	Name of division and K.L production in quintal			Sale value of Deogarh KL in Rs per quintal	Sale value in Rs lakh
	Deogarh	Angul	Total		
2000-01	25025.40	9308.4	34333.8	2798.02	960.66
2001-02	18408.60	6700.2	25108.8	3623.21	909.74
2002-03	20694.60	7668.6	28363.2	3979.37	1128.67
2003-04	20607.60	8148.0	28755.6	3453.53	993.07
2004-05	19963.20	7446.6	27409.8	3216.09	881.52
2005-06	18163.80	6615.0	24778.8	3589.16	889.35
2006-07	19966.20	6672.0	26638.2	6799.76	1811.33
2007-08	20937.00	6968.4	27905.4	5691.39	1588.20
2008-09	19433.40	6525.6	25959.0	7683.44	1994.54
2009-10	20900.40	7035.0	27935.4	7771.59	2171.02
2010-11	20584.20	7021.8	27606.0	9573.19	2642.77
2011-12	15166.80	4804.8	19971.6	11488.57	2294.45
2012-13	18683.40	6924.0	25607.4	10142.94	2597.34
2013-14	x	7698.0	7698	x	x

Sources - D.F.O (K.L) Deogarh and Angul.

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8.9.12. **Non timber Forest Produce** - A number of NTFP items are collected from the forests of this division. The accounts of various products and their evaluation for the entire item could not be possible due to want of data. But instead of money value the livelihood needs of primary collects in different Gram Panchayat level is given more importance. However, based on the available data and field studies, evaluation of various items as listed in the table below.

8.10. In situ capital value of the growing stock:

8.10.1. The forests of Deogarh Division provides timber, firewood, bamboo as well as many NTFP and a variety of medicinal plants. We could assess only for a few items for which data are available. The value of the forests for its biodiversity and the absorption of carbon dioxide and sequestration of carbon are to be also added. The valuation of biodiversity and carbon sinking capacities of the forests of this division has not been taken and needs to be added. For the purpose of assessment of capital value of the forests at present state only the value of timber, firewood, bamboo, kenduleaves and a few NTFP items have been considered. The estimate is very conservative for the growing stock and real value of the forests will be much more.

8.10.2. **Assessment of Growing Stock** - Total unity of the growing stock as per table No. 175, from the trees above 30 cm gbh is 47763966.00 (considering unity as 0.50 for the tree girth from 30 cm to <120 cm, unity as 1.00 for the tree girth from 120 cm to <150 cm & unity as 1.50 for the tree girth above 150 cm). Estimated timber production from the growing stock above 30 cm gbh is 382111728.00 cft or 27569388.74 cum. The estimated production and revenue of the division is given in the table below.

Table No. 184

Estimated production and revenue of the division

Sl. No.	Item	Total quantity	Sale price in Rs.	Capital value in Rs.
1	Timber	382111728.00 cft	225.00 per cft	85975138800.00
2	Bamboos	2217.16 SU	2500.00 per SU	5542900.00
3	Kendu leaves	25607.40 Qtl	10142.94 per Qtl	259734322.00
4	Mahua	10080.00 Qtl	1400.00 per Qtl	14112000.00
5	Sal seed	4500.00 Qtl	1200.00 per Qtl	5400000.00
6	Siali leaf	3215.00 Qtl	1200.00 per Qtl	3858000.00
7	Harida & Bahada	25.00 Qtl	2000.00 per Qtl	50000.00
	Total			86263836022.00

Sources - WPO, Keonjhar.

8.10.3. **Imputed Capital Value of Forests of this division on Environmental Services** - The Forests of this division are an open and vast treasure of biodiversity and other valuable resources evolved out of rapid growth of civilization and science. For evaluation of environmental benefits a perfect method has not yet

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been standardized and as such actual environmental valuation of the forests is not possible. However Govt. of India has suggested norms in their letter No. 11-16/85 FRy (CONS) dated 15.1.1985 for computation of environmental value of the forests. As per these norms, the environmental value of 01 ha of fully stocked forests having a density of 1.0 is 126.74 lakhs to be accrued for a period of 50 years.

Table No. 185				
Imputed Capital Value of Forests on Environmental Services				
Valuation of Environmental Services of Forests of this division				
Density Class wise forest	Density Class	Notified area in ha	Ecological Value per ha. in Rs	Ecological value in Rs.
Dense	> 40%	74872.174	253480.00	18978598666.00
Moderately dence	25-40%	19721.721	253480.00	4999061839.00
Moderately degraded	10-25%	9184.645	253480.00	2328123815.00
Degraded	< 10%	28828.1794	253480.00	7307366914.00
	Total	132606.7194	253480.00	33613151234.00
Sources- Govt. of India has suggested norms in their letter No. 11-16/85 FRy (CONS) dated 15.1.1985				

8.10.4. The density of the forests of this division varies from fully stocked to blank patches. Here the different forest blocks have been classed into groups of <10%, 10-25%, 25-40%, >40% density and the environmental value of these density groups is calculated and given in the table below. The detail of Range wise area in different group of density is presented below.

Table No. 186					
Strata wise Canopy density					
Range	Area in ha under different Density classes				
	>40%	>25 to 40%	>10 to 25%	10% and below	Total
Deogarh	25458.174	6707.721	3124.645	8654.805	43945.345
Reamal	11979.00	3155.00	1469.00	4664.063	21267.063
Barkote	18718.00	4930.00	2296.00	7623.606	33567.606
Pallahara	9733.00	2563.00	1193.00	4873.4914	18362.4914
Khamar	8984.00	2366.00	1102.00	3012.214	15464.214
Total	74872.174	19721.721	9184.645	28828.1794	132606.7194
Sourses - WPO, Keonjhar.					

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8.10.5. The total capital value of the forest as calculated above is given in the table below.

Table No.187		
The total value of the forest as per calculation		
Sl. No.	Name of items	Total value in Rs.
1	Environmental Services of Forests	33613151234.00
2	Timber	85975138800.00
3	Bamboos	5542900.00
4	Kendu leaves	259734322.00
5	Mahua	14112000.00
6	Sal seed	5400000.00
7	Siali leaf	3858000.00
8	Harida & Bahada	50000.00
	Total	119876987256.00

8.10.6. **Annual profit** - This is a vital Para to be examined in this revision. The profit will be calculated by subtracting annual expenditure from revenue. Different developmental works such as National afforestation program and other Departmental works shall be operated in this division. The amount to be spent for the developmental works in the field, establisment, Infrastructure, which is given in the Finalcial forecast Capter, is cosider as expenditure. The revenue is assed on 10 % rise. The yearwise profit is given in financial forecast Chapter.

8.11. Ennumeration area:

8.11.1. Total area in the revised plan is 132606.7194 ha, out of which plantation is 25431.7894 ha, SWC area is 94593.8950 ha & other area is 9184.6450 ha. Therefore area to be covered in 5 % enumeration is 4729.694 ha & 1 % enumeration is 91.846 ha. The details of enumeration are given below.

Table No. 188				
Area enumerated				
S. No	% of enumeration	Point enumeration in ha	Strip enumeration in ha	Total area in ha
1	100% plantation area	x	x	25431.7894
2	5% SWC area enumerated in ha.	105.8 (1058 points)	4623.894 (185 No of strip)	4729.694
3	1% RWC area enumerated in ha.	9.000 (90 points)	82.84 (04 No of strip)	91.846
			Total	30253.3294

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PART-II

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CHAPTER – I

BASIS OF PROPOSALS

1.1. General Objects of Management:

1.1.1. An area of 132606.7194 ha (30 RF = 100519.478 ha + 41 PRF = 31938.232 ha + 01 PF = 149.0094) has been considered for management in this revision. This area includes 72 blocks under the jurisdiction of Deogarh Division. The main objects of management have been given in the table below.

Table No. 189	
Objects of management	
Sl. No.	Main object of management
1	To conserve and improve the existing vegetative-cover 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 Wild Life resources with a view to conserve and help enrich bio-diversity.
5	To promote development of sustainable and non-destructive livelihood opportunities for local communities.
6	Promote Joint Forest management involving Vana Samrakhyana Samiti for sustainable management of forests.
7	Ensure sustainable production of Non-timber forest products 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.

1.2. Method of Treatment to be adopted:

1.2.1. Most of the forest tracts included in this revision is on hilly terrain with preponderance of low quality and often low defective sal mixed intimately with miscellaneous crop. The prevalence of annual fire makes the treatment more challenging. Small gap is required to be created in the canopy for establishment of seedling and sapling in most of the Reserve Forests, where defuse regeneration is adequate. Therefore, trees attaining exploitable girth are to be selected silviculturally for removal. An area of 94593.895 ha has been founded suitable for inclusion in the Selection Working Circle.

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1.2.2. The existing crops in the degraded forest have extensive eroded patches. These degraded forests are to be protected from human interferences 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. An area of 9184.645 ha of degraded forest as per notification has been selected for Rehabilitation Working Circle basing on the condition of the crop. No green felling has been prescribed here.

1.2.3. The existing crops in the RF and PRF area is degraded forest adjoining to Eco-tourism spot and have extensive eroded patches. These degraded 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. An area of 1100.00 ha of degraded forest as per notification has been selected basing on the condition of the crop. No green felling has been prescribed here.

1.2.4. The existing plantation in the notified area are in degraded forest. 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. An area of 25431.7894 ha of plantation as per notification has been selected for Plantation Working Circle basing on the condition of the crop. No green felling has been prescribed here.

1.2.5. The existing crops in the degraded forest are in more extensive eroded patches and in higher slope. These degraded forests are to be protected from human interferences 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. An area of 3396.3900 ha of degraded forest as per notification has been selected for Protection Working Circle basing on the condition of the crop. No green felling has been prescribed here.

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1.3. Constitution of Working Circle:

1.3.1. In order to achieve the above objects of management, the total forest area of the division is divided into following Working Circles. They are as follows:-

Table No. 190

Constitution of Working Circle

Sl. No.	Name of the Working Circle	Area in ha.
1	Selection Working Circle	94593.895
2	Protection Working Circle	3396.3900
3	Rehabilitation Working Circle	9184.645
4	Plantation Working Circle	25431.7894
5	Bamboo (overlapping) Working Circle	108250.800
6	Wild Life (overlapping) Working Circle	132606.7194
7	Non Timber Forest Produce (overlapping) Working Circle	132606.7194
8	Joint Forest Management (overlapping) Working Circle	59370.7708

1.3.2. Range wise abstract area of each working circle is given in the table below.

Table No. 191

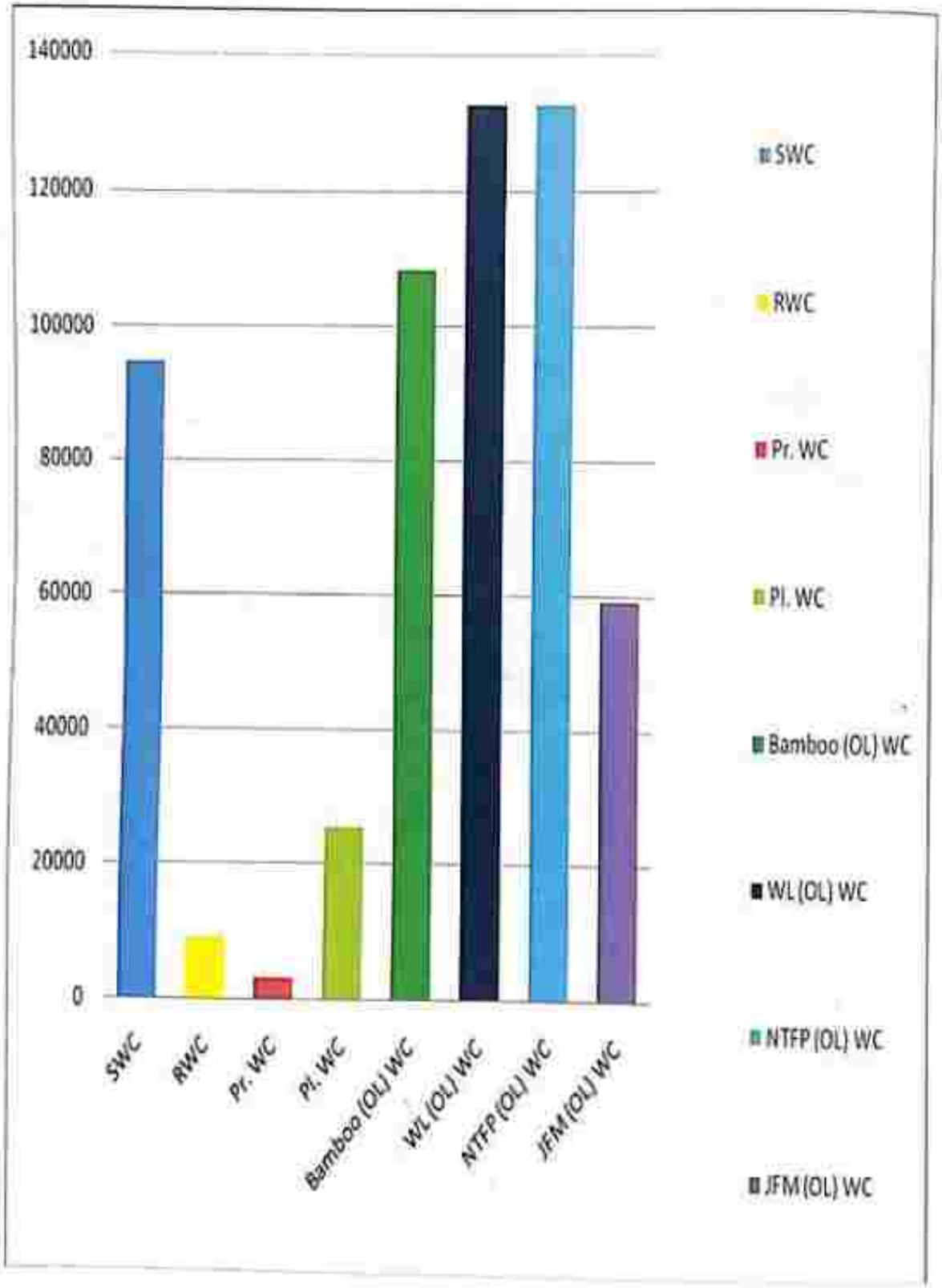
Range Wise area of each Working Circle

Sl. No	Range	Area of Working Circle in ha							
		SWC	RWC	Pr. WC	Pl. WC	Bamboo (OL) WC	WL (OL) WC	NTFP (OL) WC	JFM (OL) WC
1	Pallisara	12031.691	2891.841	200.00	3238.9594	34434.483	18362.4914	18362.4914	33058.7164
2	Khamar	7866.877	2232.069	1817.498	3507.75	9750.04	15464.214	15464.214	12521.2286
3	Barkata	24820.689	1789.913	858.892	6198.11	30896.021	33567.606	33567.606	12798.9861
4	Reamal	34195.876	1414.307	108.00	5557.68	16192.683	21267.063	21267.063	10331.4296
5	Dangarh	33678.342	836.513	400.00	6929.29	38878.188	43945.345	43945.345	92640.4101
	Total	94593.895	9184.643	3396.300	25431.7894	108250.800	132606.7194	132606.7194	59370.7708

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WC AREA

Managed Area = 132606.7194 ha



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1.3.3. Distribution of Area: - Legal status wise distribution of forest blocks into the Working Circle are given in the table below.

Table No. 192

Distribution of R.F into main Working Circle

Sl. No	Name of RF	Ntified area in ha.	Area de-red	Area div'd to ST/SC	Balance Area	Name of Range	Name of W.C
01	Pradhanpat	10386.063	00	00	10386.063	Barkote, Deogarh	SWC, Plantation WC
02	Kansar (P)	12198.600	00	00	12198.600	Reamal, Deogarh	SWC, Pltn WC
03	Pravasuni (P)	11080.449	00	00	11080.449	Deogarh	SWC, Plantation WC
04	Rambhadevi (P)	4267.186	12.03	00	4255.156	Deogarh, Reamal	SWC, Plantation WC
05	Panguli	3220.681	8.02	00	3212.661	Barkote	SWC, Plantation WC
06	Thianal	831.870	00	15.00	816.87	Barkote	RWC, Pltn WC
07	Mandasila	2856.465	00	00	2856.465	Barkote	SWC , Pltn WC
08	Pauri	8215.425	00	00	8215.425	Barkote	SWC , Pltn WC
09	Badtaila	10154.803	00	00	10154.803	Barkote	SWC , Pltn WC
10	Gogua	3599.235	3.71	00	3595.525	Reamal	SWC , Pltn WC
11	Maiyagri	11500.170	34.164	00	11466.006	Pallahara	SWC, Plantation WC
12	Nizgarh (A)	287.198	00	8.00	279.198	Pallahara	RWC, Pltn WC
13	Nizgarh (B)	93.00	00	5.00	88.00	Pallahara	RWC, Pltn WC
14	Old Pauri	6783.750	00	00	6783.750	Pallahara	SWC, Pltn WC
15	New Pauri	1296.000	00	30.00	1266.000	Pallahara	RWC
16	Tamkia RF	513.540	00	00	513.540	Pallahara	SWC, Pltn WC
17	Saida	397.710	00	00	397.710	Pallahara	SWC, Pltn WC
18	Gurusulei	388.800	00	00	388.800	Khamar	Protection WC, Pltn WC
19	Kansar (A)	162.000	00	10.00	152.000	Barkote	Protection WC, Plantation WC
20	Kansar (B)	107.325	00	10.00	97.325	Barkote	RWC, Pltn WC
21	Biripal	437.400	00	00	437.400	Khamar	Protection WC, Plantation WC
22	Chargochia	529.199	00	00	529.199	Khamar	SWC, Pltn WC
23	Danda	1458.000	00	35.00	1423.000	Khamar	Protection WC, Plantation WC
24	Makarchua	1314.225	00	00	1314.225	Pallahara	SWC, Pltn WC
25	Kuladera	2236.815	00	00	2236.815	Khamar	SWC
26	Rengalmunda	86.670	00	00	86.670	Khamar	RWC
27	Kunjam	1047.553	00	30.00	1017.553	Khamar	RWC, Pltn WC
28	Jambua	257.580	00	10.98	246.600	Khamar	RWC,Pltn WC
29	Chungmatia	15.578	00	00	15.578	Khamar	Protection WC
30	Khajuria	5008.092	00	00	5008.092	Deogarh	SWC, Pltn WC
	Total	100731.382	57.924	153.98	100519.478		

Sources - Working Plan Officer, Keonjhar Division.

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Table No. 193

Distribution of P.R.F into main Working Circle

Sl. No.	Name of the PRF	Notified area in ha	Area de-red	Balance Area	Name of the Range	Name of W.C
01	Jhadeswar	2768.499	00	2768.499	Deogarh	SWC, Pltn WC
02	Hadamunda	566.19	00	566.19	Reamal, Deogarh	SWC, Pltn WC
03	Rajamunda	249.642	00	249.642	Deogarh	RWC, Pltn WC
04	Kalkath	251.343	00	251.343	Deogarh	RWC, Pltn WC
05	Tirib	85.698	00	85.698	Deogarh	RWC, Pltn WC
06	Tarang	981.477	00	981.477	Deogarh	RWC, Pltn WC
07	Kankarkhol	5770.44	00	5770.44	Reamal	SWC, Pltn WC
08	Kundheigola	3537.715	3.224	3534.491	Reamal	SWC, Plantation WC
09	Ghodapaka	162.68	00	162.68	Reamal	Plantation WC
10	Naikul	1945.39	00	1945.39	Reamal	SWC, Pltn WC
11	Banbira	1192.32	00	1192.32	Barkote	RWC, Pltn WC
12	Kulundikudar	472.068	00	472.068	Barkote	SWC
13	Tusula	1675.45	00	1675.45	Barkote	SWC, Pltn WC
14	Kaunsibahal	593.892	00	593.892	Barkote	Protection WC, Pltn WC
15	Talabahali	63.99	00	63.99	Barkote	RWC
16	Kakharua	166.536	00	166.536	Pallahara	RWC, Pltn WC
17	Kalamjuangsahi	150.66	00	150.66	Khamar	RWC
18	Kardapal	527.391	00	527.391	Khamar	SWC, Pltn WC
19	Ranjo	221.697	00	221.697	Khamar	RWC, Pltn WC
20	Atolanka	161.87	00	161.87	Pallahara	RWC
21	Julunda-Jankpani	291.438	00	291.438	Pallahara	RWC
22	Sarbeda	277.02	00	277.02	Pallahara	RWC, Pltn WC
23	Timi	422.658	00	422.658	Pallahara	RWC
24	Jharakhaman	65.934	00	65.934	Pallahara	RWC
25	Priyambadapur	50.139	00	50.139	Khamar	RWC
26	Rangiapal	410.346	00	410.346	Khamar	RWC, Pltn WC
27	Bhaluhuli	140.94	00	140.94	Pallahara	RWC, Pltn WC
28	Bhulaka	233.118	00	233.118	Khamar	RWC
29	Sanda	446.067	00	446.067	Khamar	RWC, Pltn WC
30	Bankhol	1222.452	00	1222.452	Khamar	SWC, Pltn WC
31	Badasada	196.992	00	196.992	Khamar	RWC, Pltn WC
32	Nuagaon	136.404	7.72	128.684	Khamar	RWC
33	Injidi	73.71	00	73.71	Khamar	RWC
34	Tamkia PRF	502.83	00	502.83	Reamal	RWC
35	Bangalimunda	298.78	00	298.78	Deogarh	RWC, Pltn WC
36	Chilantikhol	2316.61	00	2316.61	Deogarh	SWC, Pltn WC
37	Kandarpa-lambdura	1666.4	00	1666.4	Deogarh	SWC
38	Ludhar-Deopani	854.54	00	854.54	Deogarh	SWC
39	Salohi-Loimura	295.65	00	295.65	Deogarh	SWC
40	Sargidihi	93.15	00	93.15	Deogarh	SWC
41	Telikusum	409.05	00	409.05	Deogarh	RWC, Pltn WC
Total		31949.176	10.944	31938.232		

Sources - Working Plan Officer, Keonjhar Division

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Table No. 194						
Distribution of P.F into main Working Circle						
Sl. No.	Name of the PRF	Notified area in ha	Area de-red	Balance Area	Name of the Range	Name of W.C
01	Balibahal	149.0094	00	149.0094	Pallahara	Plantation WC
Total		149.0094	00	149.0094		
Sources - Working Plan Officer, Keonjhar Division						

Table No. 195						
Distribution of RF/PRF/PF into Compartment						
Sl. No	Name of Range	Name of Block	Status	Compt No.	Compt Area in ha	Total Area of Block in ha
1	Barkote	Badtaila	RF	1	208.7770	10154.803
	Barkote	Badtaila	RF	2	85.0100	
	Barkote	Badtaila	RF	3	91.9350	
	Barkote	Badtaila	RF	4	129.6810	
	Barkote	Badtaila	RF	5	58.7660	
	Barkote	Badtaila	RF	6	152.1950	
	Barkote	Badtaila	RF	7	193.9140	
	Barkote	Badtaila	RF	8	375.2120	
	Barkote	Badtaila	RF	9	449.5500	
	Barkote	Badtaila	RF	10	197.6400	
	Barkote	Badtaila	RF	11	241.0560	
	Barkote	Badtaila	RF	12	316.4020	
	Barkote	Badtaila	RF	13	247.3750	
	Barkote	Badtaila	RF	14	237.8970	
	Barkote	Badtaila	RF	15	222.9120	
	Barkote	Badtaila	RF	16	162.6480	
	Barkote	Badtaila	RF	17	186.6240	
	Barkote	Badtaila	RF	18	214.5290	
	Barkote	Badtaila	RF	19	177.1070	
	Barkote	Badtaila	RF	20	251.3840	
	Barkote	Badtaila	RF	21	233.9280	
	Barkote	Badtaila	RF	22	204.1200	
	Barkote	Badtaila	RF	23	132.8400	
	Barkote	Badtaila	RF	24	231.2960	
	Barkote	Badtaila	RF	25	204.1200	
	Barkote	Badtaila	RF	26	229.3920	
	Barkote	Badtaila	RF	27	195.0480	
	Barkote	Badtaila	RF	28	199.5840	
	Barkote	Badtaila	RF	29	230.6880	
	Barkote	Badtaila	RF	30	384.9120	

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	Barkote	Badtaila	RF	31	259.2000	
	Barkote	Badtaila	RF	32	197.9640	
	Barkote	Badtaila	RF	33	178.6660	
	Barkote	Badtaila	RF	34	130.1060	
	Barkote	Badtaila	RF	35	196.2630	
	Barkote	Badtaila	RF	36	277.3440	
	Barkote	Badtaila	RF	37	253.3680	
	Barkote	Badtaila	RF	38	168.4800	
	Barkote	Badtaila	RF	39	260.4960	
	Barkote	Badtaila	RF	40	264.3840	
	Barkote	Badtaila	RF	41	198.6120	
	Barkote	Badtaila	RF	42	191.8080	
	Barkote	Badtaila	RF	43	236.6820	
	Barkote	Badtaila	RF	44	274.7520	
	Barkote	Badtaila	RF	45	155.5200	
	Barkote	Badtaila	RF	46	152.2800	
	Barkote	Badtaila	RF	47	142.5600	
	Barkote	Badtaila	RF	48	169.7760	
2	Deogarh	Pradhanpat	RF	1	373.8960	10386.063
	Deogarh	Pradhanpat	RF	2	296.1360	
	Deogarh	Pradhanpat	RF	3	301.3200	
	Deogarh	Pradhanpat	RF	4	246.2400	
	Deogarh	Pradhanpat	RF	5	286.4160	
	Deogarh	Pradhanpat	RF	6	403.7040	
	Deogarh	Pradhanpat	RF	7	434.8080	
	Deogarh	Pradhanpat	RF	8	836.7300	
	Deogarh	Pradhanpat	RF	9	471.9870	
	Deogarh	Pradhanpat	RF	10	416.6640	
	Deogarh	Pradhanpat	RF	11	517.8330	
	Deogarh	Pradhanpat	RF	12	419.5800	
	Deogarh	Pradhanpat	RF	13	508.0320	
	Deogarh	Pradhanpat	RF	14	493.4520	
	Deogarh	Pradhanpat	RF	15	314.9280	
	Barkote	Pradhanpat	RF	16	259.4820	
	Barkote	Pradhanpat	RF	17	322.4400	
	Barkote	Pradhanpat	RF	18	228.7440	
	Barkote	Pradhanpat	RF	19	265.6800	
	Barkote	Pradhanpat	RF	20	355.1040	
	Barkote	Pradhanpat	RF	21	364.1440	
	Barkote	Pradhanpat	RF	22	140.7410	
	Barkote	Pradhanpat	RF	23	234.7380	
	Barkote	Pradhanpat	RF	24	385.5600	
	Barkote	Pradhanpat	RF	25	189.0240	

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	Barkote	Pradhanpat	RF	26	377.1360	
	Barkote	Pradhanpat	RF	27	256.6080	
	Barkote	Pradhanpat	RF	28	312.9840	
	Barkote	Pradhanpat	RF	29	371.9520	
3	Reamal	Gogua	RF	1	198.9360	3595.525
	Reamal	Gogua	RF	2	247.8760	
	Reamal	Gogua	RF	3	232.8750	
	Reamal	Gogua	RF	4	410.1030	
	Reamal	Gogua	RF	5	209.2230	
	Reamal	Gogua	RF	6	206.5500	
	Reamal	Gogua	RF	7	407.5110	
	Reamal	Gogua	RF	8	459.6750	
	Reamal	Gogua	RF	9	270.2160	
	Reamal	Gogua	RF	10	342.1440	
	Reamal	Gogua	RF	11	230.0400	
	Reamal	Gogua	RF	12	200.2320	
	Reamal	Gogua	RF	13	180.1440	
4	Deogarh	Khajuria	RF	1	522.9360	5008.092
	Deogarh	Khajuria	RF	5	331.7760	
	Deogarh	Khajuria	RF	6	364.5000	
	Deogarh	Khajuria	RF	7	432.2160	
	Deogarh	Khajuria	RF	8	516.4560	
	Deogarh	Khajuria	RF	9	361.5840	
	Deogarh	Khajuria	RF	10	356.4000	
	Deogarh	Khajuria	RF	11	690.1200	
	Deogarh	Khajuria	RF	12	459.4320	
	Deogarh	Khajuria	RF	13	366.1200	
	Deogarh	Khajuria	RF	14	501.5520	
	Deogarh	Khajuria	RF	15 (P)	105.0000	
5	Khamar	Kuladera	RF	1	471.4200	2236.815
	Khamar	Kuladera	RF	2	409.4550	
	Khamar	Kuladera	RF	3	383.9400	
	Khamar	Kuladera	RF	4	407.0250	
	Khamar	Kuladera	RF	5	360.4500	
	Khamar	Kuladera	RF	6	204.5250	
6	Khamar	Kunjam	RF	1	391.2000	1017.553
	Khamar	Kunjam	RF	2	364.5000	
	Khamar	Kunjam	RF	3	261.8530	
7	Khamar	Malyagiri	RF	1	336.1500	11466.006
	Pallahara	Malyagiri	RF	2	355.0410	
	Pallahara	Malyagiri	RF	3	154.3050	
	Pallahara	Malyagiri	RF	4	510.3000	

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	Pallahara	Malyagiri	RF	5	787.7250	
	Pallahara	Malyagiri	RF	6	467.7750	
	Pallahara	Malyagiri	RF	7	384.7500	
	Pallahara	Malyagiri	RF	8	409.0500	
	Pallahara	Malyagiri	RF	9	336.1500	
	Pallahara	Malyagiri	RF	10	321.9750	
	Pallahara	Malyagiri	RF	11	332.1000	
	Pallahara	Malyagiri	RF	12	542.7000	
	Pallahara	Malyagiri	RF	13	431.3450	
	Pallahara	Malyagiri	RF	14	372.6000	
	Pallahara	Malyagiri	RF	15	417.1500	
	Khamar	Malyagiri	RF	16	419.1750	
	Khamar	Malyagiri	RF	17	184.2750	
	Khamar	Malyagiri	RF	18	317.9250	
	Khamar	Malyagiri	RF	19	350.3250	
	Khamar	Malyagiri	RF	20	298.6800	
	Khamar	Malyagiri	RF	21	342.6300	
	Khamar	Malyagiri	RF	22	496.1250	
	Khamar	Malyagiri	RF	23	411.0750	
	Khamar	Malyagiri	RF	24	409.0500	
	Khamar	Malyagiri	RF	25	317.9250	
	Khamar	Malyagiri	RF	26	498.1500	
	Khamar	Malyagiri	RF	27	451.5750	
	Khamar	Malyagiri	RF	28	370.5750	
	Khamar	Malyagiri	RF	29	180.2250	
	Khamar	Malyagiri	RF	30	259.1800	
8	Barkote	Mandasila	RF	1	244.0530	2856.465
	Barkote	Mandasila	RF	2	242.6760	
	Barkote	Mandasila	RF	3	171.7200	
	Barkote	Mandasila	RF	4	218.3760	
	Barkote	Mandasila	RF	5	272.8080	
	Barkote	Mandasila	RF	6	353.1600	
	Barkote	Mandasila	RF	7	309.0960	
	Barkote	Mandasila	RF	8	262.5210	
	Barkote	Mandasila	RF	9	289.5750	
	Barkote	Mandasila	RF	10	197.6400	
	Barkote	Mandasila	RF	11	294.8400	
9	Pallahara	Mankarchua	RF	1	392.8500	1314.225
	Pallahara	Mankarchua	RF	2	350.7300	
	Pallahara	Mankarchua	RF	3	277.0200	
	Pallahara	Mankarchua	RF	4	293.6250	
10	Barkote	Panguli	RF	1	478.5020	3212.661

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	Barkote	Panguli	RF	2	519.4220	
	Barkote	Panguli	RF	3	380.0670	
	Barkote	Panguli	RF	4	423.6300	
	Barkote	Panguli	RF	5	256.3650	
	Barkote	Panguli	RF	6	239.5570	
	Barkote	Panguli	RF	7	515.9700	
	Barkote	Panguli	RF	8	399.1480	
11	Deogarh	Pravasuni	RF	3	211.4100	11080.449
	Deogarh	Pravasuni	RF	4	341.4150	
	Deogarh	Pravasuni	RF	7	357.6150	
	Deogarh	Pravasuni	RF	8	371.3850	
	Deogarh	Pravasuni	RF	9	373.8150	
	Deogarh	Pravasuni	RF	10 (p)	150.0000	
	Deogarh	Pravasuni	RF	11 (P)	70.0270	
	Deogarh	Pravasuni	RF	12	471.4200	
	Deogarh	Pravasuni	RF	13	279.4500	
	Deogarh	Pravasuni	RF	14	223.5600	
	Deogarh	Pravasuni	RF	15	324.0000	
	Deogarh	Pravasuni	RF	16	223.1550	
	Deogarh	Pravasuni	RF	17	523.6650	
	Deogarh	Pravasuni	RF	18	304.5600	
	Deogarh	Pravasuni	RF	19	226.6600	
	Deogarh	Pravasuni	RF	20	214.6500	
	Deogarh	Pravasuni	RF	21	175.1000	
	Deogarh	Pravasuni	RF	22	407.4030	
	Deogarh	Pravasuni	RF	23	595.7550	
	Deogarh	Pravasuni	RF	24	297.6750	
	Deogarh	Pravasuni	RF	25	435.3750	
	Deogarh	Pravasuni	RF	30	356.4000	
	Deogarh	Pravasuni	RF	37 (p)	90.0000	
	Deogarh	Pravasuni	RF	38	292.1050	
	Deogarh	Pravasuni	RF	39	284.9860	
	Deogarh	Pravasuni	RF	40	66.5850	
	Deogarh	Pravasuni	RF	41	228.8250	
	Deogarh	Pravasuni	RF	42	373.0050	
	Deogarh	Pravasuni	RF	43	270.7370	
	Deogarh	Pravasuni	RF	44	111.4120	
	Deogarh	Pravasuni	RF	45	84.8100	
	Deogarh	Pravasuni	RF	46	558.0900	
	Deogarh	Pravasuni	RF	47	293.6250	
	Deogarh	Pravasuni	RF	48	505.4400	
	Deogarh	Pravasuni	RF	49	293.6250	
	Deogarh	Pravasuni	RF	50	54.8590	

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	Deogarh	Pravasuni	RF	51	129.5750	
	Deogarh	Pravasuni	RF	52	192.3750	
	Deogarh	Pravasuni	RF	53	315.9000	
12	Reamal	Rambhadevi	RF	1	231.4560	4255.156
	Reamal	Rambhadevi	RF	2	131.2200	
	Reamal	Rambhadevi	RF	3	104.3280	
	Reamal	Rambhadevi	RF	4	101.1040	
	Reamal	Rambhadevi	RF	5	211.3540	
	Reamal	Rambhadevi	RF	6	160.1370	
	Reamal	Rambhadevi	RF	7	94.1820	
	Reamal	Rambhadevi	RF	8	122.3190	
	Reamal	Rambhadevi	RF	9	68.3040	
	Reamal	Rambhadevi	RF	10	92.2930	
	Reamal	Rambhadevi	RF	11	91.3460	
	Reamal	Rambhadevi	RF	12	130.1040	
	Reamal	Rambhadevi	RF	13	170.2330	
	Reamal	Rambhadevi	RF	14	114.4530	
	Reamal	Rambhadevi	RF	15	115.3440	
	Deogarh	Rambhadevi	RF	16	88.2090	
	Deogarh	Rambhadevi	RF	17	199.0150	
	Deogarh	Rambhadevi	RF	18	167.6700	
	Deogarh	Rambhadevi	RF	19	260.8680	
	Deogarh	Rambhadevi	RF	20	401.0220	
	Deogarh	Rambhadevi	RF	21	182.9970	
	Deogarh	Rambhadevi	RF	22	241.2990	
	Deogarh	Rambhadevi	RF	23	132.6780	
	Deogarh	Rambhadevi	RF	24	277.7490	
	Deogarh	Rambhadevi	RF	25	215.7840	
	Deogarh	Rambhadevi	RF	26	149.6880	
13	Khamar	Danda	RF	1	357.4450	1423
	Khamar	Danda	RF	2	324.8100	
	Khamar	Danda	RF	3	385.1550	
	Khamar	Danda	RF	4	355.5900	
14	Reamal	Kansar (P)	RF	1	2439.7200	12198.6
	Deogarh	Kansar (P)	RF	1	9758.8800	
15	Barkote	Thianal	RF	1	816.8700	816.8700
16	Barkote	Pauri	RF	1	8215.4250	8215.4250
17	Pallahara	Nizgarh (A)	RF	1	279.198	279.198
18	Pallahara	Nizgarh (B)	RF	1	88	88
19	Pallahara	Old Pauri	RF	1	6783.75	6783.75
20	Pallahara	New Pauri	RF	1	1266	1266
21	Pallahara	Tamkia RF	RF	1	513.54	513.54
22	Pallahara	Saida	RF	1	397.71	397.71

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23	Khamar	Gurusalei	RF	1	388.8	388.8
24	Barkote	Kansar (A)	RF	1	152	152
25	Barkote	Kansar (B)	RF	1	97.325	97.325
26	Khamar	Biripal	RF	1	437.4	437.4
27	Khamar	Chargochhia	RF	1	529.199	529.199
28	Khamar	Rengaimunda	RF	1	86.67	86.67
29	Khamar	Jambua	RF	1	246.6	246.6
30	Khamar	Chungmatia	RF	1	15.578	15.578
31	Reamal	Hadamunda	PRF	1	396.3330	566.19
	Deogarh	Hadamunda	PRF	1	169.8570	
32	Deogarh	Jhadeswar	PRF	1	2768.4990	2768.499
33	Deogarh	Rajamunda	PRF	1	249.642	249.642
34	Deogarh	Kalkath	PRF	1	251.343	251.343
35	Deogarh	Tirib	PRF	1	85.698	85.698
36	Reamal	Tarang	PRF	1	981.477	981.477
37	Reamal	Kankarkhol	PRF	1	5770.44	5770.44
38	Reamal	Kundheigola	PRF	1	3534.491	3534.491
39	Reamal	Ghodapaka	PRF	1	162.68	162.68
40	Reamal	Naikul	PRF	1	1945.39	1945.39
41	Barkote	Banbira	PRF	1	1192.32	1192.32
42	Barkote	Kulundikudar	PRF	1	472.068	472.068
43	Barkote	Tusula	PRF	1	1675.45	1675.45
44	Barkote	Kaunsibahal	PRF	1	593.892	593.892
45	Barkote	Talabahali	PRF	1	63.99	63.99
46	Pallahara	Kakharua	PRF	1	166.536	166.536
47	Khamar	Kalamjuangsahi	PRF	1	150.66	150.66
48	Khamar	Kardapal	PRF	1	527.391	527.391
49	Khamar	Ranjo	PRF	1	221.697	221.697
50	Pallahara	Atolanka	PRF	1	161.87	161.87
51	Pallahara	Julunda-Jankpani	PRF	1	291.438	291.438
52	Pallahara	Sarbeda	PRF	1	277.02	277.02
53	Pallahara	Timi	PRF	1	422.658	422.658
54	Pallahara	Jharakhaman	PRF	1	65.934	65.934
55	Khamar	Priyambadapur	PRF	1	50.139	50.139
56	Khamar	Rangiapal	PRF	1	410.346	410.346
57	Pallahara	Bhaluhuli	PRF	1	140.94	140.94
58	Khamar	Bhulaka	PRF	1	233.118	233.118
59	Khamar	Sanda	PRF	1	446.067	446.067
60	Khamar	Bankhol	PRF	1	1222.452	1222.452
61	Khamar	Badasada	PRF	1	196.992	196.992
62	Khamar	Nuagaon	PRF	1	128.684	128.684
63	Khamar	Injidi	PRF	1	73.71	73.71

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64	Reamal	Tamkia PRF	PRF	1	502.83	502.83
65	Deogarh	Bangalimunda	PRF	1	298.78	298.78
66	Deogarh	Chilantikhol	PRF	1	2316.61	2316.61
67	Deogarh	Kandarpa-lambdura	PRF	1	1666.4	1666.4
68	Deogarh	Ludhar-Deopani	PRF	1	854.54	854.54
69	Deogarh	Salohi-Loimura	PRF	1	295.65	295.65
70	Deogarh	Sargidihi	PRF	1	93.15	93.15
71	Deogarh	Telikusum	PRF	1	409.05	409.05
72	Pallahara	Balibahal	PF	1	149.0094	149.0094
				Total	132606.7194	132606.7194

1.4. Reasons for Constitution of Working Circle:

1.4.1. Selection Working Circle: - An area of 94593.895 ha as per notification, which includes pure sal forest in plain area and miscellaneous forest in the hilly terrain having various age groups have been allotted to this Working Circle. In this area trees, which have attained exploitable girth and whose extraction will not create permanent gap in the canopy, are available and are to be harvested during this plan. An average of 83586 and 507 numbers of seedlings and trees respectively exist per hector. The regeneration status is adequate. The area, which was allotted to the Selection Working Circle in Behera's Plan, has been disturbed.

1.4.2. Protection Working Circle: - An area of 3396.390 ha has been allotted to this Working Circle. All tourist places like Pradhanpat, Kuraikote, Deodhar etc are included in this Working Circle. There are 05 sacred groves so far identified in this division. These sacred places may be developed to attract the Tourist. The ground flora and its favorable condition for regeneration are disturbed due to heavy forest fire. Theft has been noticed in bordering areas and in old plantation area. Theft of Bija trees has been noticed in all blocks. Outsiders from Bihar, Jharkhand and Sundergarh are encroaching the reserve forest area for cultivation and construction of houses. Extraction of stones, boulder and chips for construction of road and building are common in this division. The Wild animals are gradually decreasing due to poaching. Their protection against poachers is badly required. In very few patches podu cultivation is operating. These practices shall be stopped immediately. Therefore this Working Circle has been constituted to save the flora and fauna from its enemies.

1.4.3. Rehabilitation Working Circle: - An area of 9184.645 ha as per notification has been allotted to this Working Circle. The area, which were allotted to Rehabilitation-cum-Plantation Working Circle in Behera's Plan are now allotted to this Working Circle. 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 pressure of illicit felling throughout the year. The local people are cutting poles, which is locally called '*Medha*' for construction of their thatched house, fencing their cultivated land and firewood. Only coppice and damaged shoots are seen in those

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areas. The soil is highly eroded and there by less fertile. This Working Circle is constituted for increasing the number of growing stock by artificial regeneration.

1.4.4. Plantation Working Circle: - An area of 25431.7894 ha as per plantation record has been allotted to this Working Circle. All degraded area with blank patches is included in this Working Circle. The area allotted in Behera's Plan has been disturbed. The area under Proposed Reserve Forest has also been included in this Working Circle for increasing the growing stock by artificial method. Plantation by clearing existing vegetation is discouraged. Only in the blank area, plantation of suitable species has been prescribed. This Working Circle is constituted for increasing the number of growing stock by artificial regeneration.

1.4.5. Miscellaneous Regulation Chapter: - In this chapter all regulation has been prescribed for the forest area included in as per revenue record over an area of 85563.972 ha, area muted in favour of forest department over 2149.94 ha, Unclassed forest over an area of 6.179 ha and Village forest over 686.49 ha. This area is not allotted to any Working Circle in Behera's 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 *'Medha'* for construction of their thatched house, fencing their cultivated land and firewood. Only coppice and damaged shoots are seen in those areas. The soil is highly eroded and there by less fertile. This Miscellaneous Regulation Chapter is constituted to control non-notified forest area.

1.4.6. Bamboo (Over lapping) Working Circle: - An area of 108250.80 ha of bamboo bearing forest has been allotted to this Working Circle. Bamboos occur as an under story and the area included in Behera's Plan has not been disturbed. The area having average 03 or more clumps per 0.1 hector is allotted to this Working Circle. The reason of degradation of bamboo zone is forest fire, illicit cutting and collection of edible *'Karadi'*. Therefore this Overlapping Working Circle has been constituted to save the flora and fauna from its enemies and increase the clumps per hector.

1.4.7. Non Timber Forest Produce (Over lapping) Working Circle: - An area of 132606.7194 ha as per notification have been allotted to this Working Circle. This Working Circle overlaps the entire forest area coming under the management of this Plan. Since it is not easy to develop the irrigation system in this hilly area, cultivation depends almost entirely on rainwater. The economy of the inhabitants depends on forest produce. Good quality and quantity of non-timber forest produce are available during harvesting time. However, all items are not collected and stored in proper systematic manner. The collection, storage and disposal method along with the sale price and center is prescribed, so that the people can get higher price from the non-timber forest produces. Therefore, this Working Circle has been constituted for value addition and systematic collection and disposal of the MFP items.

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1.4.8. Joint Forest Management (Over lapping) Working Circle: - An area of 59370.7708 ha as per JFM record has been allotted to this Working Circle. The system of joint management by local people and Forest Department have been introduced in this division during the year 1993 vide resolution No.16700/ F & E dt.03.07.1993. Since then 447 VSSs have been formed. The plantation and other activities under National Afforestation Programme has been taken up in the protected areas of different Van Samrakhyan Samiti. Micro Plan for each Vana Samrakhyan Samiti has been prepared. Separate prescription for those areas is necessary for protection and interim yield. This Working Circle overlaps only the assigned area to Vana Samrakhyan Samiti for protection.

1.4.9. Wildlife (Over lapping) Working Circle: - An area of 132606.7194 ha as per notification has been allotted to this Working Circle. Due to construction of New Roads and heavy traffic on National Highway No.06, elephants do not extend their movement from the northern to southern part of this division and vice versa. Elephants prefer to make their habitat around the forest area of the dam due to availability of water during summer. Tigers have disappeared from this division. The population of other wildlife is also decreasing due to habitat destruction, poaching and forest fire. Their multiplication is not satisfactory due to unfavorable environmental condition. It is now necessary to protect the existing wildlife and create favorable condition for their multiplication. This over lapping Working Circle has been constituted to prescribe management technique for the improvement of the habitat of wildlife.

1.5. Comparison of Area with Past Plan:

1.5.1. The area managed under different Working Circles from 1933 to 2015 and to be managed from 2015-16 to 2024-25 is given in the table below. (SWC – Selection Working Circle, RWC – Rehabilitation Working Circle, UWC – Unregulated Working Circle, SIWC – Selection-Cum-Improvement Working Circle, PWC - Plantation Working Circle, RPWC – Rehabilitation-Cum-Plantation Working Circle, CWC – Coppice Working Circle and Pr. WC – Protection Working Circle)

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Table No. 196

Comparison of RF area with Past Plan

Name of block and its area in ha	Comp't No.	Comp't area in ha	Name of past W.C and its period of management				W.C from 2015-16 to 2024-25
			1933 to 1943	1950 to 1970	1970 to 1990	1995-96 to 2014-15	
Pradhanpat (10386.063)	1	373.896	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	2	296.136	UWC	SWC	SIWC	SWC	SWC
	3	301.320	UWC	SWC	SIWC	SWC	SWC
	4	246.240	UWC	SWC	SIWC	SWC	SWC
	5	286.416	UWC	SWC	SIWC	SWC	SWC
	6	403.704	UWC	SWC	SIWC	SWC	SWC
	7	434.808	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	8	836.730	UWC	SWC	SIWC	PWC	SWC & Pltn WC
	9	471.987	UWC	SWC	SIWC	SWC	SWC
	10	416.664	UWC	SWC	SIWC	SWC	SWC, Pltn WC & Pr. WC
	11	517.833	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	12	419.580	UWC	SWC	SIWC	PWC	SWC
	13	508.032	UWC	SWC	SIWC	PWC	SWC, Pltn WC & Pr. WC
	14	493.452	UWC	SWC	SIWC	PWC	SWC & Pltn WC
	15	314.928	UWC	SWC	SIWC	PWC	SWC
	16	259.482	UWC	SWC	SIWC	PWC	Pltn WC, Pr. WC
	17	322.440	UWC	SWC	SIWC	SWC	SWC
	18	228.744	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	19	265.680	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	20	355.104	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	21	364.144	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	22	140.741	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	23	234.738	UWC	SWC	SIWC	SWC	SWC
	24	385.560	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	25	189.024	UWC	SWC	SIWC	SWC	Plantation WC
	26	377.136	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	27	256.608	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	28	312.984	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	29	371.952	UWC	SWC	SIWC	SWC	SWC & Pltn WC
Kansar (P) (12198.600)	1	8256.635	x	x	RWC	SWC	SWC & Pltn WC
	1	3941.965	x	x	x	RPWC	SWC & Pltn WC
Pravasuni (11080.449)	3	211.410	UWC	SWC	SIWC	SWC	SWC
	4	341.415	UWC	SWC	SIWC	SWC	SWC
	7	357.615	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	8	371.385	UWC	SWC	SIWC	SWC	SWC
	9	373.815	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	10 (p)	150.00	UWC	SWC	SIWC	SWC	SWC
	11 (P)	70.027	UWC	SWC	SIWC	SWC	SWC
	12	471.420	UWC	SWC	SIWC	SWC	SWC

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	13	279.450	UWC	SWC	SIWC	SWC	SWC
	14	223.560	UWC	SWC	SIWC	SWC	SWC
	15	324.000	UWC	SWC	SIWC	SWC	SWC
	16	223.155	UWC	SWC	SIWC	SWC	SWC
	17	523.665	UWC	SWC	SIWC	SWC	SWC
	18	304.560	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	19	226.660	UWC	SWC	SIWC	SWC	SWC
	20	214.650	UWC	SWC	SIWC	SWC	SWC
	21	175.100	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	22	407.403	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	23	595.755	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	24	297.675	UWC	SWC	SIWC	SWC	SWC
	25	435.375	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	30	356.400	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	37 (p)	90.00	UWC	SWC	SIWC	SWC	SWC
	38	292.105	UWC	SWC	SIWC	SWC	SWC
	39	284.986	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	40	66.585	UWC	SWC	SIWC	SWC	SWC
	41	228.825	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	42	373.005	UWC	SWC	SIWC	SWC	SWC
	43	270.737	UWC	SWC	SIWC	SWC	SWC
	44	111.412	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	45	84.810	UWC	SWC	SIWC	SWC	SWC
	46	558.090	UWC	SWC	SIWC	SWC	SWC, Pr. WC
	47	293.625	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	48	505.440	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	49	293.625	UWC	SWC	SIWC	SWC	SWC
	50	54.859	UWC	SWC	SIWC	SWC	SWC
	51	129.575	UWC	SWC	SIWC	SWC	SWC & Pltn WC
	52	192.375	UWC	SWC	SIWC	SWC	SWC
	53	315.900	UWC	SWC	SIWC	SWC	SWC & Pltn WC
Rambhadevi (4267.186)	1	243.486	CWC	SWC	SIWC	SWC	SWC
	2	131.220	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	3	104.328	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	4	101.104	CWC	SWC	SIWC	SWC	SWC
	5	211.354	CWC	SWC	SIWC	SWC	SWC
	6	160.137	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	7	94.182	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	8	122.319	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	9	68.304	CWC	SWC	SIWC	SWC	SWC
	10	92.293	CWC	SWC	SIWC	SWC	SWC
	11	91.346	CWC	SWC	SIWC	SWC	SWC
	12	130.104	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	13	170.233	CWC	SWC	SIWC	SWC	SWC
	14	114.453	CWC	SWC	SIWC	SWC	SWC
	15	115.344	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	16	88.209	CWC	SWC	SIWC	SWC	SWC
	17	199.015	CWC	SWC	SIWC	SWC	SWC & Pltn WC

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	18	167.670	CWC	SWC	SIWC	SWC	SWC
	19	260.868	CWC	SWC	SIWC	SWC	SWC
	20	401.022	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	21	182.997	CWC	SWC	SIWC	SWC	SWC
	22	241.299	CWC	SWC	SIWC	SWC	SWC & Pr. WC
	23	132.678	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	24	277.749	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	25	215.784	CWC	SWC	SIWC	SWC	SWC & Pltn WC
	26	149.688	CWC	SWC	SIWC	SWC	SWC & Pltn WC
Panguli (3220.681)	1	486.522	HFWC	CWC	CWC	SWC	SWC, Pltn WC & Pr. WC
	2	519.422	HFWC	CWC	CWC	SWC	SWC & Pltn WC
	3	380.067	HFWC	CWC	CWC	SWC	SWC & Pltn WC
	4	423.630	HFWC	CWC	CWC	SWC	SWC & Pltn WC
	5	256.365	HFWC	CWC	CWC	SWC	SWC & Pltn WC
	6	239.557	HFWC	CWC	CWC	SWC	SWC & Pltn WC
	7	515.970	HFWC	CWC	CWC	SWC	SWC & Pltn WC
	8	399.128	HFWC	CWC	CWC	SWC	SWC & Pltn WC
Thianal	1	831.87	HFWC	CWC	CWC	RPWC	RWC & Pltn WC
Mandasila (2856.465)	1	244.053	HFWC	CWC	CWC	SWC	SWC
	2	242.676	HFWC	CWC	CWC	SWC	SWC & Pltn WC
	3	171.720	HFWC	CWC	CWC	SWC	SWC & Pltn WC
	4	218.376	HFWC	CWC	CWC	SWC	SWC
	5	272.808	HFWC	CWC	CWC	RPWC	SWC & Pltn WC
	6	353.160	HFWC	CWC	CWC	RPWC	SWC & Pltn WC
	7	309.096	HFWC	CWC	CWC	RPWC	SWC
	8	262.521	HFWC	CWC	CWC	SWC	SWC
	9	289.575	HFWC	CWC	CWC	SWC	SWC
	10	197.640	HFWC	CWC	CWC	SWC	SWC
	11	294.840	HFWC	CWC	CWC	SWC	SWC
Pauri	1	8215.425	HFWC	PWC	SIWC	SWC	SWC & Pltn WC
Badtaila (10154.803)	1	208.777	UWC	SWC	CWC	SWC	SWC
	2	85.010	UWC	SWC	CWC	RPWC	SWC
	3	91.935	UWC	SWC	CWC	RPWC	SWC
	4	129.681	UWC	SWC	CWC	RPWC	SWC & Pltn WC
	5	58.766	UWC	SWC	CWC	RPWC	SWC
	6	152.195	UWC	SWC	CWC	RPWC	SWC
	7	193.914	UWC	SWC	CWC	RPWC	SWC & Pltn WC
	8	375.212	UWC	SWC	CWC	RPWC	SWC & Pltn WC
	9	449.550	UWC	SWC	CWC	SWC	SWC & Pltn WC
	10	197.640	UWC	SWC	CWC	SWC	SWC & Pltn WC
	11	241.056	UWC	SWC	CWC	SWC	SWC & Pltn WC
	12	316.402	UWC	SWC	CWC	SWC	SWC & Pltn WC
	13	247.375	UWC	SWC	CWC	SWC	SWC & Pltn WC
	14	237.897	UWC	SWC	CWC	SWC	SWC & Pltn WC
	15	222.912	UWC	SWC	CWC	SWC	SWC
	16	162.648	UWC	SWC	CWC	SWC	SWC
	17	186.624	UWC	SWC	CWC	SWC	SWC & Pltn WC

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	18	214.529	UWC	SWC	CWC	SWC	SWC & Plm WC
	19	177.107	UWC	SWC	CWC	SWC	SWC & Plm WC
	20	251.384	UWC	SWC	CWC	SWC	SWC
	21	233.928	UWC	SWC	CWC	SWC	SWC
	22	204.120	UWC	SWC	CWC	SWC	SWC
	23	132.840	UWC	SWC	CWC	SWC	SWC
	24	231.296	UWC	SWC	CWC	SWC	SWC
	25	204.120	UWC	SWC	CWC	SWC	SWC
	26	229.392	UWC	SWC	CWC	SWC	SWC
	27	195.048	UWC	SWC	CWC	SWC	SWC & Plm WC
	28	199.584	UWC	SWC	CWC	SWC	SWC
	29	230.688	UWC	SWC	CWC	SWC	SWC
	30	384.912	UWC	SWC	CWC	SWC	SWC & Plm WC
	31	259.200	UWC	SWC	CWC	SWC	SWC
	32	197.964	UWC	SWC	CWC	SWC	SWC
	33	178.666	UWC	SWC	CWC	SWC	SWC
	34	130.106	UWC	SWC	CWC	SWC	SWC
	35	196.263	UWC	SWC	CWC	SWC	SWC
	36	277.344	UWC	SWC	CWC	SWC	SWC & Plm WC
	37	253.368	UWC	SWC	CWC	SWC	SWC & Plm WC
	38	168.480	UWC	SWC	CWC	SWC	SWC
	39	260.496	UWC	SWC	CWC	SWC	SWC & Plm WC
	40	264.384	UWC	SWC	CWC	SWC	SWC & Plm WC
	41	198.612	UWC	SWC	CWC	SWC	SWC & Plm WC
	42	191.808	UWC	SWC	CWC	SWC	SWC
	43	236.682	UWC	SWC	CWC	SWC	SWC & Plm WC
	44	274.752	UWC	SWC	CWC	SWC	SWC & Plm WC
	45	155.520	UWC	SWC	CWC	SWC	SWC
	46	152.280	UWC	SWC	CWC	SWC	SWC & Plm WC
	47	142.560	UWC	SWC	CWC	SWC	SWC
	48	169.776	UWC	SWC	CWC	SWC	SWC
Gogua (3599.235)	1	198.936	UWC	CWC	CWC	SWC	SWC
	2	251.586	UWC	CWC	CWC	SWC	SWC
	3	232.875	UWC	CWC	CWC	SWC	SWC
	4	410.103	UWC	CWC	CWC	SWC	SWC & Plm WC
	5	209.223	UWC	CWC	CWC	RPWC	SWC
	6	206.550	UWC	CWC	CWC	RPWC	SWC
	7	407.511	UWC	CWC	CWC	RPWC	SWC & Plm WC
	8	459.675	UWC	CWC	CWC	RPWC	SWC & Plm WC
	9	270.216	UWC	CWC	CWC	RPWC	SWC
	10	342.144	UWC	CWC	CWC	RPWC	SWC & Plm WC
	11	230.040	UWC	CWC	CWC	SWC	SWC & Plm WC
	12	200.232	UWC	CWC	CWC	SWC	SWC & Plm WC
	13	180.144	UWC	CWC	CWC	SWC	SWC & Plm WC
Malyagiri (11500.170)	1	336.15	x	x	x	SWC	SWC
	2	389.205	x	x	x	SWC	SWC & Plm WC
	3	154.305	x	x	x	SWC	SWC & Plm WC
	4	510.300	x	x	x	SWC	SWC

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	5	787.725	x	x	x	SWC	SWC & Pltn WC
	6	467.775	x	x	x	SWC	SWC & Pltn WC
	7	384.750	x	x	x	SWC	SWC & Pltn WC
	8	409.050	x	x	x	SWC	SWC & Pltn WC
	9	336.150	x	x	x	SWC	SWC & Pltn WC
	10	321.975	x	x	x	SWC	SWC, Pltn WC & Pr. WC
	11	332.100	x	x	x	SWC	SWC & Pltn WC
	12	542.700	x	x	x	PWC	SWC & Pr. WC
	13	431.345	x	x	x	PWC	SWC & Pltn WC
	14	372.600	x	x	x	SWC	SWC
	15	417.150	x	x	x	SWC	SWC & Pltn WC
	16	419.175	x	x	x	SWC	SWC
	17	184.275	x	x	x	SWC	SWC
	18	317.925	x	x	x	SWC	SWC & Pltn WC
	19	350.325	x	x	x	SWC	SWC & Pltn WC
	20	298.680	x	x	x	SWC	SWC & Pltn WC
	21	342.630	x	x	x	SWC	SWC & Pltn WC
	22	496.125	x	x	x	SWC	SWC & Pltn WC
	23	411.075	x	x	x	SWC	SWC & Pltn WC
	24	409.050	x	x	x	SWC	SWC
	25	317.925	x	x	x	SWC	SWC
	26	498.150	x	x	x	SWC	SWC & Pltn WC
	27	451.575	x	x	x	SWC	SWC
	28	370.575	x	x	x	SWC	SWC & Pltn WC
	29	180.225	x	x	x	SWC	SWC
	30	259.180	x	x	x	SWC	SWC
Nizgarh (A)	1	287.198	x	x	x	RPWC	RWC & Pltn WC
Nizgarh (B)	1	93.00	x	x	x	RPWC	RWC & Pltn WC
Old Pauri	1	6783.750	x	x	x	SWC	SWC & Pltn WC
New Pauri	1	1296.00	x	x	x	SWC	RWC & Pltn WC
Tamkia	1	513.540	x	x	x	SWC	SWC & Pltn WC
Saida	1	397.710	x	x	x	SWC	SWC & Pltn WC
Gurusulei	1	388..80	x	x	x	RPWC	Pr. WC & Pltn WC
Kansar (A)	1	162.00	x	x	x	RPWC	Pr. WC & Pltn WC
Kansar (B)	1	107.325	x	x	x	RPWC	RWC & Pltn WC
Biripal	1	437.400	x	x	x	SWC	Pr. WC & Pltn WC
Charigachhia	1	529.199	x	x	x	RPWC	SWC & Pltn WC
Danda	1	392.445	x	x	x	SWC	Pr. WC & Pltn WC
(1458.000)	2	324.810	x	x	x	SWC	Pr. WC & Pltn WC
	3	385.155	x	x	x	SWC	Pr. WC & Pltn WC
	4	355.590	x	x	x	SWC	Pr. WC & Pltn WC
Mankarchua	1	392.850	x	x	x	SWC	SWC & Pltn WC
(1314..225)	2	350.730	x	x	x	SWC	SWC & Pltn WC
	3	277.020	x	x	x	SWC	SWC & Pltn WC
	4	293.625	x	x	x	SWC	SWC & Pltn WC

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Kuladera	1	471.420	x	x	x	SWC	SWC & Pltn WC
(2236.815)	2	409.455	x	x	x	SWC	SWC & Pltn WC
	3	383.940	x	x	x	SWC	SWC & Pltn WC
	4	407.025	x	x	x	SWC	SWC & Pltn WC
	5	360.450	x	x	x	SWC	SWC & Pltn WC
	6	204.525	x	x	x	SWC	SWC & Pltn WC
Rengalmunda	1	86.670	x	x	x	RPWC	RWC
Kunjam	1	421.200	x	x	x	RPWC	RWC & Pltn WC
(1047.553)	2	364.500	x	x	x	RPWC	RWC & Pltn WC
	3	261.853	x	x	x	RPWC	RWC & Pltn WC
Jambua	1	257.580	x	x	x	SWC	RWC & Pltn WC
Chungamatia	1	15.578	x	x	x	RPWC	PWC
Khajuria	1	522.936	x	x	x	SWC	SWC
(5008.092)	5	331.776	x	x	x	SWC	SWC
	6	364.500	x	x	x	SWC	SWC
	7	432.216	x	x	x	SWC	SWC & Pltn WC
	8	516.456	x	x	x	SWC	SWC & Pltn WC
	9	361.584	x	x	x	SWC	SWC
	10	356.400	x	x	x	SWC	SWC
	11	690.120	x	x	x	SWC	SWC
	12	459.432	x	x	x	SWC	SWC & Pltn WC
	13	366.120	x	x	x	SWC	SWC
	14	501.552	x	x	x	SWC	SWC & Pltn WC
	15 (P)	105.00	x	x	x	SWC	SWC
	Total	100731.382					
Area of 30 RF = 100731.382 ha, Area de-reserved = 211.904 ha, Balance area of 30 RF = 100519.478 ha.							

Table No. 197

Comparison of PRF Area with Past Plan

Name of Block & Area in ha			Name of Past W.C and its period of management				W.C from 2015-16 to 2024-25
	Comp't No.	Comp't area in ha.	1933 to 1943	1950 to 1970	1970 to 1990	1995-96 to 2014-15	
Jhadeswar	1	2768.499	x	x	x	SWC	SWC, Pltn WC
Hadamunda	1	566.19	x	x	x	SWC	SWC, Pltn WC
Rajamunda	1	249.642	x	x	x	RPWC	RWC, Pltn WC
Kalkath	1	251.343	x	x	x	RPWC	RWC, Pltn WC
Tirib	1	85.698	x	x	x	RPWC	RWC, Pltn WC
Tarang	1	981.477	x	x	x	RPWC	RWC, Pltn WC
Kankarkhol	1	5770.44	x	x	x	RPWC 1398.87	SWC, Pltn WC
			x	x	x	SWC	SWC, Pltn WC

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						4371.570	
Kundheigola	1	3537.715	x	x	x	SWC	SWC, Pr. WC & Pltn WC
Ghodapaka	1	162.68	x	x	x	RPWC	Plantation WC
Naikul	1	1945.39	x	x	x	RPWC	SWC, Pltn WC
Banbira	1	1192.32	x	x	x	RPWC	RWC, Pltn WC
Kulundikudar	1	472.068	x	x	x	SWC	SWC
Tusula	1	1675.45	x	x	x	SWC	SWC, Pr. WC & Pltn WC
Kaunsibahal	1	593.892	x	x	x	RPWC	RWC, Pltn WC
Talabahali	1	63.99	x	x	x	RPWC	RWC
Kakharua	1	166.536	x	x	x	RPWC	RWC, Pltn WC
Kalamjuangsahi	1	150.66	x	x	x	SWC	RWC
Kardapal	1	527.391	x	x	x	RPWC	SWC, Pltn WC
Ranjo	1	221.697	x	x	x	RPWC	RWC, Pltn WC
Atonaka	1	161.87	x	x	x	RPWC	RWC
Jolonda-Jankpani	1	291.438	x	x	x	RPWC	RWC
Sarbeda	1	277.02	x	x	x	RPWC	RWC, Pltn WC
Timi	1	422.658	x	x	x	RPWC	RWC
Jharkhaman	1	65.934	x	x	x	RPWC	RWC
Priyambadapur	1	50.139	x	x	x	RPWC	RWC
Rangiapal	1	410.346	x	x	x	RPWC	RWC, Pltn WC
Bhalubuli	1	140.94	x	x	x	RPWC	RWC, Pltn WC
Bhulaka	1	233.118	x	x	x	SWC	RWC
Sanda	1	446.067	x	x	x	RPWC	RWC, Pltn WC
Bankhol	1	1222.452	x	x	x	SWC	SWC, Pltn WC
Badasada	1	196.992	x	x	x	RPWC	RWC, Pltn WC
Nuagaon	1	136.404	x	x	x	RPWC	RWC
Injidi	1	73.71	x	x	x	RPWC	RWC
Tamkia	1	502.83	x	x	x	X	RWC
Bangalimunda	1	298.78	x	x	x	X	RWC, Pltn WC
Chilantikhol	1	2316.61	x	x	x	SWC	SWC, Pltn WC
Kandarpa-lambdura	1	1666.4	x	x	x	SWC	SWC
Ludhar-Deopani	1	854.54	x	x	x	SWC	SWC
Salohi-Loimura	1	295.65	x	x	x	SWC	SWC
Sargidihi	1	93.15	x	x	x	SWC	SWC
Telikusum	1	409.05	x	x	x	SWC	RWC, Pltn WC
	Total	31949.176	x	x	x		
Area of 41 PRF = 31949.176 ha, Area de-reserved = 10.944 ha, Balance area of 41 PRF = 31938.232 ha.							

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Table No. 198							
Comparison of PF Area with Past Plan							
Name of Block & Area in ha			Name of Past W.C and its period of management				W.C from 2015-16 to 2024-25
	Comp't No.	Comp't area in ha.	1933 to 1943	1950 to 1970	1970 to 1990	1995-96 to 2014-15	
Balibahal	1	149.0094	x	x	x	x	Plantation WC
Area of 01 PF = 149.0094 ha, Area de-reserved = 00, Balance area of 01 PF = 149.0094 ha.							

1.6. Period of the Working Plan and Necessity for Intermediate Revision:

1.6.1. This Working Plan has been drawn up for a period of 10 years (2015-16 to 2024-25) as per Para 5 of National Working Plan Code. An intermediate revision has not been prescribed. The observation made in the triennial inspection report of the Territorial Regional Chief Conservator of Forest within the Working Plan period shall be implemented for the balance coupes subject to approval of the Working Plan Committee / Competent authority.

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SELECTION WORKING CIRCLE

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CHAPTER - II

SELECTION WORKING CIRCLE

2.1. General Constitution of Working Circle:

2.1.1. An area of 94593.895 ha as per notification has been allotted to this Working Circle. The Forest blocks and compartments, which have sufficient harvestable trees per hectare, are included in SWC. Some of the areas allotted to this circle are remotely located and also on hilly terrain. Area allotted to SWC in Behera's Plan has been revised.

2.1.2. Blocks and compartments: - The Range wise forest blocks and compartments allotted to Selection Working Circle is given in the table below.

Table No. 199

Range wise forest blocks and compartments allotted to Selection Working Circle

Range	Block	Status	Compartments No.	Notified area in ha
Pallahara	Malyagiri	RF	2 to 15	4575.466
	Old Puri	RF	1	6380.75
	Tamkia	RF	1	393.04
	Saida	RF	1	113.710
	Mankarchua	RF	1	568.725
			Total	12031.691
Khamar	Malyagiri	RF	1 & 16 to 30	4687.54
	Chargochhia	RF	1	21.199
	Kuladera	RF	1,2,3,4,5 & 6	1488.315
	Kardapal	PRF	1	517.391
	Bankhol	PRF	1	1152.452
			Total	7866.897
Barkote	Pradhanpat	RF	16 to 29	3113.837
	Panguli	RF	1 to 8.	1799.161
	Mandasila	RF	1 to 11.	2494.465
	Paburi	RF	1	7338.315
	Badtaila	RF	1 to 48.	7942.393
	Kulundikudar	PRF	1	472.068
	Tusula	PRF	1	1660.45
			Total	24820.689
Deogarh	Pradhanpat	RF	1 to 15	5297.706
	Kansar	RF	1	8407.66
	Pravasuni	RF	3, 4, 7, 8, 9, 10(P),11(P), 12 to 25, 30, 37(P), 38 to 53	9000.399
	Rambhadevi	RF	16 to 26	1757.979
	Khajuria	RF	1, 5 & 6 to 15.	4260.092
	Jhadeswar	PRF	1	2316.499
	Hadamunda	PRF	1	28.857
	Chilantikhol	PRF	1	1700.61

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	Kandarpa-lambdura	PRF	1	1666.4
	Ludhar Deopani	PRF	1	854.54
	Salohi Loimura	PRF	1	295.65
	Sargidihi	PRF	1	93.15
			Total	35679.542
Reamal	Kansar	RF	1	1027.72
	Rambhadevi	RF	1 to 15	1408.177
	Gogua	RF	1 to 13	2695.525
	Hadamunda	PRF	1	209.333
	Kankarkhol	PRF	1	4524.44
	Kundheigola	PRF	1	2436.491
	Naikul	PRF	1	1893.39
			Total	14195.076
			Grand Total	94593.895

2.2. General Character of Vegetation:

2.2.1. Composition: - Sal constitutes the main species, which contributes 33.16 % of the crops. Sal forms almost pure or nearly pure crop, both in the hills and in the plains. On most of the hills, it ascends to the top, either pre-dominantly or mixed with it's other associates like Bija, Ashan, Bandhan, Kurum, Kasi, Bamboo, Dhaura, Sisoo, Kendu, Haldu, Gambhari etc. The regeneration is purely natural and distributed adequately all over the area. The forest types are mainly Moist and dry peninsular sal, Northern dry mixed deciduous and Tropical hill valley swampy forest. The growth and quality of the crop have been considerably reduced due to decreasing adjoining environmental condition. The composition of sal in different forest blocks included in SWC is as under.

Table No. 200

% of sal in different forest blocks allotted to SWC

Sl. No.	Name of the Block	No. of trees at 30 cm and above gbh		% of sal
		Sal	Total	
1	Pradhanpat	1241894	6577827	18.88
2	Kansar	1033533	6746297	15.32
3	Pravasuni(P)	3031487	6777301	44.73
4	Rambhadevi(P)	829901	2399945	34.58
5	Panguli	196771	788031	24.97
6	Mandasila	375411	1254716	29.92
7	Paburi	806224	3749879	21.50
8	Badtaila	980310	4169757	23.51
9	Gogua	129420	1838348	07.04
10	Malyagiri	2275120	5076127	44.82
11	Old Puri	1867956	3375418	55.34
12	Tankia RF	45653	161147	28.33
13	Saida	23630	38094	62.03
14	Chargochhia	1288	3117	41.32
15	Mankarchua	108936	163225	66.74

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16	Kuladera	183202	607232	30.17
17	Khajuria	794537	1763678	45.05
18	Jhadeswar	700161	1436228	48.75
19	Hadamunda	41665	103851	40.12
20	Kankarkhol	1007390	3067570	32.84
21	Kundheigola	534632	1581283	33.81
22	Naikul	101047	952375	10.61
23	Kulundikudar	24291	160975	15.09
24	Tusula	165539	521382	31.75
25	Kardapal	31161	120035	25.96
26	Bankholi	164016	492097	33.33
27	Chilantikhol	68650	816293	8.41
28	Kandarpa-Lambdura	415485	1006505	41.28
29	Ludhar-Deopani	196646	359762	54.66
30	Salohi-Laimura	50209	122104	41.12
31	Sargidihi	12865	43968	29.26
	Total	17439030	56274567	

2.2.2. Age Class: - The sal crop and its associates constitute of all age classes. The inventory carried out over 5 % in the SWC area in different plots size. The plot sizes are 0.10 ha (40 mt x 25 mt), 01.00 ha (100 mt x 100 mt) and strip. Sample points are generated in every forest block based on it's area, forest type and density. Trees were grouped in to girth classes. Girth classes from 30 cm and above have been recorded but girth classes from below 30 cm were omitted. The age class of sal in the girth class of 30 to 40 cm is 10 to 20 years. Similarly the age class of sal in the girth class of 150 cm and above is more than 100 years.

2.2.3. Distribution: - The area allotted to this Working Circle is distributed in all Ranges and comprises 71.33 % of the total managed area. Sal distributed in pure form in plain and valley area, where as it is sporadically distributed in mixed forest in the hill portion.

2.2.4. Density: - The density of the crop included in this Working Circle varies from 0.30 to 0.70. In plain and valley area the density varies from 0.40 to 0.70, where as in hilly area the density varies from 0.30 to 0.60. The variation of density is due to the adjoining environmental influence and the fertility of the area. The allotment of area into SWC in different density classes is as under.

Table No. 201

Canopy density wise area in SWC

Canopy density classes	Notified area of the division in ha.	Notified area of SWC in ha.
> 40 %	74872.174	74872.174
> 25 to 40%	19721.721	19721.721
>10 to 25%	3090.746	00
10% and below	6093.899	00
Total	103778.54	94593.895

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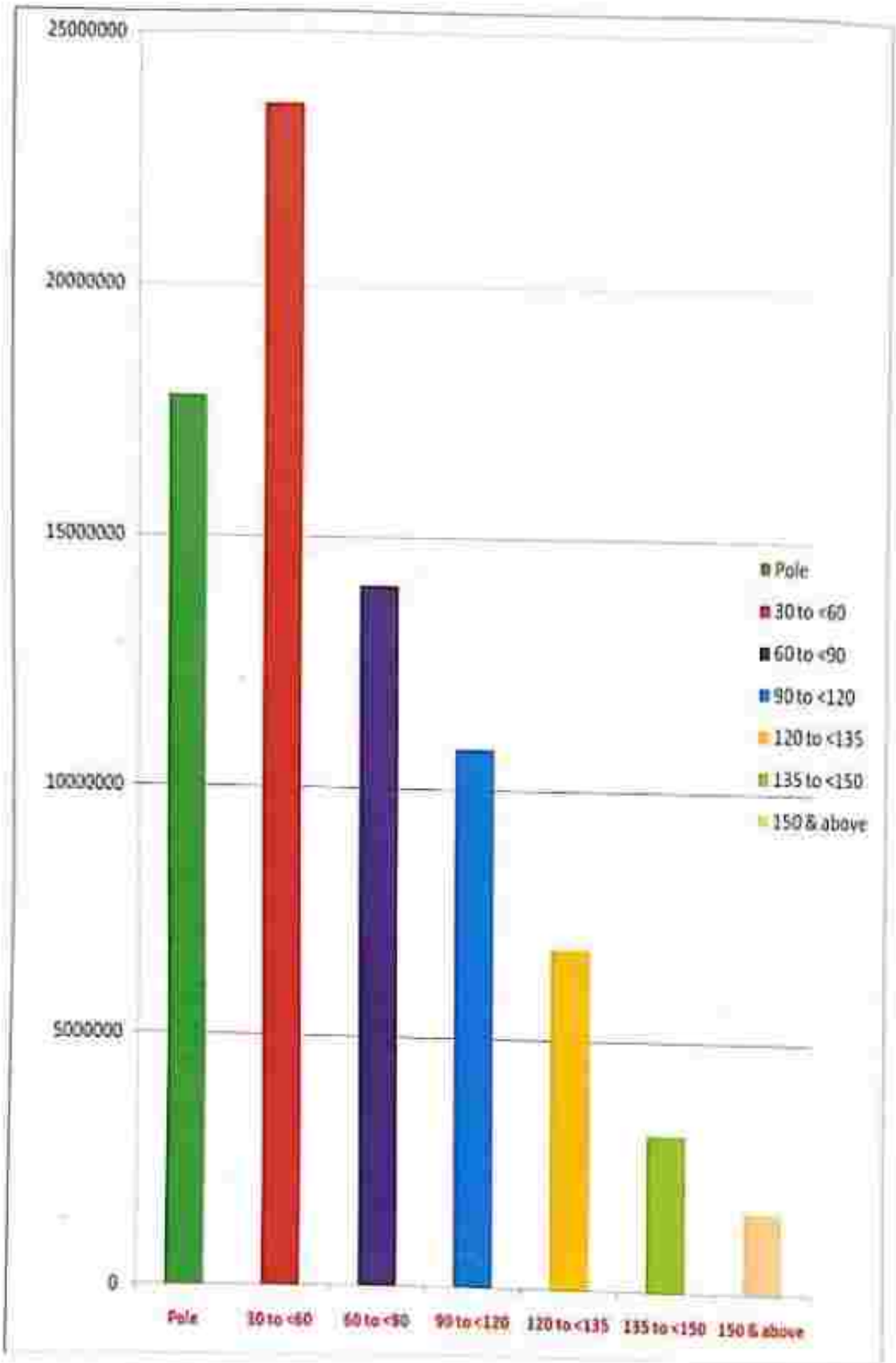
2.2.5. Growing Stock: - The total number of established trees in each forest block included in this Working Circle have been estimated in this revision. Such estimates for each forest block had not been done in the past. Based on the sample inventory data the total trees number in different girth classes is given in the table below.

Table No. 202

Growing stock in SWC area

Sl. No	Block	Seedling	Pole	Girth classes in cm					
				30<60	60<90	90<120	120<135	135<150	150 & above
1	Pradhanpat	3423498	2161767	1909420	1076678	1371082	1561370	462635	176642
2	Kumar	5255507	2339974	1764416	1934253	1471919	1132246	330238	113225
3	Pravatoni(P)	4032179	2043091	1962087	1827081	1647073	873039	333015	135006
4	Rambhadeo(P)	1560915	626899	655394	706053	557243	310283	129812	47160
5	Pangali	847405	336443	212301	339288	192510	82761	44979	16192
6	Mandosila	1277166	483926	299336	261919	249447	286863	129712	27439
7	Paburi	3654481	1783211	1320897	968058	609080	476990	271518	102736
8	Badmala	3677328	1445516	1032511	1246956	1088108	357408	381235	63539
9	Gogua	1212986	517541	719705	514845	285726	196773	75475	45824
10	Malyagiri	4742659	2315752	1083772	1343136	1167139	768829	309465	203786
11	Old Puri	3298848	1308054	797594	900067	784832	491318	287134	108473
12	Tumkia RF	207525	75464	36946	29478	39304	28299	20045	7075
13	Saida	47417	20127	10575	7164	11257	5686	2047	1365
14	Chargochhia	9222	4600	700	827	657	360	488	85
15	Mankarchua	273557	101233	58529	31849	21043	23318	14787	13649
16	Kuledera	602768	259990	160738	129483	159250	86322	58044	13395
17	Khajura	1985203	792377	413229	332287	447310	379148	140583	31121
18	Jhadeswar	1107287	551327	331259	410020	361374	203852	85710	44013
19	Hadmunda	103613	54069	18817	25963	32632	15959	6193	4287
20	Kankarkhol	1909314	986328	1063243	1167306	466017	233271	76915	58818
21	Kundheigola	1176825	538465	421513	470989	260705	238776	153499	26801
22	Nalkul	759249	384358	255608	230994	278328	115497	60588	11360
23	Kulundikudar	196852	88237	44846	5665	58064	47207	3777	1416
24	Tunda	722296	343713	102948	142799	131176	114571	18265	11623
25	Kardapal	211096	92613	39839	31564	23283	13452	7761	4139
26	Barkhol	467896	216661	165953	117350	99111	53013	43793	12677
27	Chilantidhol	794183	326517	164959	226181	181965	141151	79929	22108
28	Kandarpa-Lambdura	804871	348278	394937	279953	134978	108316	58324	29995
29	Ladhar-Deopani	441797	183162	66654	70927	93145	108527	12818	7691
30	Salsha-Laimura	150190	63565	25722	30452	30156	23948	7983	3843
31	Sargidhi	37726	16581	11085	12575	9036	6800	2888	1504
	Total	44991861	20803879	15545583	14787959	12262950	8587353	3809655	1361067

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2.2.6. Status of Regeneration: - The area included in Selection Working Circle has sufficient stock. The renewal of forest crop purely depends on nature. The regeneration survey over an area of 2 mt x 2 mt has been conducted simultaneously with the inventory of each sample point. The regeneration data have been analyzed and the status of regeneration is found adequate.

2.2.7. Climber Menace: - During the out going Plan period all annual working coupes had not been worked out due to ban on green felling. Climber cutting had not been done due to financial constrains. At present 7 % of existing trees are affected by climber. Climber is affecting the growth of trees as well as quality of timber. Some time trees are either uprooted or died 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 twice within the Plan period to avoid its menace.

2.2.8. 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 individuals of favoured species. Annual weeds die during the month of February. Dry weeds invite forest fire, which causes damage to seedling.

2.2.9. 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 and invites forest fire. Recruits are either suppressed by grasses or damaged by grazing.

2.3. Felling Series and Sections:

2.3.1. Felling Series: - This Working Circle constitutes with 09 numbers of felling series depending on distribution of area. The area allotted to different felling series is given on the table below.

Table No. 203

Area allotted to different felling series

Sl. No.	Felling Series	Range	Name of Block / Compt.	Notified area in ha
1	Khajuria	Deogarh	Khajuria RF- 1, 5 to 14 & 15 P, Kandarp-lambdura, Ludhar Deopani, Salohi lamura, Sargidihi, Chilantikhol & Kansar RF (P)	17278.102
2	Pradhanpat	Deogarh & Barkote	Pradhanpat RF – 1 to 29, Rambhadevi RF 16 to 26.	10169.522
3	Pravasuni	Deogarh	Pravasuni RF- 3, 4, 7, 8, 9, 10 to 25, 30, 37 (P), 38 to 53, Jhadeswar PRF, Hadamunda PRF (P)	11345.755
4	Reamal	Reamal	Kansar RF(P), Rambhadevi RF- 1 to 15, Gogua RF – 1 to 13, Hadamunda PRF(P), Kankarkhol PRF, Kundheigola PRF & Naikul PRF.	14195.076
5	Badtaila	Barkote	Badtaila RF – 1 to 48	7942.393

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6	Malyagiri	Pallahara & Khamar	Malyagiri RF 1 to 30	9263.006
7	Pauri	Barkote	Pauri RF, Mandasila RF 1 to 11, Panguli RF 1 to 8, Kulundikudar PRF, Tusula PRF	13764.459
8	Mankarchua	Pallahara	Old Pauri RF, Tamkia RF, Saida RF & Mankarchua RF	7456.225
9	Banor	Khamar	Chargoehhia RF, Kuladera RF, Kardapal PRF & Bankhol PRF	3179.357
			Total	94593.895
Sources - WPO, Keonjhar				

2.3.2. Reason for Constitution of Felling Series: - The number of felling series formed in the out going Plan has been reduced. In this revision 09 felling series have been formed for convenience of working, availability of labour, distribution of area etc.

2.4. Special Objectives of Management:

2.4.1. The special objectives of management of Selection Working Circle have been given in the table below.

Table No. 204	
Special Objectives of Management	
Sl.No.	Special objectives of Management
1	To encourage and obtain natural regeneration all over the area.
2	To improve the growth rate and vigor of the retained crop by creating temporary gap of the top canopy. — Cutpl 7 Prowood.
3	To improve the condition of forest cover on the hill terrain by tending operation. — SSD
4	To maintain the forest in different age groups for the interest of soil conservation and ecological stability. — SMC
5	To increase the value of the forest by encouraging the growth of principal species by adopting suitable silvicultural system.
6	To remove the dead, dry, hollow, up rooted, seriously diseased and over matured trees without creating permanent gaps in the crown to derive maximum sustained yield. — Cutpl
7	To protect the forest from theft by minimizing the demand of timber and firewood. — CPT, EFT Services (Mobile wall Tents, Binoculars, Chainsaw)

2.5. Analysis and Valuation of the Crop:

2.5.1. Stock Map: - The entire area covered by this Working Circle has been shown on the stock map. Sample points enumeration in the managed area have been done covering 5% of the area and keeping point as the center of the plot regeneration survey is done in plot size 2 t x 2 mt. Above 30 cm girth at breast height of all trees have been recorded for each plot. Stock map has been prepared by field Staff after analyzing the inventory data of sample points. The details of sample points are given in the table below.

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Table No. 205			
Analysis and Valuation of the Crop			
Sl. No.	No. of Forest Block	Status	No. of sample point
1	30	RF	822
2	41	PRF	325
3	01	PF	01
Total	72	x	1148

2.5.2. Range and Mean of Quality: - The range of the quality of sal varies from II to V, where as the mean quality is III. The crop height, girth and age have been considered for measure of relative productive capacity of this tract particularly for sal. The relationship of quality class of sal with its height, girth and age is given in the table below.

Table No. 206				
Quality class of sal in relation with its height, girth and age				
Species	Quality class	Crop height in meter	Girth in cm.	Age in year
Sal	I	39.39	172	120
	II	32.12	152	120
	III	25.15	129	120
	IV	18.18	104	120
	V	15.15	82	120

2.5.3. Age Class Distribution: - All age classes of trees of different species are present in this tract. But their number in different age classes differs from each other. In the inventory data it is found that as the age of trees increases the number of tree decreases. The reasons of decrease in the number of tree are illicit felling, uprooting and death.

2.5.4. Selection of Sample Units: - There are 1148 number of points have been taken for sample tree enumeration and rest is strip. A plot size of point enumeration is 40 mt x 25 mt has been constituted as sample unit.

2.5.5. Type of Enumeration: - Partial enumeration in separate sample units has been carried out to ascertain the growing stock in this tract. The exact girth, which is 30 cm or more at breast height, has been recorded for all species.

2.5.6. Status of Regeneration: - The regeneration survey is carried out in a plot of size 2 mt x 2 mt in the middle of each sample unit. The seedling having height 2.5 mt and above with 10 cm girth at breast height is considered as established. The seedling, which is not established but large and vigorous and so expected to become established early, is considered as woody. Its height varies from 1 mt to less than 2.5 mt but girth is not considered. All un-established seedling whose height varies from 50 cm to less than 1 mt is considered as whippy. The seedling whose height is les than 50 cm but more than one year is considered as sub-whippy. All current year seedlings are considered as recruit. The data collected in regeneration survey have been analyzed in Chapter II-A of Part-I. The status of regeneration in the area allotted to Selection Working Circle is found adequate. I have recorded regeneration status in three blocks, the figures of which are given in the table below.

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Table No. 207					
Regeneration status					
Name of Block	No. of seedling in different category in plot 2 mt x 2 mt				
	Establish	Woody shoot	Whippy	Sub-whippy	Recruit
Pradhanpat	1	2	3	4	7
Kansar	1	2	3	4	6
Pravasuni(P)	1	1	2	3	8
Rambhadevi(P)	1	1	2	5	5
Panguli	1	1	3	3	5
Mandasila	1	2	3	3	5
Paburi	2	1	3	4	6
Badtaila	1	1	3	4	5
Gogua	1	2	2	4	6
Malyagiri	1	2	3	4	10
Old Puri	1	1	4	7	8
Tamkia RF	1	1	3	6	10
Saida	1	1	3	3	6
Chargochhia	1	2	3	5	9
Mankarchua	1	1	3	4	7
Kuladera	1	1	3	4	8
Khajuria	1	1	3	4	7
Jhadeswar	1	1	4	3	7
Hadamunda	1	2	3	4	8
Kankarkhol	1	2	3	4	6
Kundheigola	1	1	3	4	6
Naikul	1	1	3	3	7
Kulundikudar	1	1	3	4	7
Tusula	1	2	3	4	6
Kardapal	1	2	3	5	8
Bankhol	1	2	3	4	6
Chilantikhol	1	1	3	4	7
Kandarpa-Lambdura	1	2	2	4	6
Ludhar-Deopani	1	2	3	4	7
Salohi-Laimura	1	1	3	4	8
Sargidihi	1	1	4	5	5

2.5.7. Comparison with Previous Data: - The number of trees per hector as per the enumeration data of the out going Plan has been compared with the present inventory. The comparison data is given separately.

2.5.8. Analysis: - During the 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. Divisional Forest Officer is advised to check the illicit felling of bija trees in all forest blocks.

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2.5.9. Special Feature: - There is not any significant change observed in the forest area managed during the out going Plan period. Firewood and small timber demand of the inhabitant of the locality are fulfilled from the forest, which are not managed in this revision. Forest fire is an important tragedy to the forest of this tract, due to which the soil fertility has reduced a lot and subsequently has a negative impact on the overall quality of the tree growth.

2.6. Silvicultural System:

2.6.1. System: - The silvicultural system prescribed is called 'Selection System' with emphasis on sustainable production and stability of the ecosystem. The trees, which have attained exploitable girth, can be selected for exploitation. The presence of bamboo as an under story in Pradhanpat, Rambhadevi, Gogua, Kansar, Pravasuni, Badataila, Mandasila, Panguli, Thianal, Pauri, Tusula, Mankarchua, Tamkia, Old Pauri, Danda, Birpal and Malyagiri is contraindicative of clear felling as this may encourage spread of bamboo at the cost of principal timber species.

2.6.2. Reasons: - Availability of tree of all age groups along with diffuse regeneration in hilly terrain can only be worked in this system. Shade demander species and suppressed trees shall be nursed up under the best possible condition of growth by selective opening of the canopy. The inaccessibility of most of the forest allotted to this Working Circle, which are in hilly terrain, the preponderance of low quality and often defective sal mixed intimately with a miscellaneous crop and the prevalence of annual fires makes the Selection System the only practical system of working these forest.

2.7. Rotation:

2.7.1. Rotation: - There is no experimental plot in the division to determine exactly the year at which the tree attains exploitable girth. The planned number of years between regeneration and maturity of a crop varies depending on its site quality. Rotation should be a multiplication of the felling cycle. In the case of a selection forest, the rotation will be the average age at which a tree is considered mature for felling. A felling cycle of 10 year has been fixed for all felling series in this Working Circle. Basing on felling cycle, the Rotation of all principal species has been given in the table below.

Table No. 208

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
7	Mundi	60	110
8	Kendu	120	220
9	Bandhan	100	150
10	Kasi	80	120
11	Tentala	120	180

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2.8. Exploitable Diameters:

2.8.1. The exploitable girth of different species have been fixed basing on the size at which the tree develops unsoundness. The other factors such as site quality, production capacity, growth, yield, market demand etc have also been taken into account. The exploitable girth of the species in different forest blocks is given table below.

Table No. 209		
Exploitable girth at breast height		
Name of the Blocks	Name of the trees	Exploitable g.b.h in cm
All Block	1. Sal (for Quality I & II)	150
	2. Sal ((for Quality III & IV) & all other species	120

2.9. Reducing Factors and Reduced Area:

2.9.1. Reducing Factors: - Reduce factor is used to determine the quality of the trees. But in this revision the quality of sal is assessed based on its girth. So reducing factor has not been used in this revision.

2.9.2. 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. So reduced area have not been used in this revision to determine the density of the crop.

2.10. Felling Cycle:

2.10.1. 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 Para 5 of the Working Plan Code and for complete execution of work in each felling series, a felling cycle of 10 year has been fixed.

2.10.2. Choice of 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.

Table No. 210			
Classification of trees			
Principal species	Secondary species	Guest species	Inferior species
Sal, Bija, Ashan, Sisoo, Bandhan, Haldu, Gambhari, and Kasi	Dhaura, Kendu, Jamu, Senha, Semuli, Khair, Moi, Tentera, Siris, bamboo and Mundi	Mango, Bel, Kusum, Karanja, Harida, Bahada, Tamarind, Mahula, Kochila, Sunari, Genduli and Nimba	All other species

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2.11. Calculation of the Yield:

2.11.1. The area included in this revised Plan have irregular nature of forest. The distribution of girth classes is abnormal. The presence of unsound exploitable tree is more than 40 %. The yield is calculated on trees basis. Maximum attempt have been made to allot one or two compartments into one annual coupe. This will facilitate for demarcation of annual coupe.

2.11.2. Smythies' Safeguarding Formula: - The yield will be regulated by area with a percentage check on the removal of exploitable trees as calculated by Smythies' safeguarding formula. This formula is also known as U.P safeguarding formula. Smythies evolved it for the sal forest of Uttar Pradesh for sustainable yield. The formula is based on the following assumptions, which holds true for the forest area allotted to this Working Circle.

2.11.3. Assumptions: The exploitable trees already exist and are being recruited everywhere. Exploitable trees will be selected for felling regularly throughout the forest in consecutive coupes in each felling series over a felling cycle of 10 years. The basic object of management is to ensure sustained yield at every felling cycle. The middle aged and younger diameter classes are well represented and the present rate of recruitment into the two highest diameter classes I and II is not likely to decrease in the near future. Sustained yield of selection trees is adequately safeguarded in an annual working area if the number of felled trees is limited to the number that will pass up from below by the time felling come round again.

2.11.4. According to Smythies the number of approach class-II trees per hectare that pass into class-I with in the felling cycle is determined by his formula. The annual yield is then expressed as a percentage of the selection trees present in the coupe at the time of marking.

2.11.5. Formula: $Y = (X / (I + X/2)\ 100 + A$, (where, Y = Annual yield expressed as percentage, X = The number of class-II trees (approach class) that survive and enter into class-I trees (exploitable class) during the felling cycle, I = The number of selection trees as enumerated, A = An arbitrary fraction for rounding of the value of Y).

2.11.6. The value of X can be calculated by the formula given below.

X = (II – Z % of II) F/T. (Where, F = The felling cycle, T = The average period that the class-II trees will take to enter into class-I, II = The number of class-II trees enumerated in felling series, Z = The mortality percentage (% of class-II trees disappear in T years)

2.11.7. But there is no any data available for ' T '. So out going plan is taken into consideration to determine the value of 'T'. Incase of sal it appears that 105 cm girth at breast height takes 36 years to attend 120 cm girth. Basing on this data ' T ' has been fixed to 36 years. From yield and stand table for sal of quality IV, the value of Z is determined and fixed to 35, corresponding to approach girth 90 cm and exploitable girth 120 cm. Now with the help of above data, the value of X is calculated as follows.

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$$X = (II - Z\% \text{ of } II)\ F / T$$
$$= II\ (1 - 35/100)\ 10/36$$
$$= II\ (0.65)\ 5/18$$
$$= 0.18\ II$$

2.11.8. Now with the help of X, the annual yield Y is further modified as follows.

$$Y = 100\ X / (1 + X/2) + A.$$
$$= 100\ (0.18\ II) / (1 + 0.18\ II / 2) + A.$$
$$= 18\ II / (1 + 0.09\ II) + A.$$

2.12. Sequence of Felling:

2.12.1. Coupe: - Basing on the period of the Plan, each felling series has been divided into 10 coupes. All coupes in each felling series will be shown on the topo sheet 1~ 50000 scale. The working year of each coupe in different felling series is given in the table below.

Table No. 211

Working year of each coupe in Khajuria felling series

Range	Block	Compa't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Deogarh	Khajuria RF	1, 5, 6, 7 & 9	1837.012	1763	I	2015-16
Deogarh	Khajuria RF	8 & 10 to 12	1792.408	1720	II	2016-17
Deogarh	Khajuria RF Ludhar – Deopani Salohi Laimura	13,14 & 15(P) 1 1	1780.862	605 999 254	III	2017-18
Deogarh	Kansar RF (P)	1	1681.000	1815	IV	2018-19
Deogarh	Kansar RF (P)	1	1681.000	1815	V	2019-20
Deogarh	Kansar RF (P)	1	1681.000	1815	VI	2020-21
Deogarh	Kansar RF (P)	1	1681.000	1815	VII	2021-22
Deogarh	Kansar RF (P)-	1	1683.66	1818	VIII	2022-23
Deogarh	Kandarp lambudura Sargidih PRF	1 1	1759.55	1116 66	IX	2023-24
Deogarh	Chilantikhol PRF	1	1700.61	1615	X	2024-25
		Total	17278.102	17216		

Table No. 212

Working year of each coupe in Pradhanpat felling series

Range	Block	Compa't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Barkote	Pradhanpat	26 to 29	930.680	949	I	2015-16
Barkote	-do-	16 & 22 to 25	1040.545	1061	II	2016-17
Barkote	-do-	17 to 21	1142.612	1165	III	2017-18
Deogarh	-do-	12, 13 & 15	1002.540	1022	IV	2018-19
Deogarh	-do-	8 & 9	1102.717	1124	V	2019-20
Barkote	-do-	4, 10 & 11	807.737	823	VI	2020-21
Deogarh	-do-	1, 2 & 7	918.840	937	VII	2021-22
Deogarh	-do-	3, 5 & 6	991.440	1011	VIII	2022-23

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Deogarh	Rambhadevi	16 to 22	1223.08	1198	IX	2023-24
Deogarh	Rambhadevi Pradhanpat	23 to 26 14	1009.331	524 483	X	2024-25
		Total	10169.522	10297		

Table No. 213

Working year of each coupe in Pravasuni felling series

Range	Block	Compa't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Deogarh	Pravasuni	40 to 45, & 47	1090.999	970	I	2015-16
Deogarh	Pravasuni	48 to 53 & 46	1475.814	1313	II	2016-17
Deogarh	Pravasuni	25, 30, 37(P), 38 & 39	1109.866	987	III	2017-18
Deogarh	Pravasuni	3, 4, 7 & 8	1131.825	1007	IV	2018-19
Deogarh	Pravasuni	9, 10(P), 11(P), 12 & 13	1224.712	1089	V	2019-20
Deogarh	Pravasuni	17, 23 & 24	1221.095	1086	VI	2020-21
Deogarh	Pravasuni	18, 19, 20, 21 & 22	975.373	868	VII	2021-22
Deogarh	Pravasuni	14,15 &16	770.715	685	VIII	2022-23
Deogarh	Jhadeswar(P) Hadamunda(P)	1 1	1186.857	856 18	IX	2023-24
Deogarh	Jhadeswar(P)	1	1158.499	857	X	2024-25
		Total	11345.755	9736		

Table No. 214

Working year of each coupe in Reamal felling series

Range	Block	Compa't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Reamal	Naikul	1	1893.39	2196	I	2015-16
Reamal	Gogua(P)	7 to 13	1339.962	937	II	2016-17
Reamal	Gogua(P)	1 to 6	1355.563	948	III	2017-18
Reamal	Rambhadevi (P)	1 to 15	1408.177	1380	IV	2018-19
Reamal	Kansar RF (P) Hadamunda (P)	1 1	1237.053	1109 131	V	2019-20
Reamal	Kankarkhol(P)	1	1500.000	975	VI	2020-21
Reamal	Kankarkhol (P)	1	1524.44	990	VII	2021-22
Reamal	Kankarkhol (P)	1	1500.000	975	VIII	2022-23
Reamal	Kundheigola(P)	1	1218.491	1389	IX	2023-24
Reamal	Kundheigola(P)	1	1218.000	1388	X	2024-25
		Total	14195.076	12418		

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Table No. 215						
Working year of each coupe in Badatailа felling series						
Range	Block	Compa't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Barkote	Badtaila RF	1 to 7	791.778	807	I	2015-16
Barkote	Badtaila RF	8 to 11	841.458	858	II	2016-17
Barkote	Badtaila RF	12 to 15	743.586	758	III	2017-18
Barkote	Badtaila RF	16 to 21	915.72	934	IV	2018-19
Barkote	Badtaila RF	22 to 25	772.376	787	V	2019-20
Barkote	Badtaila RF	30 to 33	955.242	974	VI	2020-21
Barkote	Badtaila RF	26 to 29	779.212	794	VII	2021-22
Barkote	Badtaila RF	34 to 38	801.561	817	VIII	2022-23
Barkote	Badtaila RF	39 to 43	652.572	665	IX	2023-24
Barkote	Badtaila RF	44 to 48	688.888	702	X	2024-25
		Total	7942.393	8096		

Table No. 216						
Working year of each coupe in Malyagiri felling series						
Range	Block	Compa't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Khamar	Malyagiri	1, 29 & 30	775.555	558	I	2015-16
Khamar	Malyagiri	26, 27 & 28	1164.3	838	II	2016-17
Pallahara	Malyagiri	2 to 4	890.146	640	III	2017-18
Khamar	Malyagiri	23 to 25	1048.05	754	IV	2018-19
Khamar	Malyagiri	16 to 18	855.375	615	V	2019-20
Khamar	Malyagiri	19 to 22	844.26	607	VI	2020-21
Pallahara	Malyagiri	5 & 6	966	695	VII	2021-22
Pallahara	Malyagiri	7 to 10	978.425	704	VIII	2022-23
Pallahara	Malyagiri	11 to 13	966.145	695	IX	2023-24
Pallahara	Malyagiri	14 & 15	774.75	557	X	2024-25
		Total	9263.006	6663		

Table No. 217						
Working year of each coupe in Pauri felling series						
Range	Block	Comp a't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Barkote	Panguli	1 to 4	1054.621	875	I	2015-16
Barkote	Panguli	5 to 8	744.54	617	II	2016-17
Barkote	Mandasila Kulundikudar	1 to 5 1	1379.701	1043 722	III	2017-18
Barkote	Mandasila	6 to 11	1586.832	1824	IV	2018-19
Barkote	Tusula	1	1660.45	1677	V	2019-20
Barkote	Pauri	1	1467.00	1158	VI	2020-21
Barkote	Pauri	1	1467.00	1158	VII	2021-22
Barkote	Pauri	1	1467.00	1158	VIII	2022-23
Barkote	Pauri	1	1467.00	1158	IX	2023-24
Barkote	Pauri	1	1470.315	1161	X	2024-25
		Total	13764.459	12551		

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Table No. 218

Working year of each coupe in Mankarchua felling series

Range	Block	Compa't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Pallahara	Mankarchua RF Tamkia RF	1 to 4 1	961.765	227 298	I	2015-16
Pallahara	Old Pauri Saida	1 1	720.000	472 77	II	2016-17
Pallahara	Old Pauri	1	720.000	561	III	2017-18
Pallahara	Old Pauri	1	720.000	561	IV	2018-19
Pallahara	Old Pauri	1	720.000	561	V	2019-20
Pallahara	Old Pauri	1	720.000	561	VI	2020-21
Pallahara	Old Pauri	1	720.000	561	VII	2021-22
Pallahara	Old Pauri	1	720.000	561	VIII	2022-23
Pallahara	Old Pauri	1	720.000	561	IX	2023-24
Pallahara	Old Pauri	1	734.46	572	X	2024-25
		Total	7456.225	5573		

Table No. 219

Working year of each coupe in Banor felling series

Range	Block	Compa't No.	Notified area in ha.	Trees to be Marked	Coupe No.	Year of working
Khamar	Kardapal PRF	1	269.000	169	I	2015-16
Khamar	Kardapal PRF Charigochhia RF	1 1	269.59	156 20	II	2016-17
Khamar	Kuladera	5 & 6	351.975	344	III	2017-18
Khamar	Kuladera	2	289.455	283	IV	2018-19
Khamar	Kuladera	3	243.94	239	V	2019-20
Khamar	Kuladera	4	251.325	246	VI	2020-21
Khamar	Kuladera	1	351.42	344	VII	2021-22
Khamar	Bankhol	1	384.00	311	VIII	2022-23
Khamar	Bankhol	1	384.00	311	IX	2023-24
Khamar	Bankhol	1	384.452	311	X	2024-25
		Total	3179.357	2734		

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Table No. 220

Year wise trees to be harvested in different felling series

ear	Name of felling series and trees to be harvested										Notified area in ha
	Khajuria	Pradhanpat	Pravasini	Reamal	Badatanila	Malyagiri	Pauri	Mankarchua	Banar	Total trees	
15-	1837.812	930.680	1090.999	1495.390	291.778	775.555	1054.621	961.765	209.000	8812	9604.800
16-	1792.408	1040.545	1475.814	1359.962	841.458	1164.300	744.549	720.000	209.590	8003	9248.613
17-	1780.862	1142.612	1109.866	1355.563	743.536	890.146	1379.701	720.000	353.975	9026	9434.311
18-	1681.000	1002.540	1131.823	1408.177	955.720	1048.050	1588.832	720.000	289.455	9580	9783.299
19-	1681.000	1102.717	1224.712	1237.053	772.376	855.373	1660.430	720.000	242.940	9847	9497.023
20-	1681.000	807.737	1221.095	1300.000	955.242	844.200	1467.000	720.000	251.325	8245	9447.859
21-	1681.000	918.840	975.373	1534.440	729.212	966.000	1467.000	720.000	351.430	8162	9383.285
22-	1683.660	991.440	770.715	1500.000	801.561	978.423	1467.000	720.000	384.000	8040	9295.803
23-	1359.559	1223.080	1188.857	1218.491	652.372	966.145	1467.000	720.000	384.000	8033	9377.695
24-	1700.610	1009.331	1188.499	1218.000	688.888	734.350	1470.315	734.400	384.432	8170	9139.305
tal	17278.102	10169.522	11343.755	14195.036	7942.393	9263.998	13764.459	7930.225	3179.357	85284	94393.891

2.13. Method of Executing the Felling:

2.13.1. Demarcation: - All annual coupes will be demarcated and inspected during the end of preceding year in which the coupe is due for working. As far as possible coupe line has been made coinciding with the block or compartment boundary and natural features. 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 the felling series, coupe number, its area, year of working, compartment number etc.

2.13.2. Marking Rules: - Marking will be done soon after receipt of the inspection report for completion of demarcation from Range Officer or Assistant Conservator of Forest. The marking in the annual coupe is to be done under the following principle.

2.13.3. All trees having exploitable girth, which are silviculturally available in the coupe 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 closed to the ground as possible preferable on the root. The blazes shall be opposite to each other and of size 20 cm x 15 cm. On both the blazes, Departmental hammer shall be marked along with serial number of the trees by coal tar.

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2.13.4. The retained trees should be well grown, sound and vigorous. It will be painted with single white ring at the breast height. The list of such trees shall be maintained in the compartment history and coupe register.

2.13.5. Higher 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.

Table No. 221		
% 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 Forest	01 (only in one coupe)

2.13.6. The marking officer shall assess the illicit felling inside the annual coupe prior to marking. The quantum of marking of trees shall be left by the extent of the trees illicitly felled during the period between last felling of the coupe and the time of marking. The net trees to be marked for felling shall be the difference between permissible and illicitly felled trees in the coupe.

2.13.7. All uprooted and dead trees shall be marked for felling. A tree whose top one third is already dead will be treated as a dying. A dying tree in congested patch can be marked for felling.

2.13.8. Trees of any girth class shall not be marked for felling in absence of one established crop with in 5.00 mt radius around it.

2.13.9. All trees standing by the side of any road and bank of nala shall not be marked for felling. Marking shall also not be done within 50.00 meters radius around the key habitat of Wild animals such as den, saltlick, wallows, game tank and water holes.

2.13.10. On the basis of Selection Thinning, a definite unsound tree in the approach class will be marked for felling by the Assistant Conservator of Forest.

2.13.11. All edible fruit bearing and guest trees shall not be marked for felling.

2.13.12. 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.

2.13.13. Execution of Felling, Passing and Extraction: - The execution of all coupes 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

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one end and proceed in the systematic way as per the tract followed in marking. The agent will decide the direction of felling. At the time of felling, retaining crops and established seedlings should not be damaged. The working agent will take all precautionary measure against forest fire in and around the annual working coupes. All converted timber and firewood in the coupe shall be lifted within the time limit. Felling, conversion, passing and lifting will be carried on 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 Forest may extend the time to minimum days.

2.14. Subsidiary Silvicultural Operation:

2.14.1. Cleaning: - Recruit whippy and woody seedling need special care for its establishment in the 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.

2.14.2. Items of Operation in Cleaning: - (i) Felling and extraction of the marked trees if left. (ii) Extraction of balance felled materials if any. (iii) Cutting of branches and shoots of the trees damaged during main felling, if it hampers the growth of any promising shoots. (iv) Cutting of climbers.

2.14.3. Thinning: Thinning is prescribed only to regulate the distribution of the growing space for the purpose of improving the growth and form of trees that are left in the annual worked out area. In this prescription permanent gaps are not created because regeneration is not the object of thinning. The area included in this Working Circle is irregular natural forest. Only Selection Thinning is prescribed with a thinning Cycle of 05 years.

2.14.4. Items of Operation in Thinning: - Selection thinning will be carried out in all canopy classes, removing the trees of the following characteristics. (i) Inferior trees which restrict the development of the neighboring principal species from all side. (iii) All uprooted and illicit felled trees.

2.15. Artificial Regeneration:

2.15.1. 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 and also some areas are covered with plantation. Those areas are included in the Plantation (overlapping) Working Circle. It is advised to adopt artificial regeneration in the permanent gaps of each coupe or part of the coupe, which is included in the Plantation (overlapping) Working Circle, just after annual felling.

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2.15.2. Plantation: - All the gaps in the coupe of each felling series are to be surveyed and reflected in the map at the time of marking. Mounds of size 1 ft x 1 ft 6 inches will be formed in the gap with a spacing of 5 mt x 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.

2.16. Other Regulation:

2.16.1. Grazing: - The coupe shall be closed to grazing for a period of 05 years after the main 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 coupe about such restriction. The concerned Range Officer will issue the notice with a direction not to enter the herd into the working coupe. The remaining area is open to grazing subject to the provision of the Orissa Forest (Grazing of Cattle) Rules 1980.

2.16.2. 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 in not prescribed.

2.16.3. Fire Protection: - All working coupes shall be rigidly protected from forest fire for a minimum period of 05 years after the main felling. As per previous record all the forest area were affected by fire in every year. Protection of fire in the working area can be practically possible by keeping watch and ward it from the month of February to June in every year. Provision of watcher has been prescribed and the annual allotment required for fire protection is given in the Financial Forecast Chapter.

2.16.4. 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

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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.

2.16.5. Soil and Water Conservation Measure: - The area allotted to this Working Circle varies from gently slope to precipitous. The local people are collecting stones for construction of their houses. Some time contractors are also collecting stones for construction of roads, building and other contracts works. Construction of check dams at an interval of 02 kmt 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. The expenditure to be made for construction of check dams during the Plan period will be given in a separate Chapter.

2.16.6. Restriction of Felling Along River, Roads and Hill Slopes: - Trees of any girth classes standing along the road side (other than forest roads) or rivers and nalas bank at a perpendicular distance of 50.00 mt shall not be felled. Trees standing in hill slopes will be marked for felling provided it satisfy the condition of marking rules as prescribed.

2.16.7. Works of Improvement: - The area constituted in this working circle constitute 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 are 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 by the Divisional Forest Officer.

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REHABILITATION WORKING CIRCLE

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CHAPTER - III

REHABILITATION WORKING CIRCLE

3.1. General Constitution of Working Circle:

3.1.1. The forest blocks that are in various stages of degradation are allotted to this Working Circle. An area over 9184.645 ha as per notification, has been allotted to Rehabilitation Working Circle. On an average one exploitable tree exists per 1.5 hectare but silviculturally the trees are not available for felling. This area is under continuous pressure for removal of 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.

3.1.2. Block and Compartment: - The Range wise distribution of forest blocks, compartment and its area allotted to this Working Circle is given in the table below.

Table No. 222

Range wise forest blocks and compartments allotted to Rehabilitation Working Circle

Range	Block	Status	Compartments No.	Notified area in ha
Pallahara	Ranjo	PRF	1	116.607
	Atonaka	PRF	1	161.8700
	Jolonda-Jankpani	PRF	1	291.4380
	Sarbeda	PRF	1	157.02
	Timi	PRF	1	422.6580
	Jharkhaman	PRF	1	65.9340
	Kakharua	PRF	1	52.536
	Bhaluhuli	PRF	1	110.58
	Nizgarh A	RF	1	199.198
	Nizgarh B	RF	1	48.000
	New pauri	RF	1	1266.0000
			Total	2891.841
Khamar	Sanda	PRF	1	391.067
	Rengalmunda	RF	1	86.6700
	Kunjam	RF	1	515.083
	Jambua	RF	1	90.6000
	Kalamjuangsahi	PRF	1	150.6600
	Bhulaka	PRF	1	233.1180
	Badasada	PRF	1	151.9920
	Nuagaon	PRF	1	128.6840
	Injidi	PRF	1	73.7100
	Priyambadapur	PRF	1	50.1390
	Rangiapal	PRF	1	380.346
			Total	2252.069

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Barkote	Kansar B	RF	1	77.3250
	Thianal	RF	1	651.87
	Banbira	PRF	1	996.73
	Talabahali	PRF	1	63.9900
			Total	1789.915
Deogarh	Rajamunda	PRF	1	242.6420
	Kalkath	PRF	1	186.3430
	Tirib	PRF	1	75.6980
	Bangalimunda	PRF	1	12.7800
	Telikusum	PRF	1	319.0500
			Total	836.513
Reamal	Tarang	PRF	1	911.4770
	Tamkia PRF	PRF	1	502.8300
			Total	1414.307
			Grand Total	9184.645

3.2. General Character of Vegetation:

3.2.1. Composition: - It consists mostly of hardy species. The soil is highly eroded and susceptible to sheet and gully erosion. In some patches the topsoil has been washed away and transformed into hard morrum soil and rocky surface. The area is dominated by miscellaneous vegetation like Rohini, Karla, Aoinla, Jamu, Kurei, Dhaura, Dhatuki, Kanteikoli etc. except valley and plain areas where sal predominates. The crop standing over this area conforms to Northern Dry Deciduous Forest and Dry Peninsular Sal Forest. The detailed description of these forest types and their regeneration has already been dealt in chapter –II A of Part-I

3.2.2. Distribution: - The area allotted to this Working Circle is distributed in all Ranges, which comprises 7.46 % of the total managed area of the Working Plan. Sal occurs in pure form in plain and valley area, where as it is sporadically distributed in mixed forest in the hill portion, dominated by other miscellaneous species.

3.2.3. Density: - The crown density of the crops standing over the area varies from 10 % to 25 %. The density varies from >10 % to 25 % in plain and valley area, where as it varies from 5 % to 10 % in hilly area. The variation of density is due to various climatic and edaphic factors as well as the fertility of the area. The distribution of area is as under.

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Table No. 223			
Canopy density wise area allotted to RWC			
Sl. No.	Canopy density classes	Notified area of the division in ha.	Notified area of RWC in ha.
1	> 40 %	0	x
2	> 25 to 40%	0	x
3	>10 to 25%	3090.746	3090.746
4	10% and below	6093.899	6093.899
	Total	9184.645	9184.645

3.2.4. Growing Stock: - The crop standing over the area is open and consists mostly of inferior hardy species. The actual established trees in each forest block included in this Working Circle have been estimated in this revision. This has been done based on inventory data. The estimated number of trees in different girth classes is given in the table below.

Table No. 224									
Growing stock in RWC area									
Sl. No	Block	Seedling	Pole	Girth classes in cm					
				30<60	60<90	90<120	120<135	135<150	150 & above
1	Thanal	30632625	130374	100475	70251	35942	22055	11436	8165
2	Nizgarh A	6281955	40836	19544	2792	1396	0	0	0
3	Nizgarh B	3300000	10080	11160	3720	930	0	0	0
4	New pauri	52961000	272190	138416	63300	51484	27008	10972	844
5	Kamar B	4541833	17012	18245	358	0	716	0	0
6	Rengalmunda	3936262	19934	18490	9823	7800	4045	867	0
7	Kunjam	42089692	123620	858993	399975	81900	0	0	0
8	Jambua	11220300	22650	131881	88608	28649	8243	3091	0
9	Rajamunda	11441925	54594	44103	24964	19139	12482	4161	0
10	Kalkath	8587552	43791	77079	48593	43566	28486	8378	0
11	Tnib	3106552	18546	18854	13712	7713	4713	0	0
12	Tarang	37474576	182295	328349	111531	57996	22305	10707	0
13	Banbira	41358600	204330	307022	174377	85770	31298	19375	8942
14	Talabahali	1839712	13438	15038	9279	0	320	0	0
15	Kakharua	10616670	11295	6661	3331	8327	5829	1665	4996
16	Kalanjuangsahi	6026400	33145	15819	14313	3767	2260	0	0
17	Ranjo	8867880	26820	21431	7390	0	0	739	3695
18	Atonaka	117084436	38849	5665	1619	4856	6475	0	5565
19	Solonda-Jankpani	10928925	72860	32058	23315	23315	3643	4372	0
20	Sarbeda	12465900	35330	5540	11081	9419	8311	5540	4432
21	Timi	17328978	99325	17752	3381	3381	2536	2536	845
22	Jharkhaman	2472525	16154	23407	17473	17802	10879	4286	989
23	Priyambadapur	2005560	10028	8189	3677	2841	334	0	0
24	Rangiapal	14875042	77971	77966	55397	12310	5129	23595	7181
25	Bhaluhuli	6166125	23222	20436	10571	7047	6342	2819	7047
26	Bhulaka	6216480	50120	39630	31859	40407	10879	0	0
27	Sanda	6133421	86035	182887	64680	13382	20073	2230	0
28	Badasada	7551360	34958	15759	5910	7223	1313	0	0
29	Nuagaon	4985505	30884	23807	8364	1930	3861	1930	643
30	Injidi	1934887	18428	9961	12899	5160	0	0	0
31	Tamkia PRF	4609275	113137	121517	60340	33522	20951	12571	13409
32	Bangaimunda	13694083	3003	39837	11951	5976	996	3984	0
33	Telikusum	16873312	78167	83855	37837	23520	8181	3068	1023
	Total	529610348	2013421	2839816	1406671	596670	279664	138322	67880

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3.2.5. Status of Regeneration: - The area included in Rehabilitation Working Circle does not have sufficient stock. The renewal of forest crop purely depends on nature. The regeneration survey over an area of 2 mt x 2 mt has been conducted simultaneously with the inventory of each sample point. The regeneration data have been analyzed and the status of regeneration is found to be moderate to deficient in majority of blocks. However, the young shoots are affected due to frequent fires.

3.2.6. Climber Menace: - During the out going Plan period all annual rehabilitation area have not been worked out due to paucity of funds. At present approx. 15 % of existing trees are affected by climber. Climber is affecting the growth of trees and quality of timber. Some time trees are either uprooted or died 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 twice within the Plan period to avoid its menace.

3.2.7. Weed Growth: - Unwanted plants are common in the forest floor. During rainy season vast number of weeds grow in the forest floor of this tract. Weeds tend to interfere with the growth of individuals of favoured species. Annual weeds die during the month of February. Dry weeds invite forest fire, which causes damage to seedling.

3.2.8. 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.

3.3. Rehabilitation Series and Sections:

3.3.1. Rehabilitation Series: - This Working Circle constitutes 05 rehabilitation series depending on distribution of area. The area allotted to different rehabilitation series is given in the table below.

Table No. 225

Rehabilitation Series

Sl. No.	Name of R.S	Name of Range	Name of Block – Compt.	Notified Area in ha
1	Pallahara	Pallahara	Ranjo PRF - 1, Atonaka PRF - 1, Jolanda-Jankpani PRF - 1, Sarbeda PRF -1, Timi PRF - 1, Jharkhaman PRF - 1, Kakharua PRF - 1, Bhaluhuli PRF -1, Nizgarh A RF-1, Nizgarh B RF - 1, New Pauri RF -1	2891.841
2	Khamar	Khamar	Sanda PRF - 1, Rengalmunda PRF - 1, Kunjam RF -1, Jambua RF - 1, Kalamjuangsahi PRF - 1, Bhulaka PRF - 1, Badasada PRF - 1, Nuagaon PRF - 1, Injidi PRF - 1, Priyambadapur PRF -1, Rangiapal	2252.069

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			PRF - 1.	
3	Barkote	Barkote	Kansar B RF - 1, Thianal RF - 1, Bambira PRF - 1, Talabahali PRF - 1	1789.915
4	Deogarh	Deogarh	Rajamunda PRF - 1, Kalkath PRF - 1, Tirih PRF - 1, Bangalimunda PRF - 1, Telikusum PRF - 1	836.513
5	Reamal	Reamal	Tarang PRF - 1, Tamkia PRF - 1	1414.307
			Total	9184.645

3.3.2. Reason for Constitution of Rehabilitation Series: - The number of rehabilitation series formed in the out going Plan have been reduced from 29 to 05 in this revision for convenience of working, availability of labour, distribution of area etc.

3.4. Special Objectives of Management:

3.4.1. The special objectives of management of Rehabilitation Working Circle have been given in the table below.

Table No. 226

Objectives of management of RWC area

Sl No.	Special objectives of management
1	To regenerate the degraded forest blocks by appropriate silvicultural operation and protection measure for the principal species to achieve quick apical growth with active participation of the people. — ANR
2	To restock the barren area by artificial regeneration. — AR
3	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. — SMC
4	To protect the area and minimize its further degradation. — fencing.
5	To supply the firewood, poles and timber in a systematic manner to the local peoples and there by discouraging illicit felling. — VCS Agmt
6	To remove the miscellaneous thorny bushes to favour the growth of principal and secondary species. — Weed Eradication
7	To encourage natural regeneration through fire protection and closure from grazing by involving local communities. — CFT, Fire line
8	To create favourable condition for the habitat and multiplication of the Wild Life. — Water body, Salt lick, Grass land

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3.5. Analysis and Valuation of the Crop:

3.5.1. Stock Map: - The entire area covered under Rehabilitation Working Circle have been marked on the stock map. Sample point enumeration in the managed area has been done covering an area of 0.1 ha, keeping point as the center of the plot. Longitude and latitude of points have been recorded. Above 30 cm girth at breast height of all trees along with it's clear bole and top height have been recorded for each plot. Stock map have been prepared by the field staff after analyzing the inventory data of sample points.

3.5.2. Range and Mean of Quality: - The range of the quality of sal varies from III to V, where as the mean quality is IV. The crop height, girth and age have been considered for measure of relative productive capacity of this tract particularly for sal. The relationship of quality class of Sal with its height, girth and age is given in the table below.

Table No. 227

Quality class of Sal in RWC area

Name of tree	Quality class	Crop height in meter	Girth in cm.	Age in year
Sal	III	25.15	129	120
	IV	18.18	104	120
	V	15.15	82	120

3.5.3. Age Class Distribution: - All age classed trees of different species are present in this tract. But their number in different age classes differ from each other. In the inventory data it is found that as the age of trees increases the number of tree decreases. The reasons of decrease in the number of tree are illicit felling, uprooting and death.

3.5.4. Status of Regeneration: - The regeneration survey is carried out in a plot of size 2 mt x 2 mt in the middle of each sample unit. The seedling having height 2.5 mt and above with 10 cm girth at breast height is considered as established. The seedling, which is not established but large and vigorous and so expected to become established early is considered as woody shoot. The height of woody shoot varies from 1.00 mt to less than 2.5 mt and its girth is below 10 cm. All un-established seedling whose height varies from 50 cm to less than 1.00 mt is considered as whippy. The seedling whose height is less than 50 cm but not first year seedling is considered

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as sub-whippy. All current year seedlings are considered as recruit. The data collected in regeneration survey have been analyzed in Chapter II-A of Part-I. The status of regeneration in the area allotted to Rehabilitation Working Circle is moderate to deficient. I have recorded regeneration status in three blocks; the figures are given in the table below.

Table No. 228

Regeneration status

Name of Block	No. of seedling in different category in plot 2 mt x 2 mt				
	Establish	Woody shoot	Whippy	Sub-whippy	Recruit
Thianal	1	1	4	4	5
Nizgarh A	1	1	1	2	3
Nizgarh B	1	2	1	4	7
New pauri	1	1	3	5	7
Kansar B	1	1	4	5	9
Rengalmunda	1	1	3	5	9
Kunjam	1	1	4	4	7
Jambua	1	1	3	4	9
Rajamunda	1	1	3	5	8
Kalkath	1	1	3	3	5
Tirib	1	2	3	4	5
Tarang	1	2	3	4	6
Banbira	1	2	3	3	5
Talabehali	2	2	2	3	5
Kakharua	0	1	3	7	15
Kalamjuangsahi	1	1	1	5	7
Ranja	1	1	3	5	6
Atonaka	0	1	3	6	12
Jolonda-Jankpani	1	1	1	3	9
Sarbeda	1	2	2	3	11
Timi	1	1	4	5	6
Jharkhaman	1	2	3	4	7
Priyambadapur	1	1	2	5	6
Rangiapal	1	2	3	4	6
Bhaluhuli	1	2	3	7	8
Bhulaka	1	2	2	3	2
Sanda	2	1	2	4	3
Badasada	1	2	3	3	6
Nuagaon	1	1	4	5	6
Injidi	1	1	2	2	4
Tamkia PRF	1	1	3	7	10
Bangalimunda	1	1	4	3	10
Telikusum	1	2	3	4	7

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3.5.5. Special Feature: - There is not any significant change observed in the forest area managed during the out going Plan period. Firewood and small timber demand of the inhabitant of the locality are fulfilled from the forest, which are not managed in this revision. Forest fire is an important tragedy to the forest of this tract. Soil fertility reduces due to forest fire and subsequently has a negative impact on the overall quality of the tree growth.

3.6. Silvicultural System:

3.6.1. No conventional silvicultural system is prescribed for Rehabilitation Working Circle. There will be no exploitation except removal of dead and uprooted trees. The area allotted to this Working Circle mostly contains degraded forest with extensive eroded patches. The main object of management is to protect the existing growth and restock the blank patches through artificial regeneration. The operation to be carried out involves protection, cleaning, tending, reforestation and suitable soil and moisture conservation measure that will be silviculturally compatible to the site condition.

3.7. Rehabilitation Cycle:

3.7.1. Rehabilitation Cycle: - It has been fixed based on the period of the Working Plan or the number of coupes in each rehabilitation series. As per Para 05 of the Working Plan Code and for complete execution of work in each rehabilitation series, a rehabilitation cycle of 10 year has been fixed.

3.7.2. Choice of 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.

Table No. 229

Choice of species

Principal species	Secondary species	Guest species	Inferior species
Sal, Bija, Ashan, Sisoo, Bandhan, Haldu, Gambhari, and Kasi	Dhaura, Kendu, Jamu, Senha, Semuli, Khair, Moi, Tentera, Siris, bamboo and Mundi	Mango, Bel, Kusum, Karanja, Harida, Bahada, Tamarind, Mahula, Kochila, Sunari, Genduli and Nimba	All other species

3.8. Calculation of the Yield:

3.8.1. Yield is not prescribed for this Working Circle. Only uprooted, illicitly felled and suitable dead trees will be extracted.

3.9. Table of Rehabilitation:

3.9.1. Coupe: - Each rehabilitation series has been divided into 10 numbers of coupes. All coupes in each rehabilitation series have been shown on the topo sheet

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1– 50000 scale. The working year of each coupe in different rehabilitation series is given in the table below.

Table No. 230

Annual rehabilitation coupes of Pallahara Rehabilitation series

Name of Range	Name of Block	Comp No.	Notified area in ha.	Coupe No.	Year of working
Pallahara	Ranjo PRF Atonaka PRF	1 1	278.477	I	2015-16
Pallahara	Jolanda Jankpani PRF	1	291.438	II	2016-17
Pallahara	Sarbeda PRF Kakharua PRF Bhaluhuli PRF	1 1 1	320.136	III	2017-18
Pallahara	Timi PRF (P)	1	240.000	IV	2018-19
Pallahara	Timi PRF (P) Jharkhaman PRF	1 1	248.592	V	2019-20
Pallahara	Nizgarh A RF Nizgarh B RF	1 1	247.198	VI	2020-21
Pallahara	New Pauri RF (P)	1	316.000	VII	2021-22
Pallahara	New Pauri RF (P)	1	316.000	VIII	2022-23
Pallahara	New Pauri RF (P)	1	316.000	IX	2023-24
Pallahara	New Pauri RF (P)	1	318.000	X	2024-25
		Total	2891.841		

Table No. 231

Annual rehabilitation coupes of Khamar Rehabilitation series

Name of Range	Name of Block	Comp No.	Notified area in ha.	Coupe No.	Year of working
Khamar	Sanda PRF (P)	1	235.000	I	2015-16
Khamar	Sanda PRF (P) Rengalmunda RF	1	242.737	II	2016-17
Khamar	Kunjam RF (P)	1	255.000	III	2017-18
Khamar	Kunjam RF (P)	1	260.083	IV	2018-19
Khamar	Jambua RF Badasada PRF	1 1	242.592	V	2019-20
Khamar	Nuagaon PRF Injidi PRF	1 1	202.394	VI	2020-21
Khamar	Kalamjuang sahi PRF Priyambada Pur PRF	1 1	200.799	VII	2021-22
Khamar	Bhulaka PRF	1	233.118	VIII	2022-23
Khamar	Rangiapal PRF (P)	1	190.00	IX	2023-24
Khamar	Rangiapal PRF (P)	1	190.346	X	2024-25
		Total	2252.069		

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Table No. 232					
Annual rehabilitation coupes of Barkote Rehabilitation series					
Name of Range	Name of Block	Comp No.	Notified area in ha.	Coupe No.	Year of working
Barkote	Thianal RF (P)	1	182.000	I	2015-16
Barkote	Thianal RF (P)	1	182.000	II	2016-17
Barkote	Thianal RF (P)	1	182.000	III	2017-18
Barkote	Thianal RF (P) Kansar B RF	1 1	183.195	IV	2018-19
Barkote	Banbira PRF (P)	1	176.000	V	2019-20
Barkote	Banbira PRF (P)	1	176.000	VI	2020-21
Barkote	Banbira PRF (P)	1	176.000	VII	2021-22
Barkote	Banbira PRF (P)	1	176.000	VIII	2022-23
Barkote	Banbira PRF (P)	1	176.000	IX	2023-24
Barkote	Banbira PRF (P) Talabahali PRF	1 1	180.72	X	2024-25
		Total	1789.915		

Table No. 233					
Annual rehabilitation coupes of Deogarh Rehabilitation series					
Name of Range	Name of Block	Comp No.	Notified area in ha.	Coupe No.	Year of working
Deogarh	Rajamunda PRF (P)	1	80.000	I	2015-16
Deogarh	Rajamunda PRF (P)	1	80.000	II	2016-17
Deogarh	Rajamunda PRF (P)	1	82.642	III	2017-18
Deogarh	Kalkath PRF (P)	1	93.000	IV	2018-19
Deogarh	Kalkath PRF (P)	1	93.343	V	2019-20
Deogarh	Tirib PRF Bangalimunda PRF	1 1	88.478	VI	2020-21
Deogarh	Telikusum PRF (P)	1	80.000	VII	2021-22
Deogarh	Telikusum PRF (P)	1	80.000	VIII	2022-23
Deogarh	Telikusum PRF (P)	1	80.000	IX	2023-24
Deogarh	Telikusum PRF (P)	1	79.050	X	2024-25
		Total	836.513		

Table No. 234					
Annual rehabilitation coupes of Reamal Rehabilitation series					
Name of Range	Name of Block	Comp No.	Notified area in ha.	Coupe No.	Year of working
Reamal	Tarang PRF (P)	1	151.000	I	2015-16
Reamal	Tarang PRF (P)	1	151.000	II	2016-17
Reamal	Tarang PRF (P)	1	151.000	III	2017-18

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Reamal	Tarang PRF (P)	1	151.000	IV	2018-19
Reamal	Tarang PRF (P)	1	151.000	V	2019-20
Reamal	Tarang PRF (P)	1	156.477	VI	2020-21
Reamal	Tamkia PRF (P)	1	125.000	VII	2021-22
Reamal	Tamkia PRF (P)	1	125.000	VIII	2022-23
Reamal	Tamkia PRF (P)	1	125.000	IX	2023-24
Reamal	Tamkia PRF (P)	1	127.830	X	2024-25
		Total	1414.307		

3.9.2. Year Wise RWC Area: - The extent of area to be worked out in different year during the Plan period under Rehabilitation Working Circle is given as under.

Table No. 235

Annual rehabilitation area

Year	Name of Rehabilitation Series					Total area in ha.
	Pallahara	Khamar	Barkote	Deogarh	Reamal	
2015-16	278.477	235.000	182.000	80.000	151.000	926.477
2016-17	291.438	242.737	182.000	80.000	151.000	947.175
2017-18	320.136	255.000	182.000	82.642	151.000	990.778
2018-19	240.000	260.083	183.195	93.000	151.000	927.278
2019-20	248.592	242.592	176.000	93.343	151.000	911.527
2020-21	247.198	202.394	176.000	88.478	156.477	870.547
2021-22	316.000	200.799	176.000	80.000	125.000	897.799
2022-23	316.000	233.118	176.000	80.000	125.000	930.118
2023-24	316.000	190.000	176.000	80.000	125.000	887.000
2024-25	318.000	190.346	180.720	79.050	127.830	895.946
Total	2891.841	2252.069	1789.915	836.513	1414.307	9184.645

3.10. Method of Executing the Rehabilitation:

3.10.1. Demarcation: All annual coupes will be demarcated and inspected during winter season (October to December) previous to the year in which it falls due for working. As far as possible coupes line has been made coinciding with the block or compartment boundary and natural feature. At the time of demarcation, the white paint ring (single in case of natural feature and double in case of compartment line) shall be given or renewed on the trees standing at a visible distance along the coupe line. If the coupe line passes through dense scrubby growth, the same shall be cleared to a width of 1.5 mt. However, care should be taken not to fell any established trees along the line. If the coupe line passes through an open area, small stone cairns of 01 mt. height will be erected. The coupe shall be displayed prominently through a signboard at prominent place. The signboard should contain the name of felling series, coupe number, its area, block/compartment and year of working.

3.10.2. Marking Rule: - Marking will be done soon after receipt of the inspection report for completion of demarcation from Range Officer or Assistant Conservator of Forest. The marking in the annual coupe is to be done under the following principle.

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3.10.3. All dead and uprooted trees shall be numbered serially for extraction followed by a definite principle depending on the ground position. Their number will be written by coal tar on the blaze of size 20 cm x 15 cm at a height of 4 ft 6 inches from root. Similarly all illicit felled trees shall be numbered serially for extraction followed by a definite direction depending on the ground position. Their number will be written by coal tar on the stump.

3.10.4. All uprooted and illicit felled trees shall be checked by the Higher Forest Officers. The Percentage of trees to be checked by the Range Officer and above is given in the table below.

Table No. 236		
% of checking by Higher Officer		
Sl. No.	Designation of Officer	% of marking trees to be checked
1	Forest Range Officer	50
2	Assistant Conservator of Forest	25
3	Divisional Forest Officer	10

3.10.5. All climbers shall be cut at the time of numbering the uprooted, dead and illicit felled trees.

3.10.6. Marking and felling of green trees in Rehabilitation Working Circle is prohibited.

3.10.7. All shoots and branches of trees, which are damaged due to uprooted and illicit felled shall be cut if it hampers the growth of any promising shoots.

3.10.8. All prescribed works in the coupe shall be completed from 1st October to 20th June.

3.10.9. Execution of Rehabilitation coupes: - All uprooted marked trees shall be cut very closed to the ground such 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 logging. Cutting shall be started from one end and proceeded in the systematic way as per the tract followed in marking. At the time of logging, established seedlings should not be damaged. The working agent will take all precautionary measure against forest fire in and around the annual working coups. All converted timber and firewood in the coupe shall be lifted with the time limit. Cutting, conversion, passing and lifting will be carried on simultaneously. Extension of time against different works shall not be allowed, however under unavoidable circumstances Conservator of Forest may extend the time to minimum days.

3.11. Subsidiary Silvicultural Operation:

3.11.1. Cleaning: - Recruit, whippy and woody seedling need special care for its establishment in the rehabilitation area. It has been prescribed to take up cleaning in the year following the main rehabilitation to help recruitment and establishment of

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regeneration of principal and secondary species. It also creates favorable condition for optimum growth of the promising stems. Cleaning shall be done departmentally.

3.11.2. Items of Operation in Cleaning: - (i) Cutting and extraction of the marked trees if left. (ii) Extraction of balance logs and firewood if any. (iii) Cutting of shoots of the trees damaged during extraction, if it hampers the growth of any promising shoots. (iv) Cutting of climbers to be anticipated to climb in the principal species.

3.12. Artificial Regeneration:

3.12.1. The renewal of a forest crop by showing, planting or other artificial methods is important in the area included in this Working Circle. At present, the average number of trees of 30 cm girth and above at breast height per hector are 506, which include established trees of all age classes. There are small gaps noticed in all most all blocks allotted to this Working Circle. The extent of area of individual gaps is 01.5 hectors or less. It is advised to adopt artificial regeneration in the permanent gaps of each coupe during the year of coupe working, as per the prescription.

3.12.2. The artificial regeneration shall be carried out in two ways. First one is dibbling seeds of indigenous species in the mounds. Second one is planting economical valuable species in the pits. On an average 300 seedlings per hectare will be added with the natural regeneration. The pits and the mounds are of ratio 2:1 in both column and row.

3.12.3. Seeds Dibbling in Mound: - All the gaps in the coupe of each rehabilitation series are to be surveyed and reflected in the map at the time of marking. Mounds of size 1 ft x 1 ft 6 inches will be formed in the gap at a spacing of 7.5 meters x 7.5 meters. Only 100 mounds will be prepared per ha. At least 02 to 03 seeds of indigenous species existing 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 January in the presiding financial year.

3.12.4. Plantatio: - Block plantation is not prescribed due to non-availability of minimum 05.00 ha of land in patches having status either open or scrubby forest. Only gap plantation is prescribed. The plantation areas shall be indicated by signboards at corners or at point of intersection with roads, inspection paths and boundary lines of reserved forests. The signboards should contain the name of the plantation site, area, year of planting and compartment number and other details. Year of planting is very essential; otherwise after 5-6 years it is very difficult to know the year and the area.

3.12.5. Nursery: - Seedlings will be raised in temporary, permanent or central nurseries. Care shall be taken to raise quality seedlings from certified seeds, superior clonal propagules or from known seed orchards and stands. As fur as possible seeds, seedling stock or propagules will be obtained from or through the Silviculturist, Rayagada or Bhubaneswar.

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3.12.6. Site Map: - A site map on 1:50,000 scale toposheet or in an appropriately large scale showing the details of area, direction of slope, nature of erosion, biotic interference, site specific species, aspiration of the people and other factors shall be prepared. Species suitable for the site shall be identified in accordance with the objectives of management.

3.12.7. Treatment Map: - 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 preceding to the year of plantation.

3.12.8. Plantation Plan: - Each plantation site shall be taken care for 04 years including the main year of operation. The plantation plan along with the treatment map shall be prepared by the Range Officer, checked by the ACF and approved by the Divisional Forest Officer. The treatment plan and estimates shall be as per the approved cost norms and the instructions of the authorities in vogue. Abstract of approved estimates of all plantations in the divisions will be sent to the Conservator of Forests for information.

3.12.9. Preparation of Planting Area: - The plantation site will be properly surveyed and demarcated by December. All the dry materials, which are obtained during coupe working will be collected and hipped in the blank area. Control burning of the hipped dry materials will be done in the presence of a Forest Guard. These operations shall be completed by December to January of the pre-planting year.

3.12.10. Stacking and Pitting: - After the completion of site preparation by the end of January, stacking shall be taken up in the blank area at a spacing of 2.5 mt x 2.5 mt and 200 number of pits per ha have been prescribed. Digging of soil in degraded area is discouraged and thus pitting for plantation in degraded area has not been prescribed. Pitting should be taken up at appropriate spacing. The standard size of pit 45 cm x 45 cm x 45 cm shall be dug in the entire area other than degraded. Stacking and pitting shall be completed by March-April. However, in case of stump planting, crow bar holes shall be done just at the time of planting itself. The site preparation including pitting should in all cases be over by April so as to provide intervening time for weathering of the opened up soil. However, planting shall commence immediately on the onset of monsoon. At the time of planting, insecticide and fertilizer shall be applied as a basal doze depending on the requirement. Planting will be done departmentally and plantation journal shall be maintained as per the Orissa Plantation Manual.

3.12.11. 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 varies from 190 to 210 or it should be decided by the DFO if necessary, depending on the site and the species to be planted. Required dosage of insecticides and fertilizers shall be applied during planting process.

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3.12.12. Planting Technique: - The existing five central nurseries situated at Pallahara, Pradhanpat, Kaunsibhal, Patala and Kuajharan shall be maintained for teak seedling on the mother bed for the division. In addition to central nurseries, other nurseries may be created in Ranges, Section & Beat head quarter. Divisional Forest Officer will decide the extent of area to be planted with stump or seedling with the ten annual rehabilitation coupes.

3.12.13. Stump Plantation: - Stump of size of 15 cm (12 cm root and 3 cm stem) shall be prepared at the planting side but not at the nursery. Two years seedling will be uprooted from nursery and will be transported to planting site with out root shoot cutting. The stumps shall be planted by making crow bar holes just after second shower during the moth of June.

3.12.14. Root Shoot Cutting: - Any sharp instrument shall be used for cutting the uprooted seedling. All precautionary measures shall be taken at the time of root shoot cutting, so that bark of the stem at the cut end should not be damaged. An inclined cut both at stem and main root along with removal of secondary roots is prescribed. The main root shall not be damaged while removing secondary roots at the time of preparing stumps.

3.12.15. Seedling Plantation: - Good seeds shall be sown on the mother bed before two years of the plantation. Good seedling shall be uprooted from the mother bed and transplanted to polythene bag of size 20 cm x 15 cm during February or March. All nursery technique shall be maintained for the seedling on the polythene bag so that it will attain height within 1.5 ft to 2 ft at the end of June.

3.12.16. Post Planting Operations: - Post Planting Operations shall include casualty replacement, weeding, soil working and other operations to be carried out as per calendar of operations. The planting and post-planting operations shall be carried out as per the norm approved by the Government from time to time and in accordance with the prescriptions given in the Orissa Plantation Manual. The plantations shall be fully protected from all sorts of biotic interference. Local villager should be involved in the protection of the plantations. Formation of VSS as per JFM resolution should be explored. Further, the tending operations in these plantations shall be carried out as per the prescriptions given for the tending series.

3.12.17. Plantation Journal: - A separate plantation journal shall be maintained at Range level. No separate format is given to maintain the journal. 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.

3.13. Other Regulation:

3.13.1. Grazing: - The coupe shall be closed to grazing for a period of 05 years after the coupe working. 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 coupe about such restriction. The remaining area is open to grazing subject to the provision of the Orissa Forest (Grazing of Cattle) Rules 1980.

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3.13.2. Lopping: - The local people lop 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 in not prescribed.

3.13.3. Fire Protection: - All coupes shall be rigidly protected from forest fire for a minimum period of 05 years after the main working. As per previous record all the forest area were affected by fire in every year. Protection of fire in the working area can be practically possible by watching it from the month of February to June in every year. Provision of watcher has been prescribed and the annual allotment required for fire protection is given in a separate chapter.

3.13.4. 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 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). The amount required for climber cutting during the Plan period is given in a separate chapter.

3.14. Soil and Water Conservation Measure:

3.14.1. The area allotted to this Working Circle varies from gently slope to precipitous. The local people are collecting stones for construction of their houses. Some time contractors are also collecting stones for construction of roads, building and other contracts works. Collection of stones in this Working Circle is not allowed. Construction of check dams at a interval of 0.5 kmt in the nalas flowing in almost all block is prescribed for water conservation. The expenditure to be made for construction of check dams during the Plan period will be given in a separate Chapter.

3.14.2. The area allotted to each coupe are to be grouped in two broad categories. (i) The degraded areas having sufficient rootstock with little gaps, which requires mostly cleaning and conservation measures. (ii) The degraded areas having deficient root stock with eroded soil, which require special treatment under artificial regeneration works to fill up the gaps as well as extensive soil conservation measures and light cultural operations.

3.14.3. Depending on the treatment of the coupe, a treatment Plan for 04 years shall be prepared by the Range Officer, which shall include forest block and it's Compartment, rehabilitation series, Coupe number and it's area. Also category, terrain, slope, drainage, soil type and depth, vegetation and extent of regeneration, degradation, year-wise activities, major operations to be undertaken, cost norms and a calendar of operations shall be given. The plan shall also include provisions for monitoring and evaluation. The treatment Plan shall be checked by the ACF and approved by DFO, who shall be responsible for the implementation of the approved Plan.

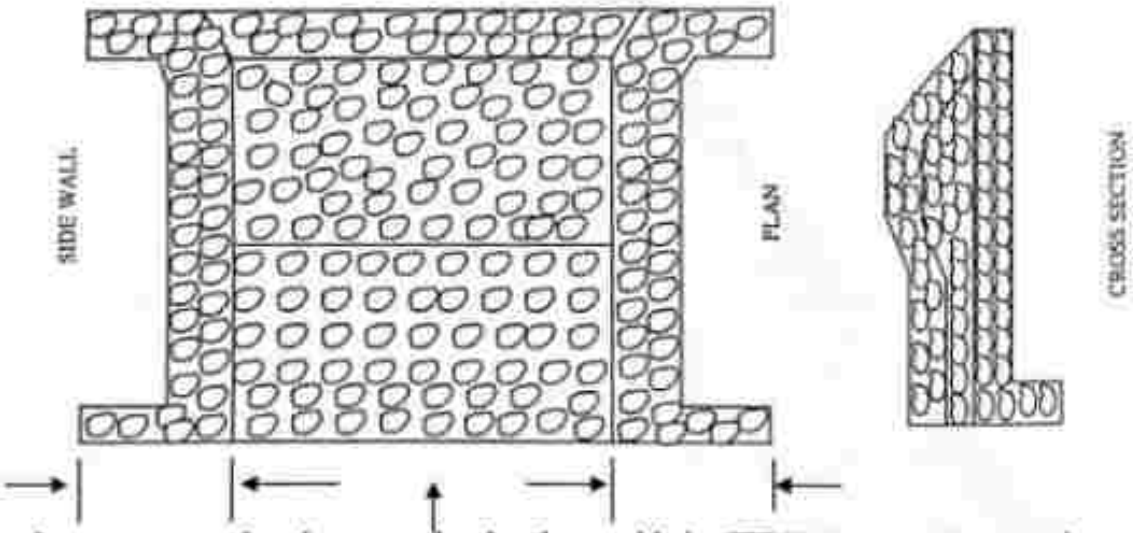
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3.14.4. Once the treatment Plan has been prepared and finalized, the work shall be carried out without any major deviation. All the operations shall be undertaken departmentally and the assistance of VSS need be taken where ever feasible and necessary.

3.14.5. The cultural operations shall be carried out in the year of creation, preferably before the onset of monsoon. Appropriate soil and moisture conservation measures such as gully plugging, staggered trenching, contour bunding and check dams shall be taken up including drainage line treatments depending upon the terrain.

3.14.6. Gully Plugging: Check dams are required to be erected across gullies. Loose boulder check dams are medium sized mechanical structures, provided in the middle reaches of the gullies having a width of 1.0 mt to 3.0 mt. Rough stones of size of 0.15 to 0.3 cum are required for the construction of these structures. Earthen bunds should be provided in both sides of the structure. The cost of construction of these check dams are provided in the Chapter- Financial forecast and cost of the Plan. Height of the check dam should be regulated 1/3rd to ½ of the gully depth. These check dams should be constructed at regular intervals depending on the gradient, steeper the slope, more check dams are required. More number of check Dams are required in category-II areas since the slopes are steep and the velocity of runoff is high.

DESIGN OF A LOOSE BOULDER CHECK DAM



3 plugging : done with l pending on the availability or material, require es and cost norms. ine gully beds should be planted with soil-binders like Sabai grass, Amari and *Agave*. Generally for brushwood check dams, the height of the fall taken into consideration is 1 mt, the maximum width of the gully is 03 mt, and depth is 0.6 mts. The cost of brushwood check dam is given in the Chapter- Financial forecast and cost of the Plan.

3.14.8. Palisading, Agave Planting and Vegetative Bunding: With the available materials palisading with the interval of 10 to 20 meter has to be prepared along the

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contours to counteract the force of water movement. Depending on the slope, grass like Khus Khus, Napier, Sachrum, etc. should be planted along with Agave.

3.14.9. Contour Bund: - Contour bunds are constructed along the contour to arrest the water velocity. Grass surfing is given on the side slope and the top of the bund. The soil binding species like Vetiver grass is to be planted on the upper slope of the bund with spacing of 0.23 mt. The cost of construction of Contour bunds will be given in the Chapter- Financial forecast and cost of the Plan.

3.14.10. Staggered Trenches: - These trenches would be constructed along the contours. The trench should be of size (2mt. x 0.5 mt. x 0.5 mt.), if it is undersize for any reason, equal trenches of more number to be constructed. These trenches should not be resorted, when the slope is more than 30^0 gradient. The distance between the two trenches can be 3.00 meter in both along and across the contour.

3.14.11. Percolation Tanks: - These tanks are to be constructed on the flat areas of the highest points. Generally each tank is to be dug out with dimensions of 02 mt. x 02 mt. x 0.5 mt. The width and the depth can vary depending on the availability of the flat surface. The earth dugout from the tanks should be placed in an inverted trapezium and the soil should be compacted. No inlet and outlet to be provided from the percolation tank. The bunds should be treated with seeds Dhanicha (*Sesbania aculeala*), Sun hemp or even Horse gram.

3.14.12. The areas where the VSS is active will be managed as per principle of JFM within the ambit of prescriptions outlined for this Working Circle. The planting of grasses shall be taken up in eroded areas. The efficacy of grasses in checking soil erosion is researched and the findings are well known. However, a list of some species of grasses suitable for planting is given in table below.

Table No. 237

List of grasses suitable for plantation

Sl. No.	Grasses	Soil and other factors	Use
1	Arundinella bengalensis	Yellowish brown, sandy loam and slightly acidic	Fodder
2	Arundinella nepalensis	Slopes with good drainage and permeability; soil sandy loam and neutral acidic reaction	Fodder
3	Chrysopogon fulvus	Hilly gravely soils, black cotton soils, red soils (best growth) low level of moisture	Fodder
4	Chrysopogon gryllus	Strong acidic soil on high hills, p^H 4.2	Fodder
5	Themeda triendra	Gravelly soil on hills, p^H acidic to neutral, Rainfall 1000 mm and above	Fodder
6	Cynodon dactylon	All type of soil on level land; prefers moist area and stands moderate grazing and trampling	Fodder
7	Eragrostis coarctata	A xerophytic grass	Fodder
8	Eulaliopsis binata	Can grow in slopes up to 50%, hot dry localities withstand forest fire	Non-fodder
9	Heteropogon contortus	Shallow eroded, black or red soil, p^H 6.8 to 7.0	Non-fodder
10	Cymbopogon iwarancusa	Level to hilly topography, sandy and rocky soil, p^H 6.5 to 7.5	Non-fodder

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11	Vetiveria zizanioides	Low lying ill drained land where water table is high. Soil sandy loam to clay, p^H 4.0 to 7.5, prefers neutral soil	Non-fodder
Source- The grass cover of India' by P.N. Dabadghao and R.A. Shankar Narayan, ICAR.			

3.14.13. The indigenous hardy species will be planted. A general checklist with suggestive measures proposed and species suitable for plantations on different sites in this Working Circle is provided in the table below. 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 concerned depending on the field requirements.

Table No. 238

Suggestive measures proposed and species suitable for plantations

Site	Measures to be taken	Species to be planted
Ravine	Soil and water conservation measures, Full protection from grazing and fire, Safe disposal of run-off, Grassland development, Afforestation	Dalbergia sisoo, Albizzia lebbek, Acacia catechu, Acacia nilotica, Azadirachta indica, Agave sisalana and Eulaliopsis binata besides soil binding grasses.
Laterite soil	Soil and water conservation measures, Full protection from grazing and fire, Application of fertilizer, Afforestation	Eucalyptus hybrid, Dendrocalamus strictus, Acacia auriculiformis, Madhuca indica, Bombax ceiba, Soymida febrifuga, Cleistanthus collinus, Albizzia lebbek, Anacardium occidentale, Agave species and soil binding grasses.
Skeletal soil	Contour bunding trenching, Afforestation, Other Soil and water conservation measures, Protection from grazing and fire, Sowing grasses, Seed dibbling.	Albizzia lebbek, Cassia siamea, Hardwickia binata, Azadirachta indica, Acacia nilotica, Acacia leucophloea, Derris indica, Eucalyptus hybrid, Dalbergia Sisoo, Teak, Tamarindus indica, Agave species, Eulaliopsis binata, Ailanthus excelsa, Acacia catechu.
Water logged areas	Preparation of mounds, Planting of tall plants, Application of anti termite chemicals, Early planting, Drainage system treatment and other such measures.	Eucalyptus robusta, Anthocephalus chinensis, Syzygium cumini, Terminalia arjuna, Bombax ceiba, Lagerstroemia speciosa, Sisoo, Derris indica, Acacia nilotica.

3.15. Works of Improvement:

3.15.1. The area constituted in this working circle is a mostly hilly slope. The flow of rain water increase suddenly and there by causing high 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 the slopes and nalas, improvement of natural water holes in the perennial and semi perennial nalas for the propose of soil and water conservation is prescribed. Plantation across the smaller nala and along the bank of the bigger nala by branch cutting is prescribed. Depending on the site quality, suitable fodder species for the wild animals shall be chosen by the Divisional Forest Officer for plantation.

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3.15.2. The concept of JFM is to involve the local people in protection and regeneration for better management of forests. Constitution of Forest Development Agency (FDA) in the respective divisions is a great help in this direction. Hence, one or more such annual treatment coupe(s) shall have registered JFM committee (VSS) wherever feasible, for the purpose of implementation of the treatment plan. However, while constituting such committees, the Govt. guidelines in this regard shall also be strictly adhered to.

3.15.3. The annual treatment coupe should have a fencing to rehabilitate the area. The cheapest and most useful fencing is that of Agave (Sisal). It shall be planted in four rows in staggered manner at spacing of 1mt x 1mt on the annual coupe boundary line. On rocky patches, stonewall fencing may be adopted if sufficient boulders are available in situ. Seeds of Palm, Bamboo etc. may also be sown on the inner side of the fencing in one or two rows.

3.15.4. The other mode of fencing is the trench fencing, which is costly and requires periodic maintenance. In case of additional objective is to create labour intensive work, where funds are not a constraint, this type of protection measure shall be undertaken. However, no digging of trench shall be done across the contours i.e. it shall be invariably along the contours in order to rule out soil erosion. Moreover, the dug out soil shall be heaped on the up hillside and should be stabilized with vegetative means.

3.15.5. Singling out of Shoot: - In the bushy area two healthy and good shoots of a stump will be selected to retain and others shall be cut. The materials obtain by this operation will be taken by the labourers engaged for the works.

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PROTECTION WORKING CIRCLE

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CHAPTER - IV

PROTECTION WORKING CIRCLE

4.1. General Constitution of Working Circle:

4.1.1. An area of 3396.390 ha has been allotted to this Working Circle. The area extended over 12 number of forest blocks. The forest of this division is under the pressure for removal of its products by the people of adjoining area such as Rourkela and Angul. Local people are illegally collecting small timber, poles and firewood from this forest for their use and sale. In most of the cases Teak and Bija are illicitly cut for sale to the outsider.

4.1.2. This overlapping Working Circle covers all blocks which need special protection measures from biotic interferences, besides the blocks and compartments existing in ecologically fragile areas. Due to intense biotic pressure from human and cattle, large number of forest blocks of the division is under various stages of degradation. Unless steps are taken to prevent fires, illicit felling, encroachment, illegal mining, poaching or podu the process of degradation cannot be reversed. Further there is need to see that forest on steep slopes and ecologically fragile areas are not disturbed and are completely protected.

4.1.3. Ecologically Fragile Areas: - To achieve successful natural regeneration of any species, it is necessary to create those conditions in the various systems in which, according to ecology, it regenerates freely in nature. Slope affects run-off and drainage and thus has a profound influence on the moisture regime of the soil. As a general rule, the steeper the slope, the greater the run-off and better the drainage. Thus, soils on the hill slope and of the moderately sloping plains at the foot of the hills are well drained. The extent of area in each blocks and compartments under > 50^0 slopes will be given.

4.1.4. Forest blocks and compartments : - The Range wise distribution of forest blocks and its area allotted to this Working Circle is given in the table below.

Table No. 239

Range wise forest blocks and compartments allotted to Protection Working Circle

Range	Block	Status	Notified area in ha
Khamar	Biripal	RF	427.40
	Danda	RF	1188.72
	Gurusulei	RF	205.80
	Chungamatia	RF	15.578
		Total	1837.498
Pallahara	Malyagiri (10 & 12)	RF	200.000
		Total	200.000
Barkote	Kansar (A)	RF	125.000
	Kaunshibahal	PRF	533.892
	Panguli	RF	100.000

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	Pradhanpat (10)	RF	100.000
		Total	858.892
Reamal	Kundheigola	PRF	100.000
		Total	100.000
Deogarh	Pradhanpat - 13	RF	200.000
	Pravasuni - 46	RF	100.000
	Rambhadevi - 22	RF	100.000
		Total	400.000
		Grand Total	3396.390

4.2. General Character of Vegetation:

4.2.1. Composition : - On most of the hills, sal ascends to the top, either predominantly or mixed with it's other associates like Bija, Ashan, Bandhan, Kurum, Kasi, Bamboo, Dhaura, Sisoo, Kendu, Haldu, Gambhari etc. The regeneration is purely natural and distributed adequately all over the area. The forest types are mainly Moist and dry peninsular sal, Northern dry mixed deciduous and Tropical hill valley swampy forest. The growth and quality of the crop have been considerably reduced depending up on the adjoining environmental condition.

4.2.2. Distribution : - The area allotted to this Working Circle is distributed in all Ranges, which comprises the total managed area of the Working Plan. Sal distributed in pure form in plain and valley area, where as it is sporadically distributed in mixed forest in the hill portion.

4.2.3. Growing Stock : - The total number of established trees in each forest block included in this Working Circle have not been counted in this revision. Also the actual number of trees established in each forest block has not been counted in the past. An average of 50 number of established trees of 30 cm and above girth at breast height exist over an area of 0.1 ha as per the inventory data of sample point.

4.2.4. Climber Menace : - During the out going Plan period all annual working area have not been worked out due to ban on green felling. Climber cutting had not been done due to financial constrain. Climber is affecting the growth of trees and quality of timber. Some time trees are either uprooted or died due to climber attack. The growth of the climber is very fast. The climbers are to be cut twice with the Plan period to avoid its menace.

4.2.5. Weed Growth: - Unwanted plants are common in the forest flower. During rainy season vast number of weeds grows in the forest flower of this tract. Weeds tend to interfere with the growth of individuals of favored species. Annual weeds died during the month of February. Dry weeds invite forest fire, which causes damage to seedling.

4.2.6. Grass Invasion: - Different grasses are seen in patches on the forest flour. Grasses grow faster in small gap or in open space, which causes heavy grazing. Recruits are either suppressed by grasses or damaged by grazing.

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4.2.7. Regular biotic interference has led to decrease in vegetative cover leading to high run-off, rapid soil erosion and even flash floods in low lying areas. The forest blocks included here are badly affected due to regular removal of biomass and becoming targets of timber smugglers. All blocks need intensive protection measures so that pressure of biomass removal is reduced substantially so that other silvicultural operation prescribed in the main Working Circle will yield the desired results.

4.3. Special Objectives of Management:

4.3.1. The special objectives of management of this Working Circle have been given in the table below.

Table No. 240

Objectives of Management for Protection

Sl.No.	Special objectives of Management
1	To manage and protect the forest with the active participation of the communities.
2	To enhance productivity by proper soil and moisture conservation measure.
3	To protect forests from fire and grazing with the active support of the villagers.
4	To treat community as stakeholders in forest protection and management.
5	To recreate green cover over the barren area with people's participation.
6	To protect Wild Life from its enemies.
7	To keep delicate and eco-fragile areas ecologically intact by maintaining adequate vegetative cover.
8	To improve the Eco-tourism area by planting flower plants, construction of check dam, steps, railing and tower for attraction of the visitors.

4.4. Analysis and Valuation of the Crop:

4.4.1. Stock Map: - The entire area covered by this Working Circle have been shown on the stock map. Sample enumeration in the managed area has been done covering an area of 0.1 ha. Stock map have been prepared by Field staff after analyzing the inventory data of sample points.

4.4.2. Age Class Distribution : - All age classes of trees of different species are present in this tract. But their numbers in different age classes differ from each other. In the inventory data it is found that as the age of trees increases the number of tree decreases. The reasons of decrease in the number of tree are illicit felling, uprooted and death.

4.4.3. Selection of Sample Units: -The longitude and latitude of sample points taken for constituting sample unit area. Keeping point in the middle, Rectangular size sample unit is formed having 0.10 ha (40 mt x 25 mt), 01.00 ha (100 mt x 100 mt) and strip.

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4.4.4. Type of Enumeration: - Partial enumeration in separate sample units has been carried out to ascertain the growing stock in this tract. The exact girth, which is 30 cm or more at breast height, has been recorded for all species at the time of inventory of the unit.

4.4.5. Status of Regeneration : - The regeneration survey is carried out in a plot of size 2 mt x 2 mt in the middle of each sample unit. The data collected in regeneration survey have been analyzed in Chapter II-A of Part-I.

4.4.6. Special Feature : - There is no any significant change observed in the forest area managed during the out going Plan period. Firewood and small timber demand of the inhabitant of this locality are full filled from the forest, which are not managed in this revision. Forest fire is an important tragedy to the forest of this tract. The areas included in this Working Circle have either degraded forest or high forest, which needs intensive protection measures. It is expected that with proper protection and stoppage of illegal removal of biomass from these degraded blocks, these block will quickly regain its original state. Protection of the high forest blocks will ensure that these blocks do not get degraded. Protection from grazing and fire will ensure that the regeneration status in all the forests will improve substantially. All these observations advocate strongly in favour of protection of these forests.

4.5. Silvicultural Systems.

4.5.1. As the forests included in this Working Circle are to be mainly protected without any other consideration, no silvicultural system has been prescribed. However, for achieving the special objectives the following operations are prescribed.

4.5.2. Protection Unit and Prescription - The area shall be rigidly protected from illegal biomass removal so as to keep it under nature's own care and nursing. Areas of forest blocks on steep precipitous slopes and eco-fragile areas would be specially protected to ensure there is no loss of vegetation or soil cover. Steps will be taken to prevent fires and grazing in the forests. Boundary of compartments and blocks will be maintained. Forest road network will be maintained. VHF sets will be used effectively. Special anti-smuggling squads and fire fighting squads will be created for each Protection Unit. The protection unit formed is as under.

Table No. 241

Protection Unit

Name of Unit	Name of Range	Name of Block	Legal status	Notified area in ha.
Khamar	Khamar	Biripal RF, Danda RF, Gurusulei RF, Chungamatia RF	RF	1837.498
Khamar	Barkote	Kansar A RF, Kaunshibahal PRF,Panguli RF, Pradhanpat RF	RF	858.892
Reamal	Reamal	Kundheigola	PRF	100.00

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Pallahara	Pallahara	Malyagiri (10 & 12)	RF	200.00
Deogarh	Deogarh	Pradhanpat(10), Pravasuni, Rambhadevi	RF	400.00
			Total	3396.390

4.5.3. Protection Cycle: - Since special protection would extend over the entire Working Circle, it is desirable to create different protection unit for this purpose. This will assist in taking up operations like maintenance of boundary to prevent encroachments, road repairs to ensure regular patrolling in vulnerable forest areas, anti-smuggling squads operations to check all illegal activities in a planned and systematic manner and will help in tackling protection 'hotspots'. Accordingly, after detail field verification, the Working Circle area has been divided into 01 number protection units. Since entire Working Circle area is to be treated within the currency of plan, the protection cycle of 10 years is prescribed.

4.5.4. Annual Protection Sub-unit: - In order to execute the protection measures, each protection units has been divided into 10 annual protection sub-units to facilitate systematic operations. The annual sub-unit shall be attended to as per the sequence prescribed in the Plan. The annual protection sub-unit will be given below.

Table No. 242

Sub-unit and year of working

Name of Unit	Name of Range	Name of Block	Comp't No.	Notified area in ha.	Total area in ha.	Sub-unit	Year of working
Khamar	Khamar	Biripal RF (P)	1	427.400	427.400	I	2015-16
Danda-1	Khamar	Danda RF (P)	1	396.000	396.000	II	2016-17
Danda-2	Khamar	Danda RF (P)	1	396.000	396.000	III	2017-18
Danda-3	Khamar	Danda RF (P)	1	396.720	396.720	IV	2018-19
Gurusulei	Khamar	Gurusulei RF	1	205.800	221.378	V	2019-20
		Chungamafin RF	1	15.578			
Barkote - 1	Barkote	Kaunshibahal PRF	1	266.000	266.000	VI	2020-21
Barkote -2	Barkote	Kaunshibahal PRF	1	267.892	267.892	VII	2021-22
Barkote -3	Barkote	Kansar A RF	1	125.000	325.000	VIII	2022-23
		Pangull RF	1	100.000			
		Pradhanpat RF	10	100.000			
Deogarh	Deogarh	Pradhanpat	13	200.000	400.000	IX	2023-24
		Pravasuni	46	100.000			
		Rambhadevi	22	100.000			
Pallahara & Reamal	Pallahara	Malyagiri RF	10	100.000	300.000	X	2024-25
			12	100.000			
	Reamal	Kundheigola	1	100.00			
Total				3396.390	3396.390		

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Table No. 243					
Annual Protection Area					
Year	Khamar	Barkote	Deogarh	Pallahara &Reamal	Total area in ha
2015-16	427.400	0	0	0	427.400
2016-17	396.000	0	0	0	396.000
2017-18	396.000	0	0	0	396.000
2018-19	396.720	0	0	0	396.720
2019-20	221.378	0	0	0	221.378
2020-21	0	266.000	0	0	266.000
2021-22	0	267.892	0	0	267.892
2022-23	0	325.000	0	0	325.000
2023-24	0	0	400.000	0	400.000
2024-25	0	0	0	300.000	300.000
Total	1837.498	858.892	400.000	300.000	3396.390

4.5.5. Demarcation of Annual Sub-unit: - The annual sub-unit shall be demarcated in the preceding season of treatment. In case a sub-unit overlaps two or more blocks and compartments, each compartment shall be treated as a separate treatment area. This will even ensure proper maintenance of compartment histories. The DFO shall ensure preparation of an annual action plan with a calendar of operations before execution of works.

4.6. Method of Executing the Protection:

4.6.1. Identification of Vulnerable Pockets: - All most all area allotted to this Working Circle have good forest growth. Illegal felling of trees for the domestic use of the local people in common in all blocks allotted to this Working Circle.

4.6.2. Communication System: - The communication systems into different beat head quarters have not been improved. One Forest Guard stationed at a remote area cannot stop a group of people used to enter inside forest for illegal felling. Considering the present scenario the following suggestion have been prescribed in the table below to improve the communication systems for better protection.

Table No. 244		
Prescribed device for communication		
Sl. No.	Designation of the Forest Officer	Communication device
1	D.F.O	One jeep and one mobile
2	A.C.F	-do-
3	F.R.O	-do-
4	Forester	One Motor Cycle and one mobile
5	Forest Guard	-do-

4.6.3. Execution of Protection: - The execution of forest protection became easy provided the present communication systems of the field staff should be improved as per the prescription. The manner of protection to be followed by the different Forest Offices is given in the table below.

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Table No. 245		
Protection methods to be followed		
Sl. No.	Designation of Forest Officer	Protection method
1	Forest Guard	Collect the preliminary information about the venerable pockets and the person involved in illegal activities.
2	Forester	Convince the local people about the important role of forest and conduct at least two meeting in each village in a year.
3	Range Officer	Discussed with the President of the V.S.S. at least once in a month and suggest how to improve the present condition of the forest.
4	A.C.F	Maintained division record based on Forest Guard information and checked all the venerable point once in a month.
5	D.F.O	Proceed to each village once in a month and discussed with the person involved in illegal forest activities based on the Forest Guard report.

4.6.4. Forest Protection Measures: - Grazing and illegal removal of forest produce shall not be allowed from the protection coupes. All the forests of this Working Circle shall be strictly protected against illicit felling, forest fires and all other sorts of biotic interferences. Anti-smuggling squads at vulnerable points in every Protection Unit shall be created by deployment of manpower from other less important areas besides engagement of protection watchers. The DFO shall evolve the modalities for its effective working.

4.6.5. 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, the staff shall be rotated on yearly basis. The forest cases detected shall be firmly dealt without remaining pending at the Forest Guard, Forester and Range Officer level. The concerned Range Officer shall periodically monitor the performance of each Beat Forest Guard and Section Forester. The DFO shall review the performance of each Range, Section and Beat at least once in six months with regard to the protection efforts, monitor illicit felling and take required remedial measures as are considered necessary and feasible. For better coordination, the communication network including VHF network shall be strengthened and made effective.

4.6.6. The field staff shall also take steps to control encroachments in the forests and take steps to evict encroachers in the treatment area. Resurvey, demarcation and construction and 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. The success of protection efforts should be monitored with regard to the number and nature of forest offence cases, encroachers evicted, timber and vehicle seized and the manner in which the booked offence cases are investigated and contested in the appropriate courts of law. The DFO and his subordinate officers shall constantly pursue the offence cases in the competent courts of law so as to ensure greater rate of conviction. These measures

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will have long lasting effect even on the over all protection in the entire division as well.

4.6.7. A functional divisional mobile squad with vehicle, required staff and arms will be constituted. The divisional mobile will be deployed by the A.C.F for regular patrolling and supporting filed staff in emergencies. There shall be regular monthly review by the DFO of the forest offence cases in every Protection Unit at the divisional level besides detailed review in the field 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 as compounded. 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 and Disposal) Rules'1980. The PR cases filed in the court shall be regularly pursued through the Public Prosecutor and Assistant Public Prosecutors. More over, the technical issues and bottlenecks may be brought for discussion and redressal in the senior officers' meeting at the District level.

4.7. Subsidiary Silvicultural Operation:

4.7.1. Cleaning: - The area affected by illicit felling need special care for establishment of recruit, whippy and woody seedling. It has been prescribed to take up cleaning immediately in the affected area to help recruitment and establishment of regeneration of principal and secondary species.

4.7.2. Items of Operation in Cleaning : - (i) Cutting and extraction of high stumps. (ii) Extraction of balance felled materials if any. (iii) Cutting of branches and shoots of the trees damaged during illicit felling, if it hampers the growth of any promising shoots. (iv) Cutting of climbers to be anticipated to climb in the principal species.

4.7.3. Thinning: - Thinning is prescribed only to regulate the distribution of the growing space for propose of improving the growth and form of trees that will come up in the illicit affected area. In this prescription permanent gaps are not created because regeneration is not the object of thinning. One selection thinning should be done only in congested patches during the Plan period.

4.7.4. Items of Operation in Thinning: - Selection thinning will be carried out in all canopy classes, removing the trees of the following characteristics. (i) Inferior trees which restrict the development of their neighbors' principal species from all side. (iii) All uprooted and illicit felled trees if left.

4.8. Artificial Regeneration:

4.8.1. The renewal of a forest crop by showing, planting or other artificial methods is not important in the area affected by illicit felling. It is advised to adopt artificial regeneration in the affected area in the same year if trees will not come up.

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4.8.2. Plantation: - All the gaps in the illicit area are to be surveyed and reflected in the map at the time of detection. Mounds of size 1 ft x 1 ft 6 inches will be formed in the gap. The seeds of the natural species existing 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.

4.9. Other Regulation:

4.9.1. Grazing: - The area under treatment shall be closed to grazing for a period of next 05 years. Practically it is not easy to maintain this restriction inside the forest over a long period. It is prescribed to issue notice to all the fringe villages nearer to the treatment area about such restriction. The remaining area is open to grazing subject to the provision of the Orissa forest (Grazing of the cattle) Rules 1980. Grazing may be controlled in forests outside the protection series areas. Steps shall also be taken, in consultation with local people, to develop fodder resources for the use of affected local people who will be encouraged to cut grasses and collect fodder for stall-feeding of their livestock.

4.9.2. Lopping : - Repeated lopping year after year weakens the trees 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 in not prescribed.

4.9.3. Fire protection: - All treatment area shall be rigidly protected from forest fire for a minimum period of 5 years after the treatment. As per previous record all the forest area of this tract were affected by fire in every year. Protection of fire in the working area can be practically possible by watching it from the month of February to June in every year. In case of accidental fire the Forest Guard will proceed to the spot along with the local people and extinguish the forest fire. The local people shall not be allowed to avail the facilities for collection of the forest produces for their non-cooperation with the Forest Guard. Provision of watcher has been prescribed and the annual allotment required for fire protection is given Financial Forecast Chapter.

4.9.4. In Part I analysis of the extent, causes of forest fire, and damage done to forest has been explained. Forest blocks vulnerable to fire based on satellite imageries have been identified and communicated to DFO. Protection against fire requires concerted effort of the field staff and the forest fringe dwellers during the period February to May. 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 firewatchers will be provided to every Protection unit.

4.9.5. The VSS should be involved in containing forest fires. Incidence of annual fire should be entered in the compartment history. Fire prone areas should be identified and precautionary measures taken in time. Every year fire maps need to be prepared block wise. Fire protection incentive schemes may be developed. Annual fire line clearance of 1 to 2-chain width in fire sensitive areas, coupled with controlled burning shall be done under the personal supervision of the Forester and Range Officer. Moreover, old fire lines, forest roads, boundary lines, village ring shall be kept

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clean by taking up control burning in 1-chain strip on both sides of it. Modern fire fighting methods should be adopted. Awareness on the damage caused by fire to be created amongst the people.

4.9.6. 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 is prescribed, which will be done at the time of demarcation 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 in a specified area, the Divisional Forest Officer will prepare a special estimate for climber cutting for the said area.

4.9.7. Soil and Water Conservation Measure: - The area allotted to this Working Circle varies from gently slope to precipitous. The local people are collecting stones for construction of their houses. Some time contractors are also collecting stones for construction of roads, building and other contracts works. Collection of stones in this Working Circle are discouraged. Construction of check dams at a interval of 02 kmt in the Semi-perennial nalas is prescribed for water conservation. The expenditure to be made for construction of check dams during the Plan period will be given in a separate Chapter.

4.9.8. Works of Improvement: - The area constituted in this Working Circle is a mostly hilly slope. The flow of rain water increase suddenly and there by causing high soil erosion. The area becomes dry just after the rainy season. Conservation of soil and water in this terrain is very difficult. Plantation across the smaller Nala and along the bank of the bigger Nala by branch cutting or direct showing is prescribed. Depending on the site quality, suitable fodder species for the Wild Life shall be chosen by the Divisional Forest Officer.

4.9.9. Forest Road Network: - The existing forest roads are not properly maintained due to paucity of funds. These forest roads are major communication networks for transportation of forest produce, for supervision of forestry operations and to check smuggling, illicit felling and poaching. Forest fringe dwellers also use these forest roads. Therefore these roads require to be properly maintained.

4.9.10. These forest roads should be maintained by providing drains on either side. The side drains should be periodically cleared to allow surface runoff smoothly. Cross-drains across the roads should be provided in hill slopes. Existing causeways and temporary bridges should be improved. Light morrum topping of road should be done periodically so as to prevent soil loss and erosion because of surface runoff and constant use. Roads should be repaired generally during November and December.

4.9.11. Attempt should be made to make all weather roads connecting vulnerable forest blocks so that the intensity of patrolling can be maintained during the rainy season. The concerned Range officer shall prepare a plan and estimate for annual repair and special repair after physical verification of forest roads and obtain the approval of the competent authority prior to execution of the work. In case of new construction, detailed investigation shall be undertaken before execution of any such project.

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4.9.12. Communication System And Mobility: - The VHF system in vulnerable pockets of the division needs to be strengthened. Fixed sets, mobile sets and handset should be made available. Each Protection Unit should be provided at least one fixed set and one handset. Since fast communication is vital for transmitting information and also for deployment as well as re-enforcement in an emergency case, there shall be VHF system with fixed stations at the Divisional Office and all the Range Offices and in every Protection Unit. Besides, all the four-wheel vehicles shall also be installed with mobile VHF sets. Attempt shall be made to provide every Protection unit with a jeep or van. Record in registers of communication through VHF and on daily patrolling done by the staff in Protection and mobile units should be properly maintained.

4.9.13. People Participation: - JFM is an accepted way to involve people in protection and regeneration of forests. Hence, local people shall be increasingly involved in forest protection and management in accordance with the Government policy in vogue. Steps should be taken by the DFO to constitute VSS for forest protection in vulnerable pockets.

4.10. Eco tourism:

4.10.1. Tourist Places: - There are 10 numbers of tourist places in Deogarh Division. The name of such places is Pradhanpat, Kurudkote, Deodhar, Rambhadevi, Khuludi, Taptajharan, Katasar Ghati, Tusula, Chakundadhar and 2nd Chilika.

4.11. Sacred Groves:

4.11.1. There are 05 numbers of sacred groves in Deogarh division. Namely Gunduriposhi sacred grove, Namagaon sacred grove, Arakhapal sacred grove, Chilantikhol sacred grove and Bankholi sacred grove. The details of these sacred groves is given below.

4.11.2. Gunduriposhi sacred grove: - Gunduriposhi village comes under Barkote FMU. The village is nearly about 6 to 7 Km. away from Barkote FMU. One has to walk about one and half Km. from the national highway No. 6 to reach the village. Gunduriposhi VSS committee has also formed in this village. It is a small village of around 30 household.

4.11.2.1. Historical fact: - The shrine has been established by the forefather of the villagers more than 90 years ago. The goddess is known as Pitabali Chudia thakurani. The shrine was established for the betterment of the villagers and their cattle and also for better crop yield.

4.11.2.2. Cultural elements of the local area: - People do not enter in the grove in a regular basis. Only the male deity worships there. Women are not allowed to enter on to the grove. During the festival time which are celebrated at the shrine and at the time of paying bali at the shrine the male members gather at the shrine.

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4.11.2.3. Type of vegetation: - The trees found in this grove are mainly of coppice trees. Area is quite dense and thick. Trees like Sal, Kendu and Mahul are the major tree spp. in the grove. The village is surrounded by dense forest but the forests are quite far from the village and the density of the forest cover gradually decreased towards the village.

4.11.2.4. Commmnity: - The major community of this village belongs to tribal cast like Munda, Kisan. People from farmer community are also residing in the village (locally known as Chasa).

4.11.2.5. Location of sacred grove: - The sacred grove is nearly about 50 meter away from the village end. IT is adjacent to agriculture land there is no perennial spring present in the sacred grove. The village road is present at a close proximity to the grove.

4.11.2.6. Folklore: - According to the village shrine has been established by their forefather for more than 90 years ago. The goddess will protect their village from any shorts of trouble and protect their cattle from being lost. That was their belief to worship at the shrine at that period of time and this practice continued in the next generations till now.

4.11.2.7. Practices associated with the grove: - People do not down from this sacred grove. They also also do not collect any dead branches from the grove. Only dry leaves are being collected by the villagers for fuel purpose and that also from the periphery of the grove. People pay bali of animals at the shrine in the name of offerings when their wishes come true. Festivals are Nuakhai, Kadabali and Nada puja.

4.11.2.8. Use of grove by community: - The villagers only collect the dry leaves from the periphery of the grove for fule purpose.

4.11.2.9. History and practices of conservation: - Since the shrine has been established at the present location cutting down of trees were prohibited here. From that period of time no cutting of trees are being done here. The fear of being punished by the goddess also restricts the people not to cut down any trees. Now after the formation of the VSS the conservation practices have become more intense.

4.11.2.10. Present status: - The sacred grove is adjacent to agriculture lands. In future there may be a possibility of cutting down of trees of sacred grove to create more crop land for the population of the village. This is one of the major threats prevailing around the sacred grove. The potential of this the no of trees can be increased by executing extensive plantation in the barren land near the grove. If that will be done then the soil and fertility conservation can be done. The adjacent agricultural lands get fertile with the liters of the trees fallen in the agricultural lands. This site can also act as a habitant for the birds and other small organisms. The main stakeholders of this grove are the villagers themselves.

4.11.2.11. Conclusion: - The villagers have conserved the vegetation of this grove which can be known by seeing the density of the trees species in the grove.

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However no sacred grove committee has been formed. In our village meeting where the president of the VSS and some other villagers were present, had some of their own suggestion such as a boundary should be made around the sacred grove to check the entry of the cattle entirely. A particular place should be made where the goddess is being worshiped.

4.11.3. Namagaon sacred Grove: - Namagaon village comes under Pallahara FMU. It is situated in the district of angul. It is around 30 km. away from pallahara. The village is situated near the malyagiri hills. A Schashrama is present on the road side while entering in to the village. Large forest covers on the both sides of the road can be observed while going towards the village. Some of them were reserved forest.

4.11.3.1. Historical fact: - Worship at the shrine had been done for more than 100 years whichstarted with a dream seen by a Baba worshiped near the hot water spring. Near the shrine Shiva pith is present where the worship has been done since the year 1996 after discovering a Shiva ling there.

4.11.3.2. Types of vegetation: - The shrine and the Shiva tample lay within the reserved forestof the Malyagiri hills. The boundary of the reserve forestis will remarketed having numberings on each trees. Large Teak trees are present at the boundary of the reserve forest with Mango trees. The vegetation cover at the shrine was quite dense. It is undisturbed by any kind of human interference.

4.11.3.3. Community : - The village has about 60 households and mostly tribal dominated.

4.11.3.4. Description of location: - The sacred grove is located in the reserve forest of the Malyagiri hills. This site is almost 2 to 3 km. away from the village. The grove is densely stalked with rich vegetation cover. The total area of the sacred grove including the Shiva pith is 7 hac.

4.11.3.5. Folklore: - Folklore associated with the grove was an incident of around 100 years ago. There was Baba worshipping near the hot water spring present in that forest. One day while worshipping he forget his pot in which he kept the water of the spring. When he searched for his pot he could not find it. The same night he had a dream that there was a sacred place near to that hot water spring and the pot would be found there. The next day when the Baba went to that place which he saw in his dream last night he found the pot there. After that incident villagers started worshiping at this place. There was also a floklore associated with the Shiva pith. In the year of 1996 a person named Harekrushna Saraswati and his follower Ram Ch. Saraswati came to this village and stayed at the foot of mountain. After some days when he saw the place near the hot water spring he told the villagers that this place is a sacred pace. The villagers, in order to known the truth of his saying went to that place and dug that place. After digging 6 to 7 ft they found a Shiva ling and worship there.

4.11.3.6. Practices associated with the grove: - The local name of yhe grove is Uchapat. A Sal and Kumbhi tree are being worshiped together at shrine. People celebrate 2 festivals in year at the shrine such as Nuakhai and Ambakhai. Women are

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not allowed to the grove. A male deity worships at the shrine. Sacrifices of animal in the form of bali are also done during the festival times celebrated at the shrine and as well as when some one's wish come true for which he has promised to give the offering at the shrine.

4.11.3.7. Use of grove by the community: - Through the villagers do not collect any kind of dead or fallen wood from the grove, they collect dead and fallen trees from the forest. Mahula flowers are also collected by the villagers from the forest in which the shrine is present.

4.11.3.8. Conservation practices: - Regarding conservation practices at the grove, the villagers do not cut down any tree in the grove. The fear of being punished by the goddess if trees are cut down from this grove has made the people of this village conserve the grove. They also do not collect dry leaves and dead branches from the grove. This vegetation of the grove is almost undisturbed.

4.11.3.9. Threats: - As the grove falls within the reserve forest, the reserve forest as well as the sacred grove is rich in valuable tree species. If proper vigilance work will not be done for this reserve forest then there may be the chance of cutting down of trees for black marketing, which may be occurred in future. Still at present threats of such type are not seen.

4.11.3.10. Potential: - The sacred grove is rich in floral species density. It has the potential to serve creatures like snake, jakal and small insects as their habitat. It may also serve as the resting and nesting site for the birds com here. The plant and leaf litters fallen on the ground has increased the fertility of this grove. This site can also serve as a potential carrier of various genetic resources of floral origin. The Shiva pith can be made in to a tourist spot for generation revenue and aesthetic value of this region.

4.11.3.11. Conclusion: - During our village meeting with the villagers we found villagers were keener to develop the Shiva pith lays near to the shrine. But due to not getting any prior permission from the forest department they are not able to do anything at that place. They have formed a sacred grove committee for the development of the place where the Shiva ling is present. Namagaon VSS has also been formed in this village.

4.11.3.12. Sacred grove committee member: - Nilacharana Garhnayak (President), Niranjan garhnayak (Vice president) and Lingaraj pradhan (Asst. General secretary)

4.11.4. Arakhapal sacred grove: - Arakhapal village comes under Riamal FMU. It is around 60 km far Deogarh. The village is surrounded by hills. The village is almost 6 to 7 km far from the kendu leaf range office. On the way to the village one can see dense forest cover on both sides of the road.

4.11.4.1. Historical fact: - The shrine is an idol of stone and situated inside the forest. The shrine is about 72 year old shrine. People of the village placed an idol of stone inside the jungale in order to not to give their forest lands and village lands to

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the hand of a rich person way back in the year of pre Independence (in the year of 1940s). Since then people of this village worship at this place.

4.11.4.2. Types of vegetation: - The forest cover is quite dense. Trees like Sal, Arjuna and Asana are found in large numbers. The trees species we had seen are quite tall also.

4.11.4.3. Community: - This village is also a tribal dominated village. They belong to kisan and kolha sub cast.

4.11.4.4. Description of location: - The sacred grove is situated inside the forest and this is around 2 km away from the village. On our way to the grove we came across a water stream. The stone idol is placed at a side of the road which stretches away in between the forest. No perennial spring is present in the grove.

4.11.4.5. Folklore: - The folklore associated with the shrine is quite interesting. What the villagers had told to us about the history of the shrine was, long time ago around the year of 1940 there was a rich person who wanted to occupy the forest area and the village where people were residing. The village people did not want to give their lands in the hands of that person. The villagers put the idol of the stone in the forest to show up that the forest land is the place for their worshipping. The matter went to the court of law. After a long judicial fight the verdict came in the fore of the villagers. From that period of time the worship is being done here.

4.11.4.6. Practices associated with the grove: - A male deity worships at the shrine. Women are allowed to the shrine. Along with the stone idol a Sal and a Bhuinkuruma tree are being worshiped together by the villagers. They do not cut down the trees present at the sacred grove.

4.11.4.7. Use of grove: - People of the village collect mahul flower, Sal leaves, various medicinal plants and plant parts from the grove when necessary. They also grasses which are used in broom making.

4.11.4.8. History and practices of conservation: - The village people do not cut down any tree from the sacred grove. It is the belief of the villagers that cutting down of trees from the grove will lead to a huge amount of trouble and people may even die who ever cut down the trees from the grove. This belief has compelled the people of the village to conserve the grove from time of the village to conserve the grove from time of its establishment. Now in this village formation of Arakhpal VSS plays a major role in conservation program and will also play an important role in the future.

4.11.4.9. Present status : - Although we have not noticed any kind of threats that can be break the harmony of the grove still there is a possibility of cutting down of the valuable tree species from the grove as well as from the nearly forest areas for the sake of money in the future.

4.11.4.10. The grove has the potential of being considered as the store house of the genetic resources. This site can serve as a good habitat for birds, snake and other

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small creatures due to the presence of dense vegetations. Help in protecting the soil together. Various types of NTFPs can be obtained from this forest and as well as from the periphery of the grove as the human interference in the grove is prohibited. Ant hills found in this grove will provide shelter to termites, ants and also for the snakes.

4.11.4.11. Conclusion: - The sacred grove is well protected and conserved by the villagers. However no sacred committee is being formed. We had some suggestion of the villagers during the village meeting which we have put at last. They suggested a proper boundary demarcation of the sacred grove. If some financial help will be provided from the government level for the maintenance of the sacred grove then they will shift the idol of the goddess near to the village where they can easily worship the goddess and keep an eye on the conservation of the grove, was the suggestion of the people present at the meeting in the presence of the VSS president and animator.

4.11.5. Chilantikhol sacred grove: - Chilantikhol sacred grove area comes under Deogarh divisional management unit as well as Deogarh FMU. IT is around 36 km far from Deogarh divisional office. One has to walk nearly 2 to 3 km from Parposh chak to reach the village. The sacred grove area is predominantly constituted by the tree species like Shorea robusta, Madhuca, Syzygium cumini etc. Other tree species like Diospyrous melanoxylon, carya arborea are also in the sacred grove. The sacred grove is about 10 meter far from the village. This site has assumed importance as a religious place for the inhabitants of Chilantikhol village. The goddess called Maa Banadurga Banashree Demul Thakurani is worshipped here.

4.11.5.1. Historical Fact: - The worship was being done by the villagers for more than 100 years. The belief of the villagers was that the goddess will protect the villagers from any kind of trouble like from any epidemic, drought and will also protect their cattle and the blessings of the goddess will increase the yield of the crops. That's why the villagers were worshipping at the shrine from that time.

4.11.5.2. Types of vegetation: - The sacred grove was very well managed by the villagers and it was quit. The upper canopy was being formed by large tree species. Shrubes and climbers form the middle layer. Various types of medicinal plants can be found at the ground level. The village was surrounded by dense forest cover.

4.11.5.3. Description of location: - The sacred grove is nearly about 100 meter from the village. Around the periphery sacred grove there is large Sal, Kendu, Mahul and Mango trees can be seen. A Sal and a Jamun tree are being worshiped together at the shrine. At concrete boundary has been made around the shrine.

4.11.5.4. Community / tribes: - Most of the villagers were tribal belong to kolha sub cast. There were around 40 to 50 house holds in this village.

4.11.5.5. Folklore: - There were no specific types of stories associated with the shrine. The fore father of the villagers established the shrine with a belief that a divine force will protect their crops. It was established around 100 year ago.

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4.11.5.6. Practices associated with the grove: - The village people do not cut down any tree from sacred grove. Women are not allowed to the sacred grove. A male deity worships at this place. Women are not allowed in to the grove Nua Khai and Demul puja are the major festivals celebrated here at the shrine. Some times people of this village start the marriage ceremony with the blessings of the goddess. People also come to the shrine to get their wishes to be fulfilled and also kill animals as offerings to the goddess. The offerings are being cooked at eaten only by the male members of the village at the shrine.

4.11.5.7. Use of grove by community: - People of the village only collect the dry leaves and Mahula flower which are fallen on the ground from the peripheral regions of the sacred grove. Sometimes cattle entered in to the grove. Dead branches of the fallen trees were also being collected by the villagers from the periphery of the grove.

4.11.5.8. History and practices of conservation: - The people of the village do not cut down any tree of the grove because they had a strong belief that cutting of any tree from the grove can put them in trouble. That is why they preserve the grove. Now VSS is also being formed in this village and this has helped the people to protect their green vegetation by creating awareness among them.

4.11.5.9. Threats: - One of the major threats is the disappearance of fear of being punished by the divine force when cutting down of the tree from that area which might be observed among the people of the village in the future. The cutting down of trees and sell them in the black market will give more money, this type of thinking can lead to cutting down of trees from that region. The population bound to cut down the trees for the sake of their living purpose.

4.11.5.10. Potential: - The conservation of soil and fertility one the most important potential of this grove. The sacred grove area can be further increased by proper maintenance and well planned conservation programs. The area has the potential to provide enough non wood forest produce which will help in increasing the economic growth of the village people. This site has the potential of being served as the resting site of various types of bird and can also provide micro climate habitats for snakes and other organisms. The root systems of the trees as well as ground for a help in binding the soil together and getting the soil to be detoriated. The VSS committee can also pay an important role to aware the village people about the importance of conserving the green vegetation. If plantation will carried out in a large scale then it will serve as the genetic store house of various types of flora.

4.11.5.11. Conclusion: - The villagers have conserved this sacred grove with people care with the help of the VSS committee formed in this village by the forest department and named as Chilantikhol VSS. There should a boundary to be made around the sacred grove to check the soil erosion as well as to check the entering of the cattle to the grove. No sacred grove committee has been formed. There s no spring present in the sacred grove and if irrigation facilities are provided then the people of the village can put a step forward for more plantations of trees.

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4.11.6. Bankholi sacred grove: - Bankholi village comes under Khamar FMU. It is in the district of Angul. This is around 42 km away from Khamar FMU. The village is adjacent to large forest area. While going towards the village patches of forest areas can be observed t the both side of the road. There comes a river also while going towards the village.

4.11.6.1. Historical fact: - The sacred grove is known as Giri Gaobardhan pith because of the name of the hill called as Giri Gobardhan hill. The worship at the grove has been done from the year of 1996 when the villagers found a hot water spring there. They arranged a yagya there at the beginning and since then worship of the god has been done there.

4.11.6.2. Types of vegetation: - The village is adjacent to large forest covering. The forest in which the idol is being worshiped is a village forest. The total area of this village forest is around 90 ha Sal, Mahula, Arjuna are the major tree spp. Found in this forest. It is a very dense forest and rich in bio diversity. Large trees of Sal and Arjuna are seen near the sacred grove. Some new types of spp are also found near the hot spring.

4.11.6.3. Community: - Tribal people belong to kisan and kolha cast along with people belong to chasa cast are living in this village. The total house hold no of the village is around 35 to 40.

4.11.6.4. Description of location: - The sacred grove is nearly about one and half km away from the village. One has to walk through the stony road to go this site. It is situated inside the forest at the feet of the hill. A patch of agricultural lands are also being seen while going to wards the forest and also water stream can be seen flowing across the village.

4.11.6.5. Folklore: - What the villagers had us that they have been worshipping this place since the year 1996 when they discovered a hot water spring there. They performed a Yagya there. After that they placed a stone there and started worshipping.

4.11.6.6. Practices associated with the grove: - The people of the village do not cut down any tree from the sacred grove and as well as from as this is a village forest and villagers are the protector of this forest. They celebrate the annual festival at the grove on Kartik purnima. People from other villagers also come to see this festival. At the time of their annual festival they arrange a Yagya also near the sacred grove.

4.11.6.7. Use of grove by community: - The people of the village do not cut down any tree from the forest. They collect the non wood forest produce like Mahula, Sal leaves, Siali leaves etc from this forest. They also collect the dead branches and dry leaves fallen on the ground.

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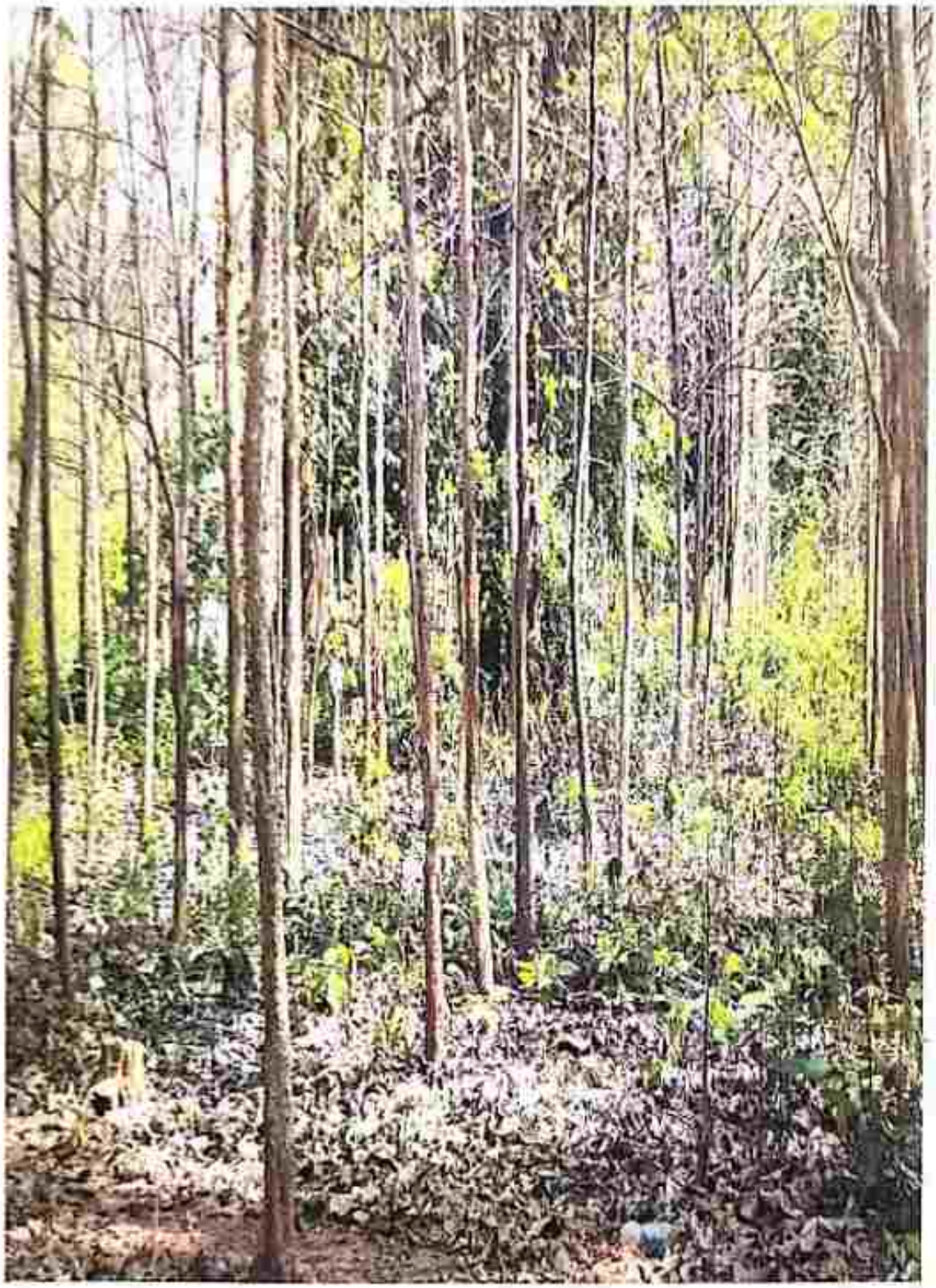
4.11.6.8. History and practices of conservation: - As the sacred grove lays within a village forest people do not cut down any tree without informing the village committee. Now the formation of Bankhol VSS has strengthened the conservation programs. The president of the VSS and the animator of the VSS are some of the post holders among the villagers. Other people villagers are also the members of the VSS along with the forester from forest department being the member secretary of the VSS. Whenever a person cut down any tree from this forest without any prior knowledge of the committee then the committee has the rights to put a fine on that person. Now a day's elephants are staying in that forest. So people do not go inside the forest having fear. That also helps in conserving the forest with human interference. This is village forest and people of this village have conserved this forest according to their own rules and regulation.

4.11.6.9. Present status: - This forest has a rich species diversity of tree species. In order to make profit people can cut down those valuable timber species. That may be the major threat come up front in the future.

4.11.6.10. There is a huge scope of collection of various types of non wood forest produces like Sal leaves and Mahula flower from this forest and proper marketing channel is provided. Harida, Awanla can also be obtained from these forests which are the major source of NTFP as well as medicine. This site has the potential of being served as the habitat for the wild animals and various types of wild birds also. Soil degradation can be checked by the root system of the trees which help in binding the soil together. These are some of the potential of this forest area. The sacred grove and the surrounding forest areas can be considered as the store house of genetic diversity because of availability of new species of flora. The stakeholders of this forest are the village people.

4.11.6.11. Conclusion: - This site has a high biodiversity potential and conservation of the species present in this forest can be fruitful in the future. So far no sacred grove committee has been formed in this village. Marketing channels should be provided for the non wood forest produces obtained from this forest which may generate more revenue and people of the village will grow economically. The road to the sacred grove should be made so that number of visitors can come to this sacred grove to see the natural heritage.

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PLANTATION WORKING CIRCLE

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CHAPTER - V

PLANTATION WORKING CIRCLE

5.1. General Constitution of Working Circle:

5.1.1. Plantation Working Circle consists an area of 25431.7894 ha out of which Planted area is 25282.78 ha and non planted area is 149.0094 ha. All planting area of this division is from 1961-62 to 2011-12. This area is treated as degraded forest. It includes plain and gently sloppy area with favorable condition for growing teak. This area is under continuous pressure for removal of pole crops and firewood by the local inhabitants. Proper protection and restocking of the area was also not ensured for which the existing crops and the site condition have deteriorated further and the rate of erosion accelerated.

5.1.2. Abstract of Range wise plantation Working Circle Area: - Range wise area of Plantation Working Circle is given in the table below.

Table No. 246

Range wise Abstract of plantation WC

S.No	Range	Planted	Non-Planted	Total area in ha
1	Pallahara	3089.95	149.0094	3238.9594
2	Khamar	3507.75	00	3507.75
3	Barkote	6198.11	00	6198.11
4	Reamal	5557.68	00	5557.68
5	Deogarh	6929.29	00	6929.29
	Total	25282.78	149.0094	25431.7894

Table No. 247

Range, Block & Compartment wise list of plantation

S.No	Range	Block	Status	Compt No	Area of Plntn
1	Pallahara	Kakharua	PRF	1	114
2		Malyagiri	RF	2, 3, 5 to 11, 13 & 15	1047.5
3		Mankarchua	RF	1 to 4	745.5
4		Nizgarh A	RF	1	80
5		Nizgarh B	RF	1	40
6		Old pauri	RF	1	403
7		Ranjo	PRF	1	105.09
8		Saida	RF	1	284
9		Sarbeda	PRF	1	120
10		Tamkia	RF	1	120.5

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11		Balibahal	PF	1	149.0094
12		Bhaluhuli	PRF	1	30.36
				Total	3238.9594
1	Khamar	Badasada	PRF	1	45
2		Bankhol	PRF	1	70
3		Birpal	RF	1	10
4		Charigochia	RF	1	508
5		Gurusulei	RF	1	183
6		Jambua	RF	1	156
7		Kardapal	PRF	1	10
8		Kuladera	RF	1 to 6	748.5
9		Kunjam	RF	1 to 3	502.47
10		Malyagiri	RF	18 to 23, 26 & 28	955.5
11		Rangiapal	PRF	1	30
12		Sanda	PRF	1	55
13		Danda	RF	1	234.28
				Total	3507.750
1	Barkote	Badtaila	RF	4, 7 to 14, 17 to 19, 27, 30, 36, 37, 39 to 41, 43, 44 & 46	2212.41
2		Banbira	PRF	1	195.59
3		Kansar B	RF	1	20
4		Mandasila	RF	2, 3, 5 & 6	362
5		Panguli	RF	1 to 8	1313.5
6		Pauri	RF	1	877.11
7		Pradhanpat	RF	18 to 22, 24 & 26 to 29	950.5
8		Thianal	RF	1	165
9		Tusula	PRF	1	15
10		Kansar A	RF	1	27
11		Kaunshibahal	PRF	1	60
				Total	6198.110
1	Reamal	Ghodapaka	PRF	1	162.68
2		Gogua	RF	4, 7, 8 & 10 to 13	900
3		Hadamunda	PRF	1	187
4		Kankarkhol	PRF	1	1246
5		Kansar	RF	1	1412
6		Kundheigola	PRF	1	998
7		Naikul	PRF	1	52
8		Rambhadevi	RF	2, 3, 6, 7, 8, 12 & 15	530
9		Tarang	PRF	1	70
				Total	5557.680
1	Deogarh	Bangalimunda	PRF	1	286
2		Chilantikhiol	PRF	1	616

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3		Hadammuda	PRF	1	141
4		Jhadeswar	PRF	1	452
5		Kalkath	PRF	1	63
6		Kaveur	RF	1	1351.22
7		Khajuria	RF	7, 8, 12 & 14	748
8		Pradhanpat	RF	1, 7, 8, 10, 11, 13 & 14	724.02
9		Pravasani	RF	7,9,18,21,22,23,25,36,39,41,44,47,48,51 & 53	1980.05
10		Rajamunda	PRF	1	7
11		Rambhadevi	RF	17, 20, 23, 24 & 25	459
12		Tirib	PRF	1	10
13		Telikusum	PRF	1	90
				Total	6929.290
				Grand Total	25431.7894

5.1.3. The allotted area is having mostly miscellaneous species confirming to Northern Dry Mixed Deciduous Forest. Continuous removal of poles and firewood causes degradation of the area. Forest fire and grazing are the main reason of destruction of whippy and woody stems. Natural regeneration on the blank area is not expected during the Plan period. It has been prescribed to restock the blank area by artificial regeneration. The species selected for plantation should have been available in the locality. Teak is introduced as it survives and can resist all biotic interference in the planting area.

5.1.4. Distribution of Area : - An area of 2039.10 ha had been planted in notified area from 1961-62 to 1994-95. An area of 28818.5594 ha had been planted from 1995-96 to 2012-13 out of which 23243.68 ha planted in notified area and 5425.87 ha planted in other forest area. Therefore the total Working Circle area is 25431.7894 ha (2039.10 + 23243.68 + 149.0094) The details of planted area are as under.

Table No. 248

List of old plantation of Deogarh Division from 1961-62 to 1994-95

Sl. No.	Location of plantation	Year of plantation	Area planted in Ha.
1	Kansar R.F.	1961-62	47.75
2	Kansar R.F.	1962-63	73.65
3	Kansar R.F.	1963-64	80.94
4	Kansar R.F.	1964-65	40.47
5	Kunjam R.F.	1964-65	40.47

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		1965-66	52.61
6	Kansar R.F.	1965-66	15.38
7	Pudapada	1966-67	40.47
8	Kansar R.F.	1966-67	40.47
9	Badtaila R.F.	1967-68	14.16
10	Danda R.F.	1967-68	78.00
11	Kansar R.F.	1968-69	32.38
12	Kansar R.F.	1968-69	20.23
13	Badtaila R.F.	1970-71	20.23
14	Kansar R.F.	1970-71	8.09
15	Badtaila R.F.	1970-71	4.05
16	Asurkhol (Pravasuni) R.F.	1970-71	10.12
17	Bhaluhuli R.F.	1970-71	6.07
18	Pauri R.F.	1971-72	20.23
19	Kansar R.F.	1971-72	10.12
20	Badtaila R.F.	1971-72	20.23
21	Pauri R.F.	1971-72	10.12
22	Bhaluhuli R.F.	1972-73	10.12
23	Danda R.F.	1972-73	18.62
24	Kansar R.F.	1972-73	10.12
25	Pradhanpat R.F.	1972-73	10.12
26	Bhaluhuli R.F.	1972-73	20.23
27	Pauri R.F.	1973-74	18.62
28	Kansar R.F.	1973-74	30.35
29	Pauri R.F.	1974 -75	12.14
30	Pauri R.F.	1975-76	12.14
31	Kansar R.F.	1975-76	8.09
32	Pauri R.F.	1976-77	2.02
33	Pradhanpat R.F.	1977-78	6.88
34	Pradhanpat R.F.	1977-78	8.09
35	Ranja P.R.F.	1977-78	8.09
36	Banbira PRF		

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37	Kansar R.F.	1980-81	20.23
38	Kansar R.F.	1980-81	20
39	Kaunsibahal DPF	1980-81	20
40	Kakharua DPF	1980-81	50
41	Kaunsibahal DPF	1981-82	40
42	Ranja DPF	1981-82	4
43	Kakharua DPF	1981-82	6
44	Rambhadevi R.F.	1982-83	34
45	Kakharua DPF	1982-83	8
46	Ranja PRF	1982-83	8
47	Ranja PRF	1983-84	10
48	Ranja PRF	1984-85	10
49	Kurudkote	1986-87	20
50	Kansar (Goimadu)	1986-87	25
51	Badtaila RF	1986-87	15
52	Badtaila RF	1987-88	50
53	Nlzgarh RF	1987-88	25
54	Badtaila RF	1988-89	50
55	Nlzgarh RF	1988-89	25
56	Badtoila RF (Baghamunda)	1989-90	30
57	Kansar RF (Pudapada)	1989-90	40
58	Kunjam RF	1989-90	30
59	Badtoila RF	1990-91	20
60	Kankarkhol DPF (Burbuda)	1990-91	20
61	Kunjam RF	1990-91	20
62	Kankarkhol DPF	1991-92	7
63	Badtoila RF	1991-92	6
64	Kunjam RF	1991-92	7
65	Kankarkhol DPF	1991-92	280
66	Badtoila RF	1991-92	24
67	Kunjam RF	1991-92	28

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68	Kansar RF	1992-93	25
69	Rambhadevi RF	1992-93	25
70	Badtoila RF	1992-93	50
71	Malyagiri RF	1992-93	50
72	Kansar RF	1993-94	7
73	Badtoila RF	1993-94	6
74	Kansar RF(A)	1993-94	7
75	Kansar RF (A)	1994-95	20
76	Badtaila RF	1994-95	20
77	Nizgarh RF (B)	1994-95	15
		Total area	2039.10

Table No. 249

List of New plantation of Deogarh Division from 1995-96 to 2011-12

Year of plantation	Name of scheme	Range	Name of Block	Area planted in ha	Name of VSS
1995-96	Economic plantation RDF	Khamar	Badasada PRF	20	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Khamar	Badasada PRF	25	Departmentally
1995-96	Economic plantation RDF	Barkote	Badtaila RF	80	Departmentally
1996-97	Economic plantation	Barkote	Badtaila RF	30	Departmentally
1996-97	Economic plantation	Barkote	Badtaila RF	5	Departmentally
2001-02	RANC (CRF) Block plantn	Barkote	Badtaila RF	20	Departmentally
2007-08	Economic plantn(block)	Barkote	Badtaila RF	10	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Barkote	Badtaila RF	80	Departmentally
2007-08	Bamboo W.C.	Barkote	Badtaila B/C-C	20	Departmentally
2008-09	OFSDP(JICA)	Barkote	Badtaila RF	65.5	Chakadihi
2008-09	OFSDP(JICA)	Barkote	Badtaila RF	63.5	Gunduriposhi
2008-09	OFSDP(JICA)	Barkote	Badtaila RF	65.5	Baghamunda
2008-09	OFSDP(JICA)	Barkote	Badtaila RF	65.5	Sibapali
2008-09	OFSDP(JICA)	Barkote	Badtaila RF	65.5	Sirapali
2008-09	OFSDP(JICA)	Barkote	Badtaila RF	65.5	Kadopada
2008-09	OFSDP(JICA)	Barkote	Badtaila RF	65.5	Masinita

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					(Kadopada)
2009-10	OFSDP(JICA)	Barkote	Badtaila RF	63	Gopalpali
2009-10	OFSDP(JICA)	Barkote	Badtaila RF	92	Kausilbahal
2009-10	OFSDP(JICA)	Barkote	Badtaila RF	105	Kelda
2009-10	OFSDP(JICA)	Barkote	Badtaila RF	116	Jayapichhula
2009-10	OFSDP(JICA)	Barkote	Badtaila RF	84	Brahmanidei
2009-10	OFSDP(JICA)	Barkote	Badtaila RF	89	Chakrapali
2009-10	OFSDP(JICA)	Barkote	Badtaila RF	25	Departmentally
2010-11	OFSDP(JICA)	Barkote	Badtaila RF	59	Chakulia
2010-11	OFSDP(JICA)	Barkote	Badtaila RF	80	Dangapal
2010-11	OFSDP(JICA)	Barkote	Badtaila RF	73	Kamchhada
2010-11	OFSDP(JICA)	Barkote	Badtaila RF	120	Sirgidah
2010-11	OFSDP(JICA)	Barkote	Badtaila RF	120	Rambhei
2010-11	OFSDP(JICA)	Barkote	Badtaila RF	10	Kadopada
2010-11	National Bamboo Mission	Barkote	Badtaila RF	10	Departmentally
2011-12	OFSDP(JICA)	Barkote	Badtaila RF	80	Ragada
2011-12	Bamboo plantation under State Plan	Barkote	Badtaila RF	15	Departmentally
2011-12	Pltn inside WP area under 13th FC grant	Barkote	Badtaila RF	20	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Barkote	Banbira PRF(P)	60	Departmentally
2008-09	OFSDP(JICA)	Barkote	Banbira PRF	63.5	Goyalmora
2008-09	OFSDP(JICA)	Barkote	Banbira PRF	49	Laxmipur
2008-09	OFSDP(JICA)	Barkote	Banbira PRF	10	Departmentally
2010-11	OFSDP(JICA)	Barkote	Banbira PRF	5	Laxmipur
2009-10	OFSDP(JICA)	Deogarh	Bangalimunda PRF	80	Departmentally
2010-11	OFSDP(JICA)	Deogarh	Bangalimunda PRF	54	Katanjgpani
2010-11	OFSDP(JICA)	Deogarh	Bangalimunda PRF	70	Departmentally
2011-12	OFSDP(JICA)	Deogarh	Bangalimunda PRF	82	Hetkhamar
2006-07	Compensatory plantn	Khamar	Bankbol	60	Departmentally
2009-10	Compensatory Afforastation	Khamar	Bankbol	10	Departmentally
2011-12	Pltn inside WP area under 13th FC grant	Khamar	Biripal RF	10	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Khamar	Charigochhia RF (P)	55	Departmentally
2009-10	OFSDP(JICA)	Khamar	Charigochia RF	108	Hatibindha
2010-11	OFSDP(JICA)	Khamar	Charigochia RF	105	Balabhadrapur
2010-11	OFSDP(JICA)	Khamar	Charigochia RF	120	Sukadevpur

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2010-11	OFSDP(JICA)	Khamar	Charigochia RF	120	Chakradharpur
2010-11	OFSDP(JICA)	Deogarh	Chilantikhol PRF	90	Chilantikhol
2010-11	OFSDP(JICA)	Deogarh	Chilantikhol PRF	100	Durijangal
2010-11	OFSDP(JICA)	Deogarh	Chilantikhol PRF	80	Rukuda
2010-11	OFSDP(JICA)	Deogarh	Chilantikhol PRF	90	Tasarda
2010-11	OFSDP(JICA)	Deogarh	Chilantikhol PRF	120	Tilcimal
2010-11	OFSDP(JICA)	Deogarh	Chilantikhol PRF	49	Budibahal
2011-12	OFSDP(JICA)	Deogarh	Chilantikhol PRF	87	Chandiposi
2007-08	Bamboo W.C.	Khamar	Danda B/C-C	15	Departmentally
2009-10	OFSDP(JICA)	Khamar	Danda RF	75	Departmentally
2010-11	OFSDP(JICA)	Khamar	Danda RF	120	Pitta
2011-12	OFSDP(JICA)	Reamal	Ghodapaka RF	101	Dehuripal
2011-12	OFSDP(JICA)	Reamal	Ghodapaka RF	61.68	Bhaliapal
2007-08	12th FC Grant-Silviculture Research RWC	Reamal	Gogua RF	90	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Reamal	Gogua RF	60	Departmentally
2008-09	OFSDP(JICA)	Reamal	Gogua RF	61	Phuljhari
2008-09	OFSDP(JICA)	Reamal	Gogua RF	75	Siarimalia
2008-09	OFSDP(JICA)	Reamal	Gogua RF	77	Bhaluchaba
2008-09	OFSDP(JICA)	Reamal	Gogua RF	78	Laxmipur
2008-09	OFSDP(JICA)	Reamal	Gogua RF	76	Brahmanipali
2008-09	OFSDP(JICA)	Reamal	Gogua RF	75	Chirgunikudar
2008-09	OFSDP(JICA)	Reamal	Gogua RF	78	Baradanali
2009-10	OFSDP(JICA)	Reamal	Gogua RF	37	Kadalipal
2009-10	OFSDP(JICA)	Reamal	Gogua RF	43	Nuadih
2011-12	OFSDP(JICA)	Reamal	Gogua RF	150	Belamunda
1995-96	Economic plantation RDF	Khamar	Gurusulei RF	50	Departmentally
1996-97	Economic plantation	Khamar	Gurusulei RF	25	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Khamar	Gurusulei RF (P)	30	Departmentally
2008-09	OFSDP(JICA)	Khamar	Gurusulei RF	78	Sahargurjang
2006-07	Rivervalley project	Reamal	Hadamunda PRF	20	Departmentally
2009-10	OFSDP(JICA)	Deogarh	Hadamunda PRF	61	Hadamunda
2010-11	OFSDP(JICA)	Deogarh	Hadamunda (P)	80	Deojharan
2010-11	OFSDP(JICA)	Reamal	Hadamunda PRF	77	Jharpara
2010-11	OFSDP(JICA)	Reamal	Hadamunda PRF	90	Sindurakhol
2008-09	OFSDP(JICA)	Khamar	Jambua RF	58	Jambua
2008-09	OFSDP(JICA)	Khamar	Jambua RF	78	Besalia
2010-11	OFSDP(JICA)	Khamar	Jambua RF	10	Jambua
2010-11	OFSDP(JICA)	Khamar	Jambua RF	10	Besalia

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2008-09	OFSDP(JICA)	Deogarh	Jhadeswar PRF	76	Bhukabada
2009-10	OFSDP(JICA)	Deogarh	Jhadeswar PRF	103	Jhaliamura
2009-10	OFSDP(JICA)	Deogarh	Jhadeswar PRF	93	Jualibahang
2010-11	OFSDP(JICA)	Deogarh	Jhadeswar PRF	80	Belmara
2010-11	OFSDP(JICA)	Deogarh	Jhadeswar PRF	100	Sukhapadan
2006-07	Economic plantn (Block)	Pallahara	Kakharua PRF	20	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Pallahara	Kakharua PRF (P)	30	Departmentally
2006-07	Economic plantn (Block)	Deogarh	Kalkath PRF	15	Departmentally
2007-08	Economic (RDF)	Deogarh	Kalkath PRF	50	Departmentally
2002-03	SGRY Block plantn	Reamal	Kankarkhol	15	Departmentally
2009-10	OFSDP(JICA)	Reamal	Kankarkhol PRF	83	Similta
2009-10	OFSDP(JICA)	Reamal	Kankarkhol PRF	81	Similihota
2009-10	OFSDP(JICA)	Reamal	Kankarkhol PRF	106	Suneripara
2009-10	OFSDP(JICA)	Reamal	Kankarkhol PRF	83	Kirtanpali
2009-10	OFSDP(JICA)	Reamal	Kankarkhol PRF	97	Chingurijharan
2009-10	OFSDP(JICA)	Reamal	Kankarkhol PRF	103	Lulang
2009-10	OFSDP(JICA)	Reamal	Kankarkhol PRF	75	Burbuda
2010-11	OFSDP(JICA)	Reamal	Kankarkhol PRF	70	Kainsar
2010-11	OFSDP(JICA)	Reamal	Kankarkhol PRF	75	Khandiamunda
2010-11	OFSDP(JICA)	Reamal	Kankarkhol PRF	64	Kurudkhol
2010-11	OFSDP(JICA)	Reamal	Kankarkhol PRF	87	Telimunda
2007-08	12th FC Grant-Silviculture Research RWC	Barkote	Kansar B RF(P)	20	Departmentally
1996-97	Economic plantation	Deogarh	Kansar RF	15	Departmentally
2002-03	Economic plantation (Block)	Deogarh	Kansar RF	50	Departmentally
2006-07	Economic plantn (Block)	Reamal	Kansar RF	15	Departmentally
2007-08	Economic plantn(block)	Deogarh	Kansar RF	20	Departmentally
2007-08	Economic plantn(block)	Reamal	Kansar RF	20	Departmentally
2007-08	Economic (RDF)	Deogarh	Kansar RF	20	Departmentally
2007-08	Economic (RDF)	Reamal	Kansar RF	20	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Reamal	Kansar RF(P)	128	Departmentally
2007-08	PWC	Reamal	Kansar RF	20	Departmentally
2008-09	OFSDP(JICA)	Reamal	Kansar RF(P)	78	Pudapada

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2008-09	OFSDP(JICA)	Reamal	Kansar RF(P)	71	Rampali
2008-09	OFSDP(JICA)	Reamal	Kansar RF(P)	78	Andhari
2008-09	OFSDP(JICA)	Reamal	Kansar RF(P)	78	Khairandha
2008-09	OFSDP(JICA)	Reamal	Kansar RF(P)	78	Malichuan
2008-09	OFSDP(JICA)	Reamal	Kansar RF(P)	74	Ghamamunda
2008-09	OFSDP(JICA)	Reamal	Kansar RF(P)	57	Iswarpali
2008-09	OFSDP(JICA)	Reamal	Kansar RF(P)	78	Badkuanarkhol
2008-09	OFSDP(JICA)	Deogarh	Kansar RF	61.5	Kumurapali
2008-09	OFSDP(JICA)	Deogarh	Kansar RF	78	Nirgundipali
2008-09	OFSDP(JICA)	Deogarh	Kansar RF	63.5	Kaliakhamar
2008-09	OFSDP(JICA)	Deogarh	Kansar RF	80	Mengiribahal
2008-09	OFSDP(JICA)	Deogarh	Kansar RF	61.5	Bijanali
2009-10	OFSDP(JICA)	Reamal	Kansar RF	100	Timur
2009-10	OFSDP(JICA)	Reamal	Kansar RF	105	Medinpur
2010-11	OFSDP(JICA)	Deogarh	Kansar RF	58	Dharmchandrapur
2010-11	OFSDP(JICA)	Deogarh	Kansar RF	80	Palkudar
2010-11	OFSDP(JICA)	Deogarh	Kansar RF	75	Bangalimunda
2010-11	OFSDP(JICA)	Reamal	Kansar RF	120	Kansar
2010-11	OFSDP(JICA)	Reamal	Kansar RF	90	Jharajhari
2010-11	OFSDP(JICA)	Reamal	Kansar RF	30	Departmentally
2010-11	OFSDP(JICA)	Reamal	Kansar RF	15	Medinpur
2010-11	CAMPA	Reamal	Kansar RF & Dasgharia KF under Dasgharia WS	50	Departmentally
2011-12	OFSDP(JICA)	Reamal	Kansar RF	78	Reamal
2011-12	OFSDP(JICA)	Reamal	Kansar RF	29	Darjimunda
2008-09	Compensatory Afforestation	Khamar	Kardapal	10	Kardapal VSS
2008-09	OFSDP(JICA)	Deogarh	Khajuria RF	78	Dimirikuda
2008-09	OFSDP(JICA)	Deogarh	Khajuria RF	74	Dudhapasi
2008-09	OFSDP(JICA)	Deogarh	Khajuria RF	78	Deopani
2008-09	OFSDP(JICA)	Deogarh	Khajuria RF	78	Ludhar
2009-10	OFSDP(JICA)	Deogarh	Khajuria RF	88	Bhaluguha
2009-10	OFSDP(JICA)	Deogarh	Khajuria RF	121	Pahalamara
2009-10	OFSDP(JICA)	Deogarh	Khajuria RF	143	Sahajbahal
2009-10	OFSDP(JICA)	Deogarh	Khajuria RF	88	Purnapani
2008-09	OFSDP(JICA)	Khamar	Kuladera RF	55	Hansla
2008-09	OFSDP(JICA)	Khamar	Kuladera RF	65.5	Bankholi
2010-11	OFSDP(JICA)	Khamar	Kuladera RF	120	Burbura
2010-11	OFSDP(JICA)	Khamar	Kuladera RF	95	Magarmuhan
2010-11	OFSDP(JICA)	Khamar	Kuladera RF	85	Malarbeda
2010-11	OFSDP(JICA)	Khamar	Kuladera RF	110	Tandiberni
2010-11	OFSDP(JICA)	Khamar	Kuladera RF	120	Biralamunda
2010-11	OFSDP(JICA)	Khamar	Kuladera RF	90	Madhupur

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2010-11	OFSDP(JICA)	Khamar	Kuladera RF	8	Bankholi
2008-09	OFSDP(JICA)	Reamal	Kundheigola PRF	76	Sadhubahali
2008-09	OFSDP(JICA)	Reamal	Kundheigola PRF	77	Khandadhuan
2008-09	OFSDP(JICA)	Reamal	Kundheigola PRF	74	Poipani
2008-09	OFSDP(JICA)	Reamal	Kundheigola PRF	78	Arkhpal
2008-09	OFSDP(JICA)	Reamal	Kundheigola PRF	74	Rairatanpur
2008-09	OFSDP(JICA)	Reamal	Kundheigola PRF	25	Departmentally
2009-10	OFSDP(JICA)	Reamal	Kundheigola PRF	97	Deojharan
2009-10	OFSDP(JICA)	Reamal	Kundheigola PRF	45	Pitasika
2009-10	OFSDP(JICA)	Reamal	Kundheigola PRF	60	Panchmahala
2010-11	OFSDP(JICA)	Reamal	Kundheigola PRF	100	Kaunsipal
2010-11	OFSDP(JICA)	Reamal	Kundheigola PRF	95	Haladiakhol
2010-11	OFSDP(JICA)	Reamal	Kundheigola PRF	70	Jambunali
2011-12	OFSDP(JICA)	Reamal	Kundheigola PRF	127	Kapagola
2007-08	Economic (RDF)	Khamar	Kunjam RF	50	Departmentally
2009-10	OFSDP(JICA)	Khamar	Kunjam RF	63	Dungapala
2009-10	OFSDP(JICA)	Khamar	Kunjam RF	107	San dhauragoth
2009-10	OFSDP(JICA)	Khamar	Kunjam RF	102	Paunshia
2010-11	OFSDP(JICA)	Khamar	Kunjam RF	20	Departmentally
2010-11	CAMPA	Khamar	Kunjam RF under Satyabandha WS	15	Departmentally
2011-12	Plin inside WP area under 13th FC grant	Khamar	Kunjam RF	20	Departmentally
1995-96	Economic plantation RDF	Pallahara	Malyagiri RF	20	Departmentally
1999-2000	Economic plantation	Pallahara	Malyagiri RF	50	Departmentally
2007-08	Bamboo W.C.	Pallahara	Malyagiri B/C-C	15	Departmentally
2008-09	OFSDP(JICA)	Pallahara	Malyagiri RF	64.5	Illisuan
2008-09	OFSDP(JICA)	Pallahara	Malyagiri RF	64.5	Tampar
2008-09	OFSDP(JICA)	Pallahara	Malyagiri RF	65.5	Jamrah
2008-09	OFSDP(JICA)	Khamar	Malyagiri RF	78	Tambur
2008-09	OFSDP(JICA)	Khamar	Malyagiri RF	78	Bahadakani
2008-09	OFSDP(JICA)	Khamar	Malyagiri RF	78	Padapasi
2008-09	OFSDP(JICA)	Khamar	Malyagiri RF	67	Nuagaon
2008-09	OFSDP(JICA)	Khamar	Malyagiri RF	66	Arjunjhari
2008-09	OFSDP(JICA)	Khamar	Malyagiri RF	65.5	Aluri
2009-10	OFSDP(JICA)	Pallahara	Malyagiri RF	105	Kerjenga
2009-10	OFSDP(JICA)	Pallahara	Malyagiri RF	65	Gudapada
2009-10	OFSDP(JICA)	Pallahara	Malyagiri RF	104	Namgaon
2009-10	OFSDP(JICA)	Pallahara	Malyagiri RF	69	Taptajharan
2009-10	OFSDP(JICA)	Khamar	Malyagiri RF	90	Kurumulla
2009-10	OFSDP(JICA)	Khamar	Malyagiri RF	62	Bhetia
2009-10	OFSDP(JICA)	Khamar	Malyagiri RF	115	Rohira

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2009-10	OFSDP(JICA)	Khamar	Malyagiri RF	41	Basudevpur
2009-10	OFSDP(JICA)	Khamar	Malyagiri RF	95	Kantiapasi
2010-11	OFSDP(JICA)	Pallahara	Malyagiri RF	120	Kadalibari
2010-11	OFSDP(JICA)	Pallahara	Malyagiri RF	120	Nuguda
2010-11	OFSDP(JICA)	Pallahara	Malyagiri RF	120	Sambala
2010-11	OFSDP(JICA)	Khamar	Malyagiri RF	110	Sapajhara
2010-11	OFSDP(JICA)	Khamar	Malyagiri RF	10	Padaposi
2010-11	CAMPA	Pallahara	Malygiri RF under Barbahali WS	15	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Barkote	Mandasila RF	90	Departmentally
2007-08	Bamboo W.C.	Barkote	Mandasila B/C-C	15	Departmentally
2009-10	OFSDP(JICA)	Barkote	Mandasila RF	61	Salohi
2010-11	OFSDP(JICA)	Barkote	Mandasila RF	120	Chapbahal
2010-11	OFSDP(JICA)	Barkote	Mandasila RF	76	Ratnapali
2007-08	Bamboo W.C.	Pallahara	Mankarchua RF Pallahara B/C-C	15	Departmentally
2008-09	OFSDP(JICA)	Pallahara	Mankarchua RF	65.5	Mankarchua
2009-10	OFSDP(JICA)	Pallahara	Mankarchua RF	125	Krutibaspur
2010-11	OFSDP(JICA)	Pallahara	Mankarchua RF	120	Itti
2010-11	OFSDP(JICA)	Pallahara	Mankarchua RF	120	Kolipali
2010-11	OFSDP(JICA)	Pallahara	Mankarchua RF	120	Naikanipali
2010-11	OFSDP(JICA)	Pallahara	Mankarchua RF	80	Timi
2011-12	OFSDP(JICA)	Pallahara	Mankarchua & Tabhapal	100	Tabhapal
2010-11	OFSDP(JICA)	Reamal	Naikul PRF	52	Kuskulia
1996-97	Economic plantation	Pallahara	Nizgarh RF	10	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Pallahara	Nizgarh A & B(P)	25	Departmentally
2009-10	OFSDP(JICA)	Pallahara	Nizgarh RF	20	Departmentally
2007-08	Bamboo W.C.	Pallahara	Old pauri B/C-C	20	Departmentally
2008-09	OFSDP(JICA)	Pallahara	Old pauri RF	44	Jolanda
2008-09	OFSDP(JICA)	Pallahara	Old pauri RF	64.5	Dudipani
2008-09	OFSDP(JICA)	Pallahara	Old pauri RF	64.5	Rugudidiha
2010-11	OFSDP(JICA)	Pallahara	Old pauri RF	120	Bhandhabhuin
2010-11	OFSDP(JICA)	Pallahara	Old pauri RF	90	Bhimkand
1996-97	Economic plantation	Barkote	Panguli RF	20	Departmentally
2007-08	Economic (RDF)	Barkote	Panguli RF	50	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Barkote	Panguli RF	80	Departmentally
2007-08	Bamboo W.C.	Barkote	Panguli B/C-C	15	Departmentally

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2008-09	OFSDP(JICA)	Barkote	Panguli RF	68	Singsat
2008-09	OFSDP(JICA)	Barkote	Panguli RF	60.5	Akhayanila
2008-09	OFSDP(JICA)	Barkote	Panguli RF	61.5	Harekrushna pur
2008-09	OFSDP(JICA)	Barkote	Panguli RF	62.5	Jagannathpur
2009-10	OFSDP(JICA)	Barkote	Panguli RF	91	Mavinita(A)
2009-10	OFSDP(JICA)	Barkote	Panguli RF	66	Ghantiposi
2009-10	OFSDP(JICA)	Barkote	Panguli RF	69	Naakeenala
2009-10	OFSDP(JICA)	Barkote	Panguli RF	98	Gopapur
2009-10	OFSDP(JICA)	Barkote	Panguli RF	149	Kaliapal
2009-10	OFSDP(JICA)	Barkote	Panguli RF	141	Talabahali
2009-10	OFSDP(JICA)	Barkote	Panguli RF	62	Kudagada
2010-11	OFSDP(JICA)	Barkote	Panguli RF	120	Indrasijharan
2010-11	OFSDP(JICA)	Barkote	Panguli RF	100	Ramchandrapur
1999-2000	Economic plantation	Barkote	Pauri RF	10	Departmentally
2007-08	Bamboo W.C.	Barkote	Pauri B/C-C	15	Departmentally
2009-10	OFSDP(JICA)	Barkote	Pauri RF	130	Netrabahal
2010-11	OFSDP(JICA)	Barkote	Pauri RF	120	Adyapur
2010-11	OFSDP(JICA)	Barkote	Pauri RF	100	Damtia
2010-11	OFSDP(JICA)	Barkote	Pauri RF	80	Pacheripani
2010-11	OFSDP(JICA)	Barkote	Pauri RF	115	Rugudkudar
2010-11	CAMPA	Barkote	Pauri RF under jalisual WS	30	Departmentally
2010-11	CAMPA	Barkote	Pauri RF under Gursangi WS	50	Departmentally
2011-12	OFSDP(JICA)	Barkote	Pauri RF	130	Tainsira
1999-2000	Economic plantation	Barkote	Pradhanpat RF	20	Departmentally
2006-07	Rivervalley project	Deogarh	Pradhanpat RF	50	Departmentally
2007-08	Economic plantn(block)	Barkote	Pradhanpat RF	20	Departmentally
2007-08	Economic (RDF)	Deogarh	Pradhanpat RF	30	Departmentally
2007-08	Bamboo W.C.	Deogarh	Pradhanpat B/C-C	20	Departmentally
2008-09	OFSDP(JICA)	Barkote	Pradhanpat RF	65.5	Brahminisal
2008-09	OFSDP(JICA)	Barkote	Pradhanpat RF	78	Brundabanpur
2008-09	OFSDP(JICA)	Barkote	Pradhanpat RF	74	Chaitanpali
2008-09	OFSDP(JICA)	Barkote	Pradhanpat RF	65.5	Nagdihi
2008-09	OFSDP(JICA)	Barkote	Pradhanpat RF	64	Chhuriabahal
2008-09	OFSDP(JICA)	Barkote	Pradhanpat RF	65.5	Basaloi
2008-09	OFSDP(JICA)	Barkote	Pradhanpat RF	46	Utuniamunda
2008-09	OFSDP(JICA)	Deogarh	Pradhanpat RF	78	Kharumunda
2008-09	OFSDP(JICA)	Deogarh	Pradhanpat RF	78	Tainsar
2008-09	OFSDP(JICA)	Deogarh	Pradhanpat RF	78	Badabaliposi
2008-09	OFSDP(JICA)	Deogarh	Pradhanpat RF	78	Kureinbahal

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2009-10	OFSDP(JICA)	Barkote	Pradhanpat RF	53	Barbahal
2009-10	OFSDP(JICA)	Barkote	Pradhanpat RF	45	Kusumkata
2010-11	OFSDP(JICA)	Deogarh	Pradhanpat RF	75	Pudapada
2010-11	OFSDP(JICA)	Deogarh	Pradhanpat RF	118	Dumripani
2010-11	OFSDP(JICA)	Barkote	Pradhanpat RF	69	Baichenbgali
2010-11	OFSDP(JICA)	Barkote	Pradhanpat RF	65	Tunda
2010-11	OFSDP(JICA)	Barkote	Pradhanpat RF	90	Beteijharan
2010-11	OFSDP(JICA)	Barkote	Pradhanpat RF	115	Talkholi
2010-11	OFSDP(JICA)	Barkote	Pradhanpat RF	15	Brahmnimal
2011-12	OFSDP(JICA)	Deogarh	Pradhanpat RF	80	kalamati
2006-07	Rivervalley project	Deogarh	Pravasuni RF	25	Departmentally
2007-08	Bamboo W.C.	Deogarh	Pravasuni B/C-C	20	Departmentally
2008-09	OFSDP(JICA)	Deogarh	Pravasuni RF	78	Kailash
2009-10	OFSDP(JICA)	Deogarh	Pravasuni RF	65	Kanteikoli
2009-10	OFSDP(JICA)	Deogarh	Pravasuni RF	100	Gundeimara
2009-10	OFSDP(JICA)	Deogarh	Pravasuni RF	81	Bargadia
2009-10	OFSDP(JICA)	Deogarh	Pravasuni RF	84	Pravasuni
2009-10	OFSDP(JICA)	Deogarh	Pravasuni RF	115	Baliaghati
2009-10	OFSDP(JICA)	Deogarh	Pravasuni RF	103	Amulpani
2010-11	OFSDP(JICA)	Deogarh	Pravasuni RF	120	Bhalukhol
2010-11	OFSDP(JICA)	Deogarh	Pravasuni RF	120	Dangakhol
2010-11	OFSDP(JICA)	Deogarh	Pravasuni RF	100	Gailo
2010-11	OFSDP(JICA)	Deogarh	Pravasuni RF	120	Kardapal
2010-11	OFSDP(JICA)	Deogarh	Pravasuni RF	67	Asurkhol
2010-11	OFSDP(JICA)	Deogarh	Pravasuni RF	105	Mandarnali
2010-11	CAMPA	Deogarh	Pravasuni RF under Gundeimara WS	20	Departmentally
2010-11	CAMPA	Deogarh	Pravasuni RF under Gogua WS	50	Departmentally
2010-11	Bamboo plantation under State Plan	Deogarh	Pravasuni RF	20	Departmentally
2011-12	OFSDP(JICA)	Deogarh	Pravasuni RF	138	Laxmipur
2011-12	OFSDP(JICA)	Deogarh	Pravasuni RF	145	Tikilijharan
2011-12	OFSDP(JICA)	Deogarh	Pravasuni RF	150	Jhargogua
2011-12	OFSDP(JICA)	Deogarh	Pravasuni RF	150	Budhikutuni
1997-98	Economic plantation	Deogarh	Rajamunda PRF	7	Departmentally
2006-07	River valley project	Reamal	Randhadevi RF	30	Departmentally
2007-08	Economic (RDF)	Reamal	Randhadevi RF	50	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Reamal	Randhadevi RF	60	Departmentally

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2007-08	12th FC Grant-Silviculture Research RWC	Reamal	Rambhadevi RF	70	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Deogarh	Rambhadevi RF (P)	50	Departmentally
2007-08	Bamboo W.C.	Reamal	Rambhadevi B/C-C	15	Departmentally
2008-09	OFSDP(JICA)	Deogarh	Rambhadevi (P)	78	Kamamunda
2008-09	OFSDP(JICA)	Deogarh	Rambhadevi (P)	78	Balanda
2008-09	OFSDP(JICA)	Deogarh	Rambhadevi (P)	78	Masinita
2010-11	OFSDP(JICA)	Reamal	Rambhadevi(P)	76	Kadamdarh colony
2010-11	OFSDP(JICA)	Deogarh	Rambhadevi (P)	85	Katei
2010-11	OFSDP(JICA)	Reamal	Rambhadevi RF	110	Sulia
2010-11	OFSDP(JICA)	Deogarh	Rambhadevi RF	90	Sankarpur
2010-11	CAMPA	Reamal	Rambhadevi Rf under Baisyapada WS	60	Departmentally
2007-08	12th FC Grant-Silviculture Research RWC	Khamar	Rangiapal PRF(P)	30	Departmentally
1996-97	Economic plantation	Pallahara	Ranjo PRF	25	Departmentally
2006-07	Compensatory plantn	Pallahara	Ranjo	10	Departmentally
2007-08	Economic (RDF)	Pallahara	Ranjo PRF	30	Departmentally
2009-10	OFSDP(JICA)	Pallahara	Saida RF	64	Kantanali
2009-10	OFSDP(JICA)	Pallahara	Saida RF	125	Sairha
2009-10	OFSDP(JICA)	Pallahara	Saida RF	95	Simlipali
2007-08	12th FC Grant-Silviculture Research RWC	Khamar	Sanda PRF(P)	55	Departmentally
2010-11	OFSDP(JICA)	Pallahara	Sarbeda PRF	120	Pechamundi
2008-09	OFSDP(JICA)	Pallahara	Tamkia RF	65.5	Kardapal
2009-10	OFSDP(JICA)	Pallahara	Tamkia RF	55	Kamparkala
2007-08	12th FC Grant-Silviculture Research RWC	Reamal	Tarang PRF(P)	70	Departmentally
2010-11	OFSDP(JICA)	Deogarh	Telikusum PRF	90	Desinkuli
2007-08	12th FC Grant-Silviculture Research RWC	Barkote	Thianal RF(P)	70	Departmentally
2010-11	OFSDP(JICA)	Barkote	Thianal RF	95	Mandasila(B)
2006-07	Compensatory plantn	Deogarh	Tirib	10	Departmentally
2007-08	Bamboo W.C.	Barkote	Tusula B/C-C	15	Departmentally
	Non planted	Pallahara	Balibahal	149.0094	
			Total	2392.6894	

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5.1.5. Abstract of old plantation Area: - Range and Block wise area distribution of notified old plantation is given in the table below.

Table No. 250			
Range & Block wise Abstract of Old plantation			
S.No	Range	Block	Area of Plntn
1	Pallahara	Bhaluhuli	30.36
2		Kakharua	64
3		Malyagiri	50
4		Nizgarh B	15
5		Nizgarh A	50
6		Ranjo	40.09
		Total	249.45
1	Khamar	Danda	24.28
2		Kunjam	125.47
		Total	149.75
1	Barkote	Badtaila	349.91
2		Banbira	8.09
3		Kansar A	27
4		Kaunshibahal	60
5		Paburi	97.11
		Total	542.11
1	Reamal	Kankarkhol	307
2		Rambhadevi	59
		Total	366
1	Deogarh	Pravasuni	4.05
2		Kansar RF	688.72
3		Pradhanpat	39.02
		Total	731.79
		Grand Total	2039.10

5.1.6. Abstract of notified new plantation Area: - Range and Block wise area distribution of notified new plantation is given in the table below.

Table No. 251			
Range and block wise abstract of new plantation			
S.No	Range	Block	Area of Plantation
1	Pallahara	Kakharua PRF	50
2		Malyagiri RF	997.5
3		Mankarchua RF	745.5
4		Nizgarh A	30
5		Nizgarh B	25
6		Old pauri RF	403

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7		Ranjo PRF	65
8		Saida RF	284
9		Sarbeda PRF	120
10		Tamkia RF	120.5
11		Balibahal PF	149.0094
		Total	2989.5094
1	Khamar	Badasada PRF	45
2		Bankhol PRF	70
3		Birpal RF	10
4		Charigochia RF	508
5		Gurusulei RF	183
6		Jambua RF	156
7		Kardapal	10
8		Kuladera RF	748.5
9		Kunjam RF	377
10		Malyagiri RF	955.5
11		Rangiapal PRF	30
12		Sanda PRF	55
13		Danda RF	210
		Total	3358.000
1	Barkote	Badtaila RF	1862.5
2		Banbira PRF	187.5
3		Kansar B RF	20
4		Mandasila RF	362
5		Panguli RF	1313.5
6		Pauri RF	780
7		Pradhanpat RF	950.5
8		Thianal RF	165
9		Tusula PRF	15
		Total	5656.000
1	Reamal	Ghodapaka RF	162.68
2		Gogua RF	900
3		Hadamunda PRF	187
4		Kankarkhol PRF	939
5		Kansar RF	1412
6		Kundheigola PRF	998
7		Naikul PRF	52
8		Rambhadevi RF	471
9		Tarang PRF	70
		Total	5191.680
1	Deogarh	Bangalimunda PRF	286
2		Chilantikhiol PRF	616
3		Hadamunda PRF	141

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4		Jhadeswar PRF	452
5		Kalkath PRF	65
6		Kansar RF	662.5
7		Khajuria RF	748
8		Pradhanpat RF	685
9		Pravasini RF	1976
10		Rajamunda PRF	7
11		Rambhadevi RF	459
12		Telikosum PRF	90
13		Tirib PRF	10
		Total	6197.500
		Grand Total	23392.6894

5.1.7. Abstract of plantation Area : - Year and scheme wise area distribution of notified plantation is given in the table below.

Table No. 252

Year and Scheme wise area Abstract of plantation

Year of pltn.	Silviculture research	Bamboo	Block	CAMPA	Compensatory afforestation	RDF	Economic	OFSDP(JICA)	13 FC grant	River Valley	PWC	Old pltn	Total
1961-62	00	00	00	00	00	00	00	00	00	00	00	47.75	47.75
1962-63	00	00	00	00	00	00	00	00	00	00	00	73.65	73.65
1963-64	00	00	00	00	00	00	00	00	00	00	00	80.94	80.94
1964-65	00	00	00	00	00	00	00	00	00	00	00	80.94	80.94
1965-66	00	00	00	00	00	00	00	00	00	00	00	67.99	67.99
1966-67	00	00	00	00	00	00	00	00	00	00	00	80.94	80.94
1967-68	00	00	00	00	00	00	00	00	00	00	00	92.16	92.16
1968-69	00	00	00	00	00	00	00	00	00	00	00	52.61	52.61
1970-71	00	00	00	00	00	00	00	00	00	00	00	48.56	48.56
1971-72	00	00	00	00	00	00	00	00	00	00	00	60.7	60.7
1972-73	00	00	00	00	00	00	00	00	00	00	00	69.21	69.21
1973-74	00	00	00	00	00	00	00	00	00	00	00	48.97	48.97
1974-75	00	00	00	00	00	00	00	00	00	00	00	12.14	12.14
1975-76	00	00	00	00	00	00	00	00	00	00	00	20.23	20.23
1976-77	00	00	00	00	00	00	00	00	00	00	00	2.02	2.02
1977-78	00	00	00	00	00	00	00	00	00	00	00	23.06	23.06
1980-81	00	00	00	00	00	00	00	00	00	00	00	110.23	110.23
1981-82	00	00	00	00	00	00	00	00	00	00	00	50	50
1982-83	00	00	00	00	00	00	00	00	00	00	00	50	50
1983-84	00	00	00	00	00	00	00	00	00	00	00	10	10
1984-85	00	00	00	00	00	00	00	00	00	00	00	10	10
1986-87	00	00	00	00	00	00	00	00	00	00	00	60	60

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1987-88	00	00	00	00	00	00	00	00	00	00	00	75	75
1988-89	00	00	00	00	00	00	00	00	00	00	00	75	75
1989-90	00	00	00	00	00	00	00	00	00	00	00	100	100
1990-91	00	00	00	00	00	00	00	00	00	00	00	60	60
1991-92	00	00	00	00	00	00	00	00	00	00	00	352	352
1992-93	00	00	00	00	00	00	00	00	00	00	00	150	150
1993-94	00	00	00	00	00	00	00	00	00	00	00	20	20
1994-95	00	00	00	00	00	00	00	00	00	00	00	55	55
1995-96	00	00	00	00	00	170	00	00	00	00	00	00	170
1996-97	00	00	00	00	00	00	130	00	00	00	00	00	130
1997-98	00	00	00	00	00	00	7	00	00	00	00	00	7
1998-99	00	00	00	00	00	00	00	00	00	00	00	00	00
1999-00	00	00	00	00	00	00	80	00	00	00	00	00	80
2000-01	00	00	00	00	00	00	00	00	00	00	00	00	00
2001-02	00	00	20	00	00	00	00	00	00	00	00	00	20
2002-03	00	00	65	00	00	00	00	00	00	00	00	00	65
2003-04	00	00	00	00	00	00	00	00	00	00	00	00	00
2004-05	00	00	00	00	00	00	00	00	00	00	00	00	00
2005-06	00	00	00	00	00	00	00	00	00	00	00	00	00
2006-07	00	00	50	00	80	00	00	00	00	125	00	00	255
2007-08	1178	200	70	00	00	300	00	00	00	00	20	00	1768
2008-09	00	00	00	00	10	00	00	5424	00	00	00	00	5434
2009-10	00	00	00	00	10	00	00	5664	00	00	00	00	5674
2010-11	00	30	00	290	00	00	00	7567	00	00	00	00	7887
2011-12	00	15	00	00	00	00	00	1688.68	50	00	00	00	1753.68
Total	1178	245	205	290	100	470	217	20343.68	50	125	20	2039.1	25282.78

5.2. General Character of Vegetation:

5.2.1. Composition: - It consists of mostly hardy species. The soil is highly eroded and susceptible to sheet and gully erosion. In some patches the topsoil have been washed away exposing the hard morums and rocky surface. The planted species are Teak, Khair, Eucalyptus, Bija, Sisoo, Bandhana, Gambhari, Sabai-grass, Cashewnut, Siris, Chakundi, Simuli, Malguri and Patalgarud. The natural miscellaneous vegetation like Sal, Rohini, Karla, Aoinla, Jamu, Kurei, Dhaura, Dhatuki and Kanteikoli exist in this area. The crop standing over this area conforms to Northern dry mixed deciduous forest and dry peninsular sal forest.

5.2.2. Distribution: - The area allotted to this Working Circle is distributed in all Ranges, which comprises 19.17 % of the managed area. The density of the crop included in this Working Circle varies from 0.2 to 0.4. In plain and valley area the density varies from 0.3 to 0.4, where as in hilly area the density varies from 0.2 to 0.4. The variation of density is due to the adjoining environmental influence and the fertility of the area.

5.2.3. Climber Menace: - During the out going Plan period, all annual planting area had not been worked out due to scarcity of allotment. Also climber cutting had not been done due to financial allocation. At present 15 % of existing trees are affected by climber. Climber is affecting the growth of trees and quality of timber. The climbers are to be cut twice with the Plan period to avoid its menace.

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5.2.4. Weed Growth: - Unwanted plants are common in the forest floor. During rainy season vast number of weeds grow in the forest floor of this tract. Weeds tend to interfere with the growth of individuals of favoured species. Annual weeds died during the month of February. Dry weeds invite forest fire.

5.3. Plantation Treatment Series:

5.3.1. Plantation treatment Series : - This Working Circle constituted with 05 numbers of planting series depending on distribution of area. The area allotted to different plantation treatment series will be given in the table below.

Table No. 253

Planting series

Sl. No.	Name of planting series	Name of Range	Planted area in ha.
1	Deogarh	Deogarh	6929.29
2	Reamal	Reamal	5557.68
3	Barkote	Barkote	6198.11
4	Pallahara	Pallahara	3238.9594
5	Khamar	Khamar	3507.75
		Total	25431.7894

5.3.2. Reason for Constitution of Plantation treatment Series : - The number of planting series formed in the out going Plan have been disturbed in this revision. There are 05 plantation treatment series now formed for convenience of working, availability of labour, distribution of area, decentralization of nursery etc.

5.4. Special Objectives of Management:

5.4.1. The special objectives of management of Plantation Working Circle have been given in the table below.

Table No. 254

Special objectives of management

Sl No.	Special objectives of management
1	To improve the condition of planted economical valuable species with active participation of the people.
2	To reduce soil erosion in the degraded portion of the forest blocks.
3	To enrich the micro-edaphic condition for making the forests more productive in the near future.
4	To protect the area and minimize its future destruction.
5	To increase socio economical condition of the labourers.
6	To increase continuous inspection and there by reduces further degradation.
7	To create favorable condition for habitat and multiplication of the wildlife.

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5.5. Analysis and Valuation of the Crop:

5.5.1. Stock Map: - The entire area covered by Plantation Working Circle have been shown on the stock map. Sample points enumeration in the managed area have been done covering an area of 0.1 ha, keeping point as the center of the plot. Stock map have been prepared by field staff.

5.5.2. Age Class Distribution: - All age classes of trees of different species are present in this tract. The numbers of trees in different age classes differ from each other. In the inventory data it is found that as the age of trees increases the number of tree decreases. The reasons of decrease in the number of tree are illicit felling, uprooted and death.

5.5.3. Type of Enumeration: - Partial enumeration in separate sample units has been carried out to ascertain the growing stock in this tract. The exact girth, which is 30 cm or more at breast height, has been recorded for all species.

5.5.4. Status of Regeneration : - The regeneration survey is carried out in a plot of size 2 mt x 2 mt in the middle of each sample unit. The data collected in regeneration survey have been analyzed in Chapter II-A of Part-I.

5.5.5. Special Feature: - There is no any significant change observed in the forest area managed during the out going Plan period. Firewood and small timber demand of the inhabitant of this locality are full filled from the forest, which are not managed in this revision. Forest fire is an important tragedy to the forest of this tract.

5.6. Silvicultural System:

5.6.1. System: - The old planted trees have not attended exploitable girth. So conventional silvicultural system is not prescribed for Plantation Working Circle.

5.6.2. Reasons : - The area allotted to this Working Circle contains plantation. There will not be any exploitation except removal of uprooted trees. The operations to be carried out involve protection, tending, and suitable soil and moisture conservation measure that will be silviculturally compatible to the site condition.

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5.6.3. Rotation: - There is no any experimental plot in this division to determine exactly the year at which the tree attending exploitable girth. The planned number of years between regeneration and maturity of a crop will vary depending on its site quality. The rotation will be the average age at which a tree is considered mature for felling. A plantation treatment cycle of 10 year has been fixed for all treatment series in this Working Circle. Basing on treatment cycle, the Rotation of all planting species has been given in the table below.

Table No. 255			
Rotation			
Sl. No.	Name of species	Rotation in years	Longevity in years
1	Bija	100	150
2	Sisoo	130	500
3	Teak	60	456
4	Eucalyptus	20	394
5	Bandhan	100	150

5.7. Exploitable Diameters:

5.7.1. The exploitable girth of different species have been fixed basing on the size to which tree can not develop unsoundness and give maximum financial return. The exploitable girth of the species in different planting area is given below.

Table No. 256		
Exploitable Diameters		
Name of the Blocks	Name of the trees	Exploitable g.b.h in cm
All blocks	Teak	120
	Gambhar	120
	Sisoo	105
	All other species	135

5.8. Plantation Treatment Cycle:

5.8.1. Plantation Treatment Cycle: - It has been fixed basing on the period of the Working Plan or the number of coupes in each plantation treatment series. As per Para 5 of the Working Plan Code and for complete execution of work in each plantation treatment series, the plantation treatment cycle of 10 year has been fixed.

5.8.2. Yield Calculation: - Felling of exploitable green trees are prohibited in Plantation Working Circle. Only uprooted and illicit felled trees are to be marked for extraction. So yield calculation is not applicable in Plantation Working Circle.

5.9. Table of Plantation Treatments:

5.9.1. Coupe: - Basing on the period of the Plan, each plantation treatment series has been divided into 10 coupes. All coupes in each planting series have been shown on the topo sheet 1~ 50000 scale. The working year of each coupe in different planting series is given in the table below.

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Table No. 257

Distribution of area of Deogarh Plantation Series

Plantation treatment series	Range	Block	Comp't No	Planted area in ha.	Coupe	Year of working
Deogarh	Deogarh	Rambhadevi RF Telikusum PRF Rajamunda PRF Kalkath PRF Tirib PRF	17, 20, 23, 24 & 25 1 1 1 1	631.000	I	2015-16
Deogarh	Deogarh	Pravasuni RF	7, 9, 18, 21, 22	623.000	II	2016-17
Deogarh	Deogarh	Pravasuni RF	23, 25, 30, 39, 41	665.000	III	2017-18
Deogarh	Deogarh	Pravasuni RF	44, 47, 48, 51, 53	792.050	IV	2018-19
Deogarh	Deogarh	Pradhanpat RF	1, 7, 8, 10, 11, 13 & 14	724.020	V	2019-20
Deogarh	Deogarh	Khajuria RF	7, 8, 12 & 14	748.000	VI	2020-21
Deogarh	Deogarh	Kansar RF	1	675.000	VII	2021-22
Deogarh	Deogarh	Kansar RF	1	676.220	VIII	2022-23
Deogarh	Deogarh	Jhadeswar RF Bangalimunda PRF	1 1	638.000	IX	2023-24
Deogarh	Deogarh	Chilantikhol PRF Hadamunda PRF	1 1	757.000	X	2024-25
			Total	6929.29		

Table No. 258

Distribution of area of Reamal Plantation Series

Plantation treatment series	Range	Block	Comp't No	Planted area in ha.	Coupe	Year of working
Reamal	Reamal	Rambhadevi RF	2, 3, 6, 7, 8, 12 & 15	530.000	I	2015-16
Reamal	Reamal	Gogua RF	4, 7, 8, 10	569.000	II	2016-17
Reamal	Reamal	Gogua RF Hadamunda PRF	11, 12 & 13	518.000	III	2017-18
Reamal	Reamal	Kankarkhol PRF	1	623.000	IV	2018-19
Reamal	Reamal	Kankarkhol PRF	1	623.000	V	2019-20
Reamal	Reamal	Kansar RF	1	524.000	VI	2020-21
Reamal	Reamal	Kansar RF	1	524.000	VII	2021-22
Reamal	Reamal	Kansar RF Ghodapaka PRF	1 1	526.680	VIII	2022-23
Reamal	Reamal	Kundheigola PRF	1	560.000	IX	2023-24
Reamal	Reamal	Kundheigola PRF Naikul PRF Tarang PRF	1 1 1	560.000	X	2024-25
			Total	5557.680		

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Table No. 259

Distribution of area of Barkote Plantation Series

Plantation treatment series	Range	Block	Comp't No	Planted area in ha.	Coupe	Year of working
Barkote	Barkote	Badtaila RF	4, 7 to 12	642.500	I	2015-16
Barkote	Barkote	Badtaila RF	13,14,17 to 19, 27 & 30	640.500	II	2016-17
Barkote	Barkote	Badtaila RF	36, 37, 39 to 41	657.910	III	2017-18
Barkote	Barkote	Badtaila RF Banbira PRF KansarA RF Kansar B RF Kaureshibahal PRF Tusula PRF	43, 44 & 46 1 1 1 1 1	589.09	IV	2018-19
Barkote	Barkote	Pradhanpat RF Mandasila RF	18 to 20 1	690.000	V	2019-20
Barkote	Barkote	Pradhanpat RF	21,22,24 & 26 to 29	622.500	VI	2020-21
Barkote	Barkote	Panguli RF	1 to 3	569.500	VII	2021-22
Barkote	Barkote	Panguli RF Thiannl RF	4 to 7 1	677.000	VIII	2022-23
Barkote	Barkote	Panguli RF Pauri RF	8 1	554.000	IX	2023-24
Barkote	Barkote	Pauri RF	1	555.110	X	2024-25
			Total	6198.110		

Table No. 260

Distribution of area of Pallahara Plantation Series

Plantation treatment series	Range	Block	Comp't No	Planted area in ha.	Coupe	Year of working
Pallahara	Pallahara	Malyagiri RF	2, 11, 13 & 15	319.500	I	2015-16
Pallahara	Pallahara	Malyagiri RF	3, 5 & 6	354.500	II	2016-17
Pallahara	Pallahara	Malyagiri RF	7 to 10	373.500	III	2017-18
Pallahara	Pallahara	Mankarchua RF	1 & 4	385.500	IV	2018-19
Pallahara	Pallahara	Mankarchua RF	2 & 3	360.000	V	2019-20
Pallahara	Pallahara	Nizgarh A RF Nizgarh B RF Sarbeda PRF Ranjo PRF	1 1 1 1	345.090	VI	2020-21
Pallahara	Pallahara	Tamkia RF Balibahal PF	1 1	269.5094	VII	2021-22
Pallahara	Pallahara	Saida RF Bhaluhuli PRF	1 1	314.360	VIII	2022-23
Pallahara	Pallahara	Old Pauri RF	1	258.000	IX	2023-24
Pallahara	Pallahara	Old Pauri RF Kakharua PRF	1 1	259.000	X	2024-25
			Total	3238.9594		

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Table No. 261						
Distribution of area of Khamar Plantation Series						
Plantation treatment series	Range	Block	Comp't No	Planted area in ha.	Coupe	Year of working
Khamar	Khamar	Malyagiri RF	18 to 20	370.500	I	2015-16
Khamar	Khamar	Malyagiri RF	21 & 22	339.000	II	2016-17
Khamar	Khamar	Malyagiri RF	23, 26 & 28	246.000	III	2017-18
Khamar	Khamar	Chargochhia RF	1	316.000	IV	2018-19
Khamar	Khamar	Chargochhia RF Biripal RF Badasada PRF Bankhol PRF	1 1 1 1	317.000	V	2019-20
Khamar	Khamar	Gurusulei RF Jambua RF	1 1	339.000	VI	2020-21
Khamar	Khamar	Kunjam RF Kardapal PRF	1 & 2 1	324.000	VII	2021-22
Khamar	Khamar	Kunjam RF Kuladera RF	3 4	343.970	VIII	2022-23
Khamar	Khamar	Kuladera RF	1,2,3 & 5	483.000	IX	2023-24
Khamar	Khamar	Kulaera RF Danda RF Rangiapal PRF Sanda PRF	6 1 1 1	429.280	X	2024-25
			Total	3507.75		

Table No. 262						
Annual Plantation working area						
Year	Name of Plantation Series					Total area in ha.
	Pallahara	Khamar	Barkote	Deogarh	Reamal	
2015-16	319.5000	370.500	642.500	631.000	530.000	2493.5000
2016-17	354.5000	339.000	640.500	623.000	569.000	2526.0000
2017-18	373.5000	246.000	657.910	665.000	518.000	2460.4100
2018-19	385.5000	316.000	589.090	792.050	623.000	2705.6400
2019-20	360.0000	317.000	690.000	724.020	623.000	2714.0200
2020-21	345.0900	339.000	622.500	748.000	524.000	2578.5900
2021-22	269.5094	324.000	569.500	675.000	524.000	2362.0094
2022-23	314.3600	343.970	677.000	676.220	526.680	2538.2300
2023-24	258.0000	483.000	554.000	638.000	560.000	2493.0000
2024-25	259.0000	429.280	555.110	757.000	560.000	2560.3900
Total	3238.9594	3507.750	6198.110	6929.290	5557.680	25431.7894

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5.10. Method of Executing the Plantation Treatment:

5.10.1. Prescriptions given in the Orissa Plantation Manual, 1977 and other executive instructions, in force, shall be followed meticulously in addition to the following guidelines. It is needless to emphasize that success of the plantation depends largely on good plantation treatments and timely operations in the field. However, a tentative work schedule with different operations is indicated below.

5.10.2. Demarcation: - All annual coupes will be demarcated and inspected during cold weather previous to the year in which it falls due for treatment. As far as possible coupes line has been made to coincide with the plantation boundary. At the time of demarcation, single white paint ring shall be given or renewed on the trees standing at a visible distance along the coupe line. The coupe number and year of plantation treatment shall be shown in the displayed signboard.

5.10.3. Site Map : - A site map on 1:50,000 scale topo sheet or in an appropriately large scale showing the details of area, direction of slope, nature of erosion, biotic interference, site specific species, aspiration of the people and other factors shall be prepared.

5.10.4. Treatment Map : - 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 preceding to the year of plantation treatment.

5.10.5. Tending: - The existing plantations in the managed area of this revision over an area of 5419.65 ha have been taken for tending operation. Growth of the existing planted trees is not uniform. In some cases, plantations have been adversely affected by biotic interference, where as in other cases, the plantations have been protected. Moreover, the year of these plantations is made available from the out going Plan and Office record. Further, these plantations have yet not reached the harvesting stage. Hence uniform tending operation like cleaning, pruning and climber cutting for all the planted area is prescribed.

5.10.6. No systematic survey of these plantations was carried out, however these areas are enumerated to ascertain the survival percentage of the plantation. The survival percentage gives a general idea of the condition of the existing plantations. However, on an average, about 614.0 hectares shall be taken up annually for the treatments so as to cover once the entire area of the Working Circle within the Plan period.

5.10.7. Tending in Teak Plantation: - Since the teak plantations are varying in age, these are in need of appropriate silvicultural operations to further boost the growth. They require operations like pruning and climber cutting. However, the following shall be carried out in the annual coupes. (i) All dead and uprooted trees

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shall be removed departmentally. (ii) All climbers shall be cut. (iii) Pruning should be done in the plantations that are bushy and branchy. (iv) Loranthus attacked branches shall be lopped. (v) Thinning shall be done only in the congested crop.

5.10.8. Tending in Other Plantation: - Growth in the miscellaneous plantations tends to become bushy and branchy for want of cleaning and pruning. This is more prevalent in case of miscellaneous plantations with species like Acaci, Chakunda, Siris, Gambhar, Amla etc, which are in regular need of cleaning, pruning and climber cutting. These operations are beneficial in the early years of the formation of the plantations followed with thinning in the later years.

5.10.9. Items of Operation in Cleaning : - (i) Cutting and extraction of the marked trees if left. (ii) Extraction of balance logs and firewood if any. (iii) Cutting of shoots of the trees damaged during extraction, if it hampers the growth of any promising shoots. (iv) Cutting of climbers to be anticipated to climb in the principal species.

5.10.10. Thinning: - Thinning is prescribed only to regulate the distribution of growing space for improving the growth and form of trees that are left in the annual worked out area. In this prescription permanent gaps are not created because regeneration is not the object of thinning. The area included in this Working Circle is irregular natural forest. Only selection thinning in congested patches is prescribed with a Thinning Cycle of 10 years. Thinning shall be allowed if it has not been done in the rehabilitation coupe.

5.10.11. Items of Operation in Thinning : - Selection thinning will be carried out in all canopy classes, removing the trees of the following characteristics. (i) Inferior trees which restrict the development of their neighbor principal species from all side. (iii) All uprooted and elicit felled trees.

5.11. Other Regulation:

5.11.1. Grazing: - The coupe shall be closed to grazing for a period of 05 years after the coupe working. 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 coupe about such restriction. The concern Range Officer will issue notice with a direction not to enter the herd into the working coupe.

5.11.2. Lopping : - The local people are regularly lopping 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 in not prescribed.

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5.11.3. Fire Protection: - All coupes shall be rigidly protected from forest fire for a minimum period of 10 years after treatments. As per previous record all the forest area were affected by fire in every year. Protection of fire in the working area can be practically possible by watching it from the month of February to June in every year. Provision of watcher has been prescribed and the annual allotment required for fire protection is given in a separate chapter.

5.11.4. 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. 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). The amount required for climber cutting during the Plan period is given in a separate chapter.

5.11.5. Singling out of Shoot: - In the bushy area two healthy and good shoots of a stump will be selected to retain and others shall be cut. The local laborers will take the materials obtained by this operation as an incentive for their works; those are engaged by the Forest Department.

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5.12. Plantation Norm:

5.12.1. The plantation norm for block and RDF plantation is given in the table below.

Table No. 263

Wage rate wise plantation norm

RDF plantation @300 plants per ha — This norm has been implemented since 2005-06 vide memo No.28329 dt.22.12.2005 of PCCF,ODISHA.

Year	Mandays generated @150/-				Mandays generated @90/-				Mandays generated @70/-				Mandays generated @55/-				Mandays generated @50/-			
	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total
	Nos.	Amount			Nos.	Amount			Nos.	Amount			Nos.	Amount			Nos.	Amount		
oth	14	3100	255	2355	14	1260	153	1413	14	980	119	1099	14	770	94	864	14	700	87.5	787.5
1st	64	9600	1268	10868	64	5760	761	6521	64	4480	592	5072	64	770	94	864	64	3200	442.5	3643
2nd	13	1950	857	2807	13	1170	514	1684	13	910	400	1310	13	770	94	864	13	650	300	950
3rd	7	1050	750	1800	7	630	450	1080	7	490	350	840	7	770	94	864	7	280	300	580
Total	98	14700	3130	17830	98	8820	1878	10698	98	6860	1461	8321	98	770	94	864	98	4810	1130	5940

Block plantation @1600 plants per ha — This norm has been implemented since 2012-13 vide memo No.6944 dt.26.04.2012 of PCCF,ODISHA.

Year	Mandays generated @150/-				Mandays generated @90/-				Mandays generated @70/-				Mandays generated @55/-				Mandays generated @50/-			
	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total
	Nos.	Amount			Nos.	Amount			Nos.	Amount			Nos.	Amount			Nos.	Amount		
oth	99	14850	6000	20850	99	8910	3600	12510	99	6930	2800	9730	99	5445	2200	7645	99	4950	2000	6950
1st	112	16800	4200	21000	112	10080	2520	12600	112	7840	1960	9800	112	6160	1540	7700	112	5600	1400	7000
2nd	55	8250	1800	10050	55	4950	1080	6030	55	3850	840	4690	55	3025	660	3685	55	2750	600	3350
3nd	40	6000	1800	7800	40	3600	1080	4680	40	2800	840	3640	40	2200	660	2860	40	2000	600	2600
4th	29	4350	450	4800	29	2610	270	2880	29	2030	210	2240	29	1595	165	1760	29	1450	150	1600
5th	29	4350	450	4800	29	2610	270	2880	29	2030	210	2240	29	1595	165	1760	29	1450	150	1600
6th	29	4350	450	4800	29	2610	270	2880	29	2030	210	2240	29	1595	165	1760	29	1450	150	1600
Total	393	58950	15150	74100	393	35370	9090	44460	393	27510	7070	34580	393	21615	5555	27170	393	19650	5050	24700

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5.12.2. The cost norm for CAMPA is given in the table below.

Table No. 264

CAMPA

Block plantation @1600 plants per ha	This norm has been implemented since 2009-10 vide memo No.708 dt.06.01.2010 of PCCF,ODISHA.

Year	Mandays generated @150/-				Mandays generated @90/-				Mandays generated @70/-				Mandays generated @55/-				Mandays generated @50/-			
	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total	Mandays		Material cost	Total
	Nos.	Amount			Nos.	Amount			Nos.	Amount			Nos.	Amount			Nos.	Amount		
oth	106	15900	6000	21900	106	9540	3600	13140	106	7420	2800	10220	106	5830	2200	8030	106	5300	2000	7300
1st	119	17850	4125	21975	119	10710	2482	13192	119	8330	1925	10255	119	6545	1513	8058	119	5950	1375	7325
2nd	61.5	9225	1800	11025	61.5	5535	1080	6615	61.5	4305	840	5145	61.5	3383	660	4043	61.5	3075	600	3675
3rd	34	5100	1800	6900	34	3060	1080	4140	34	2380	840	3220	34	1870	660	2530	34	1700	600	2300
6th	321	48075	13725	61800	320.5	28845	8242	37087	321	22435	6405	28840	321	17628	5033	22661	320.5	16025	4575	20600

5.12.3. The Comparison of Wage rate from dt.01.02.1989 to 31.12.2013 is given in the table below.

Table No. 265

Enhance of Wage Rate

Sl. No.	Notification	Date	Amount	With effect from
1	5-88-1641/LE	01.02.1989	11/-	10.02.1989
2	No. IV/5-3/90-7522/LE	30.06.1990	25/-	01.07.1990
3	LL-I-69/95-10002/LE	14.08.1996	30/-	15.08.1996
4	SRC No. 374/99	29.04.1999	40/-	01.05.1999
5	LL-I-7F/01-71-C-129/LE	02.01.2002	50/-	02.01.2002
6	O.O. No.25M (6) A-26/2003-20123	27.11.2003	55/-	01.01.2006
7	LL-I (AR) 12/2007-4078/LE	28.04.2007	70/-	01.05.2007
8	No.6272-LL-I (AR) 08/09/LE	13.07.2009	90/-	13.07.2009
9	No. LL-I-(AR)-2/12-3146/LESI	20.04.2012	92.50/-	20.06.2012
10	No. 8536-LL-I(AR)-2/12/LESI	09.10.2012	150/-	31.12.2013

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BAMBOO OVERLAPPING WORKING CIRCLE

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CHAPTER - VI

BAMBOO (Overlapping) WORKING CIRCLE

6.1. General Constitution of Working Circle:

6.1.1. An area of 108250.800 ha as per Notification has been allotted to this Working Circle. The area extended over 25 number of forest blocks. Remotely situated hill portion, which embraces bamboo bearing area are included in this Working Circle. It overlaps part of the area managed under Selection and Rehabilitation Working Circle. Area allotted to Bamboo (overlapping) Working Circle in Behera's Plan has not been excluded.

6.1.2. Distribution of Area: - The Range wise distribution of area allotted to this Working Circle is given in the table below.

Table No. 266

Range wise distribution of Bamboo area

Range	Name of the block	Compartments No.	Notified area in ha
Deogarh	Pradhanpat RF (P)	1 to 15	6321.726
	Rambhadevi RF (P)	16 to 26	2316.979
	Pravasuni RF	3, 4, 7 to 9, 10 (P), 12 to 25, 30, 37 (P), 38 to 50, 52 & 53	11080.449
	Khajuria RF	1, 5 to 13	5008.092
	Kansar RF (P)	1	9758.88
	Kandarpa Lambdura PRF	1 (P)	1666.40
	Chilantikhol PRF	1	2316.61
	Telikusum PRF	1	409.05
		Total	38878.186
Reamal	Gogua RF	1 to 13,	3595.525
	Kansar RF (P)	1	2439.72
	Rambhadevi RF (P)	1 to 15	1938.177
	Kankarkhol PRF	1	5770.44
	Naikul PRF	1	1945.39
	Tankia PRF	1	502.83
		Total	16192.082
Barkote	Badtaila RF	1 to 48	10154.803
	Mandasila RF	1 to 11	2856.465
	Panguli RF	1 to 8	3212.661
	Thianal RF	1	816.87
	Pauri RF	1	8215.425
	Tusula PRF	1	1675.45
	Pradhanpat RF	16 to 29	4064.337
		Total	30996.011
Pallahara	Mankarchua RF	1 to 4	1314.225
	Tankia RF	1	513.54
	Old Pauri RF	1	6783.75
	Malyagiri RF (P)	2 to 15	5822.966
		Total	14434.481
Khamar	Dandu RF	1 to 4	1423.00

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	Biripal RF	I	437.40
	Malyagiri RF (P)	I & 16 to 30	5643.04
	Jambua RF	I	246.60
		Total	7750.04
		Grand Total	108250.800

6.2. General Character of Vegetation:

6.2.1. Composition: - Salia bamboo (Dendrocalamus strictus) constitutes the main species, which contribute about 04 % to 10 % of the crops. Bamboo forms as the middle story in the miscellaneous forest. On most of the hills, it ascends to the top, with its other associates like Sal, Bija, Ashan, Bandhan, Kurum, Kasi, Dhaura, Sisoo, Kendu, Haldu etc. The distribution of clumps in the zone is sporadic and mostly it occurs in hill terrine. The culms are undersized. The regeneration is purely natural and distributed inadequately all over the area. The forest type is Northern Tropical Dry Deciduous. The growth and quality of the crop have been considerably reduced depending up on the adjoining environmental condition.

6.2.2 Age Class: - The Salia bamboo and it's associates are constituting of all age classes. In the sample inventory over an area of 0.1 ha, bamboos are grouped in four age classes. But in the sample inventory over an area of 0.1 ha trees are grouped in two classes. Girth class from 30 cm and above has been recorded but girth class from below 30 cm is not recorded. In case of bamboo, the numbers of culms of different age classes in individual clump have been recorded.

6.2.3 Distribution: - The area allotted to this Working Circle is distributed in five Ranges, which comprises 81.63 % of the total managed area of the Working Plan. Bamboo is sporadically distributed in hilly area of mixed forest. Dendrocalamus strictus is more prominent in higher slope and in some patches it is almost pure in the middle slope.

6.2.4. Density: - The density of the crop included in this Working Circle varies from 0.3 to 0.7. In plain and valley area the density varies from 0.4 to 0.7, where as in hilly area the density varies from 0.3 to 0.05. The variation of density is due to the adjoining environmental influence and the fertility of the area.

6.2.5. Growing Stock: - The total numbers of clumps in each forest block included in this Working Circle have not been counted in this revision. Also the actual numbers of clumps in each forest block have not been counted in the past. An average of 14 clumps exist over an area of 1.00 ha, as per the inventory data of sample point. As per inventory, the details of average growing stock have been calculated. The number of culms to be removed is given. However the abstract of each block compartment wise is given in the table below.

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Table No. 267							
Bamboo inventory data							
Name of block	Compt No.	Notified area in ha	Inventory area in ha.	Avg clumps girth in Mt	Average culms height in Mt	Total clump in the Compt	Culms to be cut in the Compt
Malyagiri RF	1	336.15	16.8075	5.04	6.36	7395	9076
Malyagiri RF	2	355.041	17.75205	5.04	6.36	7811	9586
Malyagiri RF	3	154.305	7.71525	5.04	6.36	3395	4166
Malyagiri RF	4	510.3	25.515	5.04	6.36	11227	13778
Malyagiri RF	5	787.725	39.38625	5.04	6.36	17330	21269
Malyagiri RF	6	467.775	23.38875	5.04	6.36	10291	12630
Malyagiri RF	7	384.75	19.2375	5.04	6.36	8465	10388
Malyagiri RF	8	409.05	20.4525	5.04	6.36	8999	11044
Malyagiri RF	9	336.15	16.8075	5.04	6.36	7395	9076
Malyagiri RF	10	321.975	16.09875	5.04	6.36	7083	8693
Malyagiri RF	11	332.1	16.605	5.04	6.36	7306	8967
Malyagiri RF	12	542.7	27.135	5.04	6.36	11939	14653
Malyagiri RF	13	431.345	21.56725	5.04	6.36	9490	11646
Malyagiri RF	14	372.6	18.63	5.04	6.36	8197	10060
Malyagiri RF	15	417.15	20.8575	5.04	6.36	9177	11263
Malyagiri RF	16	419.175	20.95875	5.04	6.36	9222	11318
Malyagiri RF	17	184.275	9.21375	5.04	6.36	4054	4975
Malyagiri RF	18	317.925	15.89625	5.04	6.36	6994	8584
Malyagiri RF	19	350.325	17.51625	5.04	6.36	7707	9459
Malyagiri RF	20	298.68	14.934	5.04	6.36	6571	8064
Malyagiri RF	21	342.63	17.1315	5.04	6.36	7538	9251
Malyagiri RF	22	496.125	24.80625	5.04	6.36	10915	13395
Malyagiri RF	23	411.075	20.55375	5.04	6.36	9044	11099
Malyagiri RF	24	409.05	20.4525	5.04	6.36	8999	11044
Malyagiri RF	25	317.925	15.89625	5.04	6.36	6994	8584
Malyagiri RF	26	498.15	24.9075	5.04	6.36	10959	13450
Malyagiri RF	27	451.575	22.57875	5.04	6.36	9935	12193
Malyagiri RF	28	370.575	18.52875	5.04	6.36	8153	10006
Malyagiri RF	29	180.225	9.01125	5.04	6.36	3965	4866
Malyagiri RF	30	259.18	12.959	5.04	6.36	5702	6997
Badtaila RF	1	208.777	10.43885	2.78	5.15	6681	0
Badtaila RF	2	85.01	4.2505	2.78	5.15	2720	0
Badtaila RF	3	91.935	4.59675	2.78	5.15	2942	0
Badtaila RF	4	129.681	6.48405	2.78	5.15	4150	0
Badtaila RF	5	58.766	2.9383	2.78	5.15	1881	0
Badtaila RF	6	152.195	7.60975	2.78	5.15	4870	0

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Badtaila RF	7	193.914	9.6957	2.78	5.15	6205	0
Badtaila RF	8	375.212	18.7606	2.78	5.15	12007	0
Badtaila RF	9	449.55	22.4775	2.78	5.15	14386	0
Badtaila RF	10	197.64	9.882	2.78	5.15	6324	0
Badtaila RF	11	241.056	12.0528	2.78	5.15	7714	0
Badtaila RF	12	316.402	15.8201	2.78	5.15	10125	0
Badtaila RF	13	247.375	12.36875	2.78	5.15	7916	0
Badtaila RF	14	237.897	11.89485	2.78	5.15	7613	0
Badtaila RF	15	222.912	11.1456	2.78	5.15	7133	0
Badtaila RF	16	162.648	8.1324	2.78	5.15	5205	0
Badtaila RF	17	186.624	9.3312	2.78	5.15	5972	0
Badtaila RF	18	214.529	10.72645	2.78	5.15	6865	0
Badtaila RF	19	177.107	8.85535	2.78	5.15	5667	0
Badtaila RF	20	251.384	12.5692	2.78	5.15	8044	0
Badtaila RF	21	233.928	11.6964	2.78	5.15	7486	0
Badtaila RF	22	204.12	10.206	2.78	5.15	6532	0
Badtaila RF	23	132.84	6.642	2.78	5.15	4251	0
Badtaila RF	24	231.296	11.5648	2.78	5.15	7401	0
Badtaila RF	25	204.12	10.206	2.78	5.15	6532	0
Badtaila RF	26	229.392	11.4696	2.78	5.15	7341	0
Badtaila RF	27	195.048	9.7524	2.78	5.15	6242	0
Badtaila RF	28	199.584	9.9792	2.78	5.15	6387	0
Badtaila RF	29	230.688	11.5344	2.78	5.15	7382	0
Badtaila RF	30	384.912	19.2456	2.78	5.15	12317	0
Badtaila RF	31	259.2	12.96	2.78	5.15	8294	0
Badtaila RF	32	197.964	9.8982	2.78	5.15	6335	0
Badtaila RF	33	178.666	8.9333	2.78	5.15	5717	0
Badtaila RF	34	130.106	6.5053	2.78	5.15	4163	0
Badtaila RF	35	196.263	9.81315	2.78	5.15	6280	0
Badtaila RF	36	277.344	13.8672	2.78	5.15	8875	0
Badtaila RF	37	253.368	12.6684	2.78	5.15	8108	0
Badtaila RF	38	168.48	8.424	2.78	5.15	5391	0
Badtaila RF	39	260.496	13.0248	2.78	5.15	8336	0
Badtaila RF	40	264.384	13.2192	2.78	5.15	8460	0
Badtaila RF	41	198.612	9.9306	2.78	5.15	6356	0
Badtaila RF	42	191.808	9.5904	2.78	5.15	6138	0
Badtaila RF	43	236.682	11.8341	2.78	5.15	7574	0
Badtaila RF	44	274.752	13.7376	2.78	5.15	8792	0
Badtaila RF	45	155.52	7.776	2.78	5.15	4977	0
Badtaila RF	46	152.28	7.614	2.78	5.15	4873	0
Badtaila RF	47	142.56	7.128	2.78	5.15	4562	0

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Badtaila RF	48	169.776	8.4888	2.78	5.15	5433	0
Biripal RF	1	437.4	21.87	4.66	5.83	5249	3499
Chilantikhol PRF	1	2316.61	115.8305	4.79	6.37	27799	6950
Danda RF	1	357.445	17.87225	4.71	6.64	2502	0
Danda RF	2	324.81	16.2405	4.71	6.64	2274	0
Danda RF	3	385.155	19.25775	4.71	6.64	2696	0
Danda RF	4	355.59	17.7795	4.71	6.64	2489	0
Gogua RF	1	198.936	9.9468	4.3	6.05	5968	597
Gogua RF	2	247.876	12.3938	4.3	6.05	7436	744
Gogua RF	3	232.875	11.64375	4.3	6.05	6986	699
Gogua RF	4	410.103	20.50515	4.3	6.05	12303	1230
Gogua RF	5	209.223	10.46115	4.3	6.05	6277	628
Gogua RF	6	206.55	10.3275	4.3	6.05	6197	620
Gogua RF	7	407.511	20.37555	4.3	6.05	12225	1223
Gogua RF	8	459.675	22.98375	4.3	6.05	13790	1379
Gogua RF	9	270.216	13.5108	4.3	6.05	8106	811
Gogua RF	10	342.144	17.1072	4.3	6.05	10264	1026
Gogua RF	11	230.04	11.502	4.3	6.05	6901	690
Gogua RF	12	200.232	10.0116	4.3	6.05	6007	601
Gogua RF	13	180.144	9.0072	4.3	6.05	5404	540
Jambua RF	1	246.6	12.33	4.71	5.84	3946	0
Kandarp-Lambdura PRF	1	1666.4	83.32	3.2	6.16	19997	0
Kankarkhol PRF	1	5770.44	288.522	4.37	6.5	69245	0
Kansar RF (P)	1 (P)	9758.88	487.944	4.89	6.36	536738	234213
Kansar RF (P)	1 (P)	2439.72	121.986	4.89	6.36	134185	58553
Khajuria RF	1	522.936	26.1468	4.7	6.23	7844	0
Khajuria RF	5	331.776	16.5888	4.7	6.23	4977	0
Khajuria RF	6	364.5	18.225	4.7	6.23	5468	0
Khajuria RF	7	432.216	21.6108	4.7	6.23	6483	0
Khajuria RF	8	516.456	25.8228	4.7	6.23	7747	0
Khajuria RF	9	361.584	18.0792	4.7	6.23	5424	0
Khajuria RF	10	356.4	17.82	4.7	6.23	5346	0
Khajuria RF	11	690.12	34.506	4.7	6.23	10352	0
Khajuria RF	12	459.432	22.9716	4.7	6.23	6891	0
Khajuria RF	13	366.12	18.306	4.7	6.23	5492	0
Khajuria RF	14	501.552	25.0776	4.7	6.23	7523	0
Khajuria RF	15 (P)	105	5.25	4.7	6.23	1575	0
Mandasila RF	1	244.053	12.20265	3.26	6.03	3661	0
Mandasila RF	2	242.676	12.1338	3.26	6.03	3640	0
Mandasila RF	3	171.72	8.586	3.26	6.03	2576	0

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Mandasila RF	4	218.376	10.9188	3.26	6.03	3276	0
Mandasila RF	5	272.808	13.6404	3.26	6.03	4092	0
Mandasila RF	6	353.16	17.658	3.26	6.03	5297	0
Mandasila RF	7	309.096	15.4548	3.26	6.03	4636	0
Mandasila RF	8	262.521	13.12605	3.26	6.03	3938	0
Mandasila RF	9	289.575	14.47875	3.26	6.03	4344	0
Mandasila RF	10	197.64	9.882	3.26	6.03	2965	0
Mandasila RF	11	294.84	14.742	3.26	6.03	4423	0
Mankarchua RF	1	392.85	19.6425	5.5	6.5	1964	8643
Mankarchua RF	2	350.73	17.5365	5.5	6.5	1754	7716
Mankarchua RF	3	277.02	13.851	5.5	6.5	1385	6094
Mankarchua RF	4	293.625	14.68125	5.5	6.5	1468	6460
Naikul PRF	1	1945.39	97.2695	4.65	5.92	25290	0
Old Pauri RF	1	6783.75	339.1875	0.5	1.25	81405	0
Panguli RF	1	478.502	23.9251	3.15	6	5742	0
Panguli RF	2	519.422	25.9711	3.15	6	6233	0
Panguli RF	3	380.067	19.00335	3.15	6	4561	0
Panguli RF	4	423.63	21.1815	3.15	6	5084	0
Panguli RF	5	256.365	12.81825	3.15	6	3076	0
Panguli RF	6	239.557	11.97785	3.15	6	2875	0
Panguli RF	7	515.97	25.7985	3.15	6	6192	0
Panguli RF	8	399.148	19.9574	3.15	6	4790	0
Pauri RF	1	8215.425	410.7713	2.94	5.76	139662	0
Pradhanpat RF	1	373.896	18.6948	4.8	6.33	5608	2243
Pradhanpat RF	2	296.136	14.8068	4.8	6.33	4442	1777
Pradhanpat RF	3	301.32	15.066	4.8	6.33	4520	1808
Pradhanpat RF	4	246.24	12.312	4.8	6.33	3694	1477
Pradhanpat RF	5	286.416	14.3208	4.8	6.33	4296	1718
Pradhanpat RF	6	403.704	20.1852	4.8	6.33	6056	2422
Pradhanpat RF	7	434.808	21.7404	4.8	6.33	6522	2609
Pradhanpat RF	8	836.73	41.8365	4.8	6.33	12551	5020
Pradhanpat RF	9	471.987	23.59935	4.8	6.33	7080	2832
Pradhanpat RF	10	416.664	20.8332	4.8	6.33	6250	2500
Pradhanpat RF	11	517.833	25.89165	4.8	6.33	7767	3107
Pradhanpat RF	12	419.58	20.979	4.8	6.33	6294	2517
Pradhanpat RF	13	508.032	25.4016	4.8	6.33	7620	3048
Pradhanpat RF	14	493.452	24.6726	4.8	6.33	7402	2961
Pradhanpat RF	15	314.928	15.7464	4.8	6.33	4724	1890
Pradhanpat RF	16	259.482	12.9741	4.8	6.33	3892	1557
Pradhanpat RF	17	322.44	16.122	4.8	6.33	4837	1935
Pradhanpat RF	18	228.744	11.4372	4.8	6.33	3431	1372
Pradhanpat RF	19	265.68	13.284	4.8	6.33	3985	1594

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Pradhanpat RF	20	355.104	17.7552	4.8	6.33	5327	2131
Pradhanpat RF	21	364.144	18.2072	4.8	6.33	5462	2185
Pradhanpat RF	22	140.741	7.03705	4.8	6.33	2111	844
Pradhanpat RF	23	234.738	11.7369	4.8	6.33	3521	1408
Pradhanpat RF	24	385.56	19.278	4.8	6.33	5783	2313
Pradhanpat RF	25	189.024	9.4512	4.8	6.33	2835	1134
Pradhanpat RF	26	377.136	18.8568	4.8	6.33	5657	2263
Pradhanpat RF	27	256.608	12.8304	4.8	6.33	3849	1540
Pradhanpat RF	28	312.984	15.6492	4.8	6.33	4695	1878
Pradhanpat RF	29	371.952	18.5976	4.8	6.33	5579	2232
Pravasuni RF	3	211.41	10.5705	4.65	6.76	2748	0
Pravasuni RF	4	341.415	17.07075	4.65	6.76	4438	0
Pravasuni RF	7	357.615	17.88075	4.65	6.76	4649	0
Pravasuni RF	8	371.385	18.56925	4.65	6.76	4828	0
Pravasuni RF	9	373.815	18.69075	4.65	6.76	4860	0
Pravasuni RF	10 (p)	150	7.5	4.65	6.76	1950	0
Pravasuni RF	11 (P)	70.027	3.50135	4.65	6.76	910	0
Pravasuni RF	12	471.42	23.571	4.65	6.76	6128	0
Pravasuni RF	13	279.45	13.9725	4.65	6.76	3633	0
Pravasuni RF	14	223.56	11.178	4.65	6.76	2906	0
Pravasuni RF	15	324	16.2	4.65	6.76	4212	0
Pravasuni RF	16	223.155	11.15775	4.65	6.76	2901	0
Pravasuni RF	17	523.665	26.18325	4.65	6.76	6808	0
Pravasuni RF	18	304.56	15.228	4.65	6.76	3959	0
Pravasuni RF	19	226.66	11.333	4.65	6.76	2947	0
Pravasuni RF	20	214.65	10.7325	4.65	6.76	2790	0
Pravasuni RF	21	175.1	8.755	4.65	6.76	2276	0
Pravasuni RF	22	407.403	20.37015	4.65	6.76	5296	0
Pravasuni RF	23	595.755	29.78775	4.65	6.76	7745	0
Pravasuni RF	24	297.675	14.88375	4.65	6.76	3870	0
Pravasuni RF	25	435.375	21.76875	4.65	6.76	5660	0
Pravasuni RF	30	356.4	17.82	4.65	6.76	4633	0
Pravasuni RF	37 (p)	90	4.5	4.65	6.76	1170	0
Pravasuni RF	38	292.105	14.60525	4.65	6.76	3797	0
Pravasuni RF	39	284.986	14.2493	4.65	6.76	3705	0
Pravasuni RF	40	66.585	3.32925	4.65	6.76	866	0
Pravasuni RF	41	228.825	11.44125	4.65	6.76	2975	0
Pravasuni RF	42	373.005	18.65025	4.65	6.76	4849	0
Pravasuni RF	43	270.737	13.53685	4.65	6.76	3520	0
Pravasuni RF	44	111.412	5.5706	4.65	6.76	1448	0
Pravasuni RF	45	84.81	4.2405	4.65	6.76	1103	0

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Pravasuni RF	46	558.09	27.9045	4.65	6.76	7255	0
Pravasuni RF	47	293.625	14.68125	4.65	6.76	3817	0
Pravasuni RF	48	505.44	25.272	4.65	6.76	6571	0
Pravasuni RF	49	293.625	14.68125	4.65	6.76	3817	0
Pravasuni RF	50	54.859	2.74295	4.65	6.76	713	0
Pravasuni RF	51	129.575	6.47875	4.65	6.76	1684	0
Pravasuni RF	52	192.375	9.61875	4.65	6.76	2501	0
Pravasuni RF	53	315.9	15.795	4.65	6.76	4107	0
Rambhadevi RF	1	231.456	11.5728	4.96	6.28	3240	694
Rambhadevi RF	2	131.22	6.561	4.96	6.28	1837	394
Rambhadevi RF	3	104.328	5.2164	4.96	6.28	1461	313
Rambhadevi RF	4	101.104	5.0552	4.96	6.28	1415	303
Rambhadevi RF	5	211.354	10.5677	4.96	6.28	2959	634
Rambhadevi RF	6	160.137	8.00685	4.96	6.28	2242	480
Rambhadevi RF	7	94.182	4.7091	4.96	6.28	1319	283
Rambhadevi RF	8	122.319	6.11595	4.96	6.28	1712	367
Rambhadevi RF	9	68.304	3.4152	4.96	6.28	956	205
Rambhadevi RF	10	92.293	4.61465	4.96	6.28	1292	277
Rambhadevi RF	11	91.346	4.5673	4.96	6.28	1279	274
Rambhadevi RF	12	130.104	6.5052	4.96	6.28	1821	390
Rambhadevi RF	13	170.233	8.51165	4.96	6.28	2383	511
Rambhadevi RF	14	114.453	5.72265	4.96	6.28	1602	343
Rambhadevi RF	15	115.344	5.7672	4.96	6.28	1615	346
Rambhadevi RF	16	88.209	4.41045	4.96	6.28	1235	265
Rambhadevi RF	17	199.015	9.95075	4.96	6.28	2786	597
Rambhadevi RF	18	167.67	8.3835	4.96	6.28	2347	503
Rambhadevi RF	19	260.868	13.0434	4.96	6.28	3652	783
Rambhadevi RF	20	401.022	20.0511	4.96	6.28	5614	1203
Rambhadevi RF	21	182.997	9.14985	4.96	6.28	2562	549
Rambhadevi RF	22	241.299	12.06495	4.96	6.28	3378	724
Rambhadevi RF	23	132.678	6.6339	4.96	6.28	1857	398
Rambhadevi RF	24	277.749	13.88745	4.96	6.28	3888	833
Rambhadevi RF	25	215.784	10.7892	4.96	6.28	3021	647
Rambhadevi RF	26	149.688	7.4844	4.96	6.28	2096	449
Tamkia PRF	1	502.83	25.1415	5.05	5.55	4525	0
Tamkia RF	1	513.54	25.677	4.5	6.5	1540	0
Telikusum PRF	1	409.05	20.4525	2.87	5.12	3272	0
Thianal RF	1	816.87	40.8435	4.5	6.33	4901	0
Tusula PRF	1	1675.45	83.7725	3.06	5.75	13404	0
Total		108250.800	5412.540	4.210	6.080	2288688	727576

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6.2.6. Status of Regeneration: - The area included in Bamboo (overlapping) Working Circle have no sufficient bamboo stock. The renewal of forest crop is purely depending on nature. As per the inventory data of individual clumps, it is found that 3rd and 4th year culms are very negligible as compared to 1st and 2nd culms. The regeneration of culms in a clump is found adequate.

6.2.7. Climber Menace: - During the out going Plan period all annual working area had not been worked out due non availability matured bamboos. Climber cutting had not been done due to financial constrains. The climbers are to be cut twice with the Plan period to avoid its menace.

6.2.8. Weed Growth: - During rainy season vast number of weeds grow in the forest floor of this tract. Weeds tend to interfere with the growth of individuals of favored species. Annual weeds died during the month of February. Dry weeds invite forest fire, which causes extensive damage to bamboo.

6.2.9. Grass Invasion: - Different grasses are seen in patches on the forest flour. Grasses grow faster in small gap or in open space, which causes heavy grazing. Some times the animals, while grazing in bamboo zone are destroying the mound around the clump out of pleasure.

6.3. Cutting Series and Sections:

6.3.1. Cutting Series: - This Working Circle constituted with 06 numbers of cutting series depending on distribution of area but cutting section have not been formed. The area allotted to different cutting series is given in the table below.

Table No. 268

Cutting series

Sl No.	Name of Range	Name of cutting series	Name of Block /Compt	Area in ha.
1	Deogarh	Pradhanpat	Pradhanpat RF - 1 to 15, Rambhadevi RF - 16 to 26 & Kansar RF (P) -1(P)	18397.585
		Pravasuni	Pravasuni RF - 3, 4, 7 to 9, 10 (P), 12 to 25, 30, 37 (P), 38 to 50, 52 & 53, Khajuria RF- 1, 5 to 14 & 15(P), Kandarp Lambdura - 1(P), Chilantikhol PRF - 1, Telikusum PRF - 1	20480.601
2	Reamal	Kansar	Kansar RF (P) - 1(P), Gogua RF- 1 to 13, Rambhadevi RF - 1 to 15, Naikul PRF - 1, Tamkia PRF - 1, Kankarkhol PRF - 1	16192.082
3	Barkote	Badtaila	Badtaila RF- 1 to 48, Panguli RF-1 to 8, Mandasila RF- 1 to 11, Thianal RF- 1, Pauri RF-1, Pradhanpat RF - 16 to 29, Tusula PRF-1	30996.011
4	Pallahara	Malyagiri	Malyagiri RF(P) - 2 to 15, Mankarchua RF- 1 to 4, Tamkia RF- 1, Old Pauri RF- 1	14434.481
5	Khamar	Danda	Danda RF-1 to 4, Biripai RF-1, Malyagiri RF(P)- 1 & 16 to 30, Jambua RF - 1	7750.040
			Total	108250.800

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6.3.2. Reason for Constitution of Cutting Series: - The number of cutting series formed in the out going Plan have been changed in this revision. There are 06 number of cutting series now formed for convenience of working, availability of labour, distribution of area etc.

6.4. Blocks and Compartments:

6.4.1. Treatment type: - The Range wise distribution of forest blocks and its compartments into different cutting series along with quality of bamboo and treatment type is given in the table below.

Table No. 269

Quality of bamboo and treatment type

Range	Cutting series	Name of block	Comp't No.	Quality	Treatment type	Notified area in ha
Deogarh	Pradhanpat	Pradhanpat RF	1	II	A	373.896
Deogarh	Pradhanpat	Pradhanpat RF	2	II	A	296.136
Deogarh	Pradhanpat	Pradhanpat RF	3	II	A	301.320
Deogarh	Pradhanpat	Pradhanpat RF	4	II	A	246.240
Deogarh	Pradhanpat	Pradhanpat RF	5	II	A	286.416
Deogarh	Pradhanpat	Pradhanpat RF	6	II	A	403.704
Deogarh	Pradhanpat	Pradhanpat RF	7	II	A	434.808
Deogarh	Pradhanpat	Pradhanpat RF	8	II	A	836.730
Deogarh	Pradhanpat	Pradhanpat RF	9	II	A	471.987
Deogarh	Pradhanpat	Pradhanpat RF	10	II	A	416.664
Deogarh	Pradhanpat	Pradhanpat RF	11	II	A	517.833
Deogarh	Pradhanpat	Pradhanpat RF	12	II	A	419.580
Deogarh	Pradhanpat	Pradhanpat RF	13	II	A	508.032
Deogarh	Pradhanpat	Pradhanpat RF	14	II	A	493.452
Deogarh	Pradhanpat	Pradhanpat RF	15	II	A	314.928
Deogarh	Pradhanpat	Rambhadevi RF	16	II	A	88.209
Deogarh	Pradhanpat	Rambhadevi RF	17	II	A	199.015
Deogarh	Pradhanpat	Rambhadevi RF	18	II	A	167.670
Deogarh	Pradhanpat	Rambhadevi RF	19	II	A	260.868
Deogarh	Pradhanpat	Rambhadevi RF	20	II	A	401.022
Deogarh	Pradhanpat	Rambhadevi RF	21	II	A	182.997
Deogarh	Pradhanpat	Rambhadevi RF	22	II	A	241.299
Deogarh	Pradhanpat	Rambhadevi RF	23	II	A	132.678
Deogarh	Pradhanpat	Rambhadevi RF	24	II	A	277.749
Deogarh	Pradhanpat	Rambhadevi RF	25	II	A	215.784
Deogarh	Pradhanpat	Rambhadevi RF	26	II	A	149.688
Deogarh	Pradhanpat	Kansar RF (P)	1 (P)	II	A	9758.880
Deogarh	Pravasuni	Pravasuni RF	3	II	C	211.410

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6.3.2. Reason for Constitution of Cutting Series: - The number of cutting series formed in the out going Plan have been changed in this revision. There are 06 number of cutting series now formed for convenience of working, availability of labour, distribution of area etc.

6.4. Blocks and Compartments:

6.4.1. Treatment type: - The Range wise distribution of forest blocks and its compartments into different cutting series along with quality of bamboo and treatment type is given in the table below.

Table No. 269

Quality of bamboo and treatment type

Range	Cutting series	Name of block	Comp't No.	Quality	Treatment type	Notified area in ha
Deogarh	Pradhanpat	Pradhanpat RF	1	II	A	373.896
Deogarh	Pradhanpat	Pradhanpat RF	2	II	A	296.136
Deogarh	Pradhanpat	Pradhanpat RF	3	II	A	301.320
Deogarh	Pradhanpat	Pradhanpat RF	4	II	A	246.240
Deogarh	Pradhanpat	Pradhanpat RF	5	II	A	286.416
Deogarh	Pradhanpat	Pradhanpat RF	6	II	A	403.704
Deogarh	Pradhanpat	Pradhanpat RF	7	II	A	434.808
Deogarh	Pradhanpat	Pradhanpat RF	8	II	A	836.730
Deogarh	Pradhanpat	Pradhanpat RF	9	II	A	471.987
Deogarh	Pradhanpat	Pradhanpat RF	10	II	A	416.664
Deogarh	Pradhanpat	Pradhanpat RF	11	II	A	517.833
Deogarh	Pradhanpat	Pradhanpat RF	12	II	A	419.580
Deogarh	Pradhanpat	Pradhanpat RF	13	II	A	508.032
Deogarh	Pradhanpat	Pradhanpat RF	14	II	A	493.452
Deogarh	Pradhanpat	Pradhanpat RF	15	II	A	314.928
Deogarh	Pradhanpat	Rambhadevi RF	16	II	A	88.209
Deogarh	Pradhanpat	Rambhadevi RF	17	II	A	199.015
Deogarh	Pradhanpat	Rambhadevi RF	18	II	A	167.670
Deogarh	Pradhanpat	Rambhadevi RF	19	II	A	260.868
Deogarh	Pradhanpat	Rambhadevi RF	20	II	A	401.022
Deogarh	Pradhanpat	Rambhadevi RF	21	II	A	182.997
Deogarh	Pradhanpat	Rambhadevi RF	22	II	A	241.299
Deogarh	Pradhanpat	Rambhadevi RF	23	II	A	132.678
Deogarh	Pradhanpat	Rambhadevi RF	24	II	A	277.749
Deogarh	Pradhanpat	Rambhadevi RF	25	II	A	215.784
Deogarh	Pradhanpat	Rambhadevi RF	26	II	A	149.688
Deogarh	Pradhanpat	Kansar RF (P)	1 (P)	II	A	9758.880
Deogarh	Pravasuni	Pravasuni RF	3	II	C	211.410

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Deogarh	Pravasuni	Pravasuni RF	4	II	C	341.415
Deogarh	Pravasuni	Pravasuni RF	7	II	C	357.615
Deogarh	Pravasuni	Pravasuni RF	8	II	C	371.385
Deogarh	Pravasuni	Pravasuni RF	9	II	C	373.815
Deogarh	Pravasuni	Pravasuni RF	10 (p)	II	C	150.000
Deogarh	Pravasuni	Pravasuni RF	11 (P)	II	C	70.027
Deogarh	Pravasuni	Pravasuni RF	12	II	C	471.420
Deogarh	Pravasuni	Pravasuni RF	13	II	C	279.450
Deogarh	Pravasuni	Pravasuni RF	14	II	C	223.560
Deogarh	Pravasuni	Pravasuni RF	15	II	C	324.000
Deogarh	Pravasuni	Pravasuni RF	16	II	C	223.155
Deogarh	Pravasuni	Pravasuni RF	17	II	C	523.665
Deogarh	Pravasuni	Pravasuni RF	18	II	C	304.560
Deogarh	Pravasuni	Pravasuni RF	19	II	C	226.660
Deogarh	Pravasuni	Pravasuni RF	20	II	C	214.650
Deogarh	Pravasuni	Pravasuni RF	21	II	C	175.100
Deogarh	Pravasuni	Pravasuni RF	22	II	C	407.403
Deogarh	Pravasuni	Pravasuni RF	23	II	C	595.755
Deogarh	Pravasuni	Pravasuni RF	24	II	C	297.675
Deogarh	Pravasuni	Pravasuni RF	25	II	C	435.375
Deogarh	Pravasuni	Pravasuni RF	30	II	C	356.400
Deogarh	Pravasuni	Pravasuni RF	37 (p)	II	C	90.000
Deogarh	Pravasuni	Pravasuni RF	38	II	C	292.105
Deogarh	Pravasuni	Pravasuni RF	39	II	C	284.986
Deogarh	Pravasuni	Pravasuni RF	40	II	C	66.585
Deogarh	Pravasuni	Pravasuni RF	41	II	C	228.825
Deogarh	Pravasuni	Pravasuni RF	42	II	C	373.005
Deogarh	Pravasuni	Pravasuni RF	43	II	C	270.737
Deogarh	Pravasuni	Pravasuni RF	44	II	C	111.412
Deogarh	Pravasuni	Pravasuni RF	45	II	C	84.810
Deogarh	Pravasuni	Pravasuni RF	46	II	C	558.090
Deogarh	Pravasuni	Pravasuni RF	47	II	C	293.625
Deogarh	Pravasuni	Pravasuni RF	48	II	C	505.440
Deogarh	Pravasuni	Pravasuni RF	49	II	C	293.625
Deogarh	Pravasuni	Pravasuni RF	50	II	C	54.859
Deogarh	Pravasuni	Pravasuni RF	51	II	C	129.575
Deogarh	Pravasuni	Pravasuni RF	52	II	C	192.375
Deogarh	Pravasuni	Pravasuni RF	53	II	C	315.900
Deogarh	Pravasuni	Khajuria RF	1	II	B	522.936
Deogarh	Pravasuni	Khajuria RF	5	II	B	331.776
Deogarh	Pravasuni	Khajuria RF	6	II	B	364.500
Deogarh	Pravasuni	Khajuria RF	7	II	B	432.216
Deogarh	Pravasuni	Khajuria RF	8	II	B	516.456

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Deogarh	Pravasuni	Khajuria RF	9	II	B	361.584
Deogarh	Pravasuni	Khajuria RF	10	II	B	356.400
Deogarh	Pravasuni	Khajuria RF	11	II	B	690.120
Deogarh	Pravasuni	Khajuria RF	12	II	B	459.432
Deogarh	Pravasuni	Khajuria RF	13	II	B	366.120
Deogarh	Pravasuni	Khajuria RF	14	II	B	501.552
Deogarh	Pravasuni	Khajuria RF	15 (P)	II	B	105.000
Deogarh	Pravasuni	Chilantikhol PRF	1	II	A	2316.610
Deogarh	Pravasuni	Telikusum PRF	1	II	C	409.050
Deogarh	Pravasuni	Kandarp-Lambdura PRF	1	II	B	1666.400
Reamal	Kansar	Kansar RF (P)	1 (P)	II	A	2439.720
Reamal	Kansar	Rambhadevi RF	1	II	A	231.456
Reamal	Kansar	Rambhadevi RF	2	II	A	131.220
Reamal	Kansar	Rambhadevi RF	3	II	A	104.328
Reamal	Kansar	Rambhadevi RF	4	II	A	101.104
Reamal	Kansar	Rambhadevi RF	5	II	A	211.354
Reamal	Kansar	Rambhadevi RF	6	II	A	160.137
Reamal	Kansar	Rambhadevi RF	7	II	A	94.182
Reamal	Kansar	Rambhadevi RF	8	II	A	122.319
Reamal	Kansar	Rambhadevi RF	9	II	A	68.304
Reamal	Kansar	Rambhadevi RF	10	II	A	92.293
Reamal	Kansar	Rambhadevi RF	11	II	A	91.346
Reamal	Kansar	Rambhadevi RF	12	II	A	130.104
Reamal	Kansar	Rambhadevi RF	13	II	A	170.233
Reamal	Kansar	Rambhadevi RF	14	II	A	114.453
Reamal	Kansar	Rambhadevi RF	15	II	A	115.344
Reamal	Kansar	Gogua RF	1	II	A	198.936
Reamal	Kansar	Gogua RF	2	II	A	247.876
Reamal	Kansar	Gogua RF	3	II	A	232.875
Reamal	Kansar	Gogua RF	4	II	A	410.103
Reamal	Kansar	Gogua RF	5	II	A	209.223
Reamal	Kansar	Gogua RF	6	II	A	206.550
Reamal	Kansar	Gogua RF	7	II	A	407.511
Reamal	Kansar	Gogua RF	8	II	A	459.675
Reamal	Kansar	Gogua RF	9	II	A	270.216
Reamal	Kansar	Gogua RF	10	II	A	342.144
Reamal	Kansar	Gogua RF	11	II	A	230.040
Reamal	Kansar	Gogua RF	12	II	A	200.232
Reamal	Kansar	Gogua RF	13	II	A	180.144
Reamal	Kansar	Naikul PRF	1	III	C	1945.390
Reamal	Kansar	Tamkia PRF	1	III	B	502.830

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Reamal	Kanwar	Kankarkhol PRF	1	II	C	5770.440
Barkote	Badtaila	Badtaila RF	1	III	C	208.777
Barkote	Badtaila	Badtaila RF	2	III	C	85.010
Barkote	Badtaila	Badtaila RF	3	III	C	91.935
Barkote	Badtaila	Badtaila RF	4	III	C	129.681
Barkote	Badtaila	Badtaila RF	5	III	C	58.766
Barkote	Badtaila	Badtaila RF	6	III	C	152.195
Barkote	Badtaila	Badtaila RF	7	III	C	193.914
Barkote	Badtaila	Badtaila RF	8	III	C	375.212
Barkote	Badtaila	Badtaila RF	9	III	C	449.550
Barkote	Badtaila	Badtaila RF	10	III	C	197.640
Barkote	Badtaila	Badtaila RF	11	III	C	241.056
Barkote	Badtaila	Badtaila RF	12	III	C	316.402
Barkote	Badtaila	Badtaila RF	13	III	C	247.375
Barkote	Badtaila	Badtaila RF	14	III	C	237.897
Barkote	Badtaila	Badtaila RF	15	III	C	222.912
Barkote	Badtaila	Badtaila RF	16	III	C	162.648
Barkote	Badtaila	Badtaila RF	17	III	C	186.624
Barkote	Badtaila	Badtaila RF	18	III	C	214.529
Barkote	Badtaila	Badtaila RF	19	III	C	177.107
Barkote	Badtaila	Badtaila RF	20	III	C	251.384
Barkote	Badtaila	Badtaila RF	21	III	C	233.928
Barkote	Badtaila	Badtaila RF	22	III	C	204.120
Barkote	Badtaila	Badtaila RF	23	III	C	132.840
Barkote	Badtaila	Badtaila RF	24	III	C	231.296
Barkote	Badtaila	Badtaila RF	25	III	C	204.120
Barkote	Badtaila	Badtaila RF	26	III	C	229.392
Barkote	Badtaila	Badtaila RF	27	III	C	195.048
Barkote	Badtaila	Badtaila RF	28	III	C	199.584
Barkote	Badtaila	Badtaila RF	29	III	C	230.688
Barkote	Badtaila	Badtaila RF	30	III	C	384.912
Barkote	Badtaila	Badtaila RF	31	III	C	259.200
Barkote	Badtaila	Badtaila RF	32	III	C	197.964
Barkote	Badtaila	Badtaila RF	33	III	C	178.666
Barkote	Badtaila	Badtaila RF	34	III	C	130.106
Barkote	Badtaila	Badtaila RF	35	III	C	196.263
Barkote	Badtaila	Badtaila RF	36	III	C	277.344
Barkote	Badtaila	Badtaila RF	37	III	C	253.368
Barkote	Badtaila	Badtaila RF	38	III	C	168.480
Barkote	Badtaila	Badtaila RF	39	III	C	260.496
Barkote	Badtaila	Badtaila RF	40	III	C	264.384
Barkote	Badtaila	Badtaila RF	41	III	C	198.612
Barkote	Badtaila	Badtaila RF	42	III	C	191.808

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Barkote	Badtaila	Badtaila RF	43	III	C	236.682
Barkote	Badtaila	Badtaila RF	44	III	C	274.752
Barkote	Badtaila	Badtaila RF	45	III	C	155.520
Barkote	Badtaila	Badtaila RF	46	III	C	152.280
Barkote	Badtaila	Badtaila RF	47	III	C	142.560
Barkote	Badtaila	Badtaila RF	48	III	C	169.776
Barkote	Badtaila	Panguli RF	1	II	C	478.502
Barkote	Badtaila	Panguli RF	2	II	C	519.422
Barkote	Badtaila	Panguli RF	3	II	C	380.067
Barkote	Badtaila	Panguli RF	4	II	C	423.630
Barkote	Badtaila	Panguli RF	5	II	C	256.365
Barkote	Badtaila	Panguli RF	6	II	C	239.557
Barkote	Badtaila	Panguli RF	7	II	C	515.970
Barkote	Badtaila	Panguli RF	8	II	C	399.148
Barkote	Badtaila	Mandasila RF	1	II	C	244.053
Barkote	Badtaila	Mandasila RF	2	II	C	242.676
Barkote	Badtaila	Mandasila RF	3	II	C	171.720
Barkote	Badtaila	Mandasila RF	4	II	C	218.376
Barkote	Badtaila	Mandasila RF	5	II	C	272.808
Barkote	Badtaila	Mandasila RF	6	II	C	353.160
Barkote	Badtaila	Mandasila RF	7	II	C	309.096
Barkote	Badtaila	Mandasila RF	8	II	C	262.521
Barkote	Badtaila	Mandasila RF	9	II	C	289.575
Barkote	Badtaila	Mandasila RF	10	II	C	197.640
Barkote	Badtaila	Mandasila RF	11	II	C	294.840
Barkote	Badtaila	Pradhanpat RF	16	II	A	259.482
Barkote	Badtaila	Pradhanpat RF	17	II	A	322.440
Barkote	Badtaila	Pradhanpat RF	18	II	A	228.744
Barkote	Badtaila	Pradhanpat RF	19	II	A	265.680
Barkote	Badtaila	Pradhanpat RF	20	II	A	355.104
Barkote	Badtaila	Pradhanpat RF	21	II	A	364.144
Barkote	Badtaila	Pradhanpat RF	22	II	A	140.741
Barkote	Badtaila	Pradhanpat RF	23	II	A	234.738
Barkote	Badtaila	Pradhanpat RF	24	II	A	385.560
Barkote	Badtaila	Pradhanpat RF	25	II	A	189.024
Barkote	Badtaila	Pradhanpat RF	26	II	A	377.136
Barkote	Badtaila	Pradhanpat RF	27	II	A	256.608
Barkote	Badtaila	Pradhanpat RF	28	II	A	312.984
Barkote	Badtaila	Pradhanpat RF	29	II	A	371.952
Barkote	Badtaila	Thianal RF	1	II	A	816.870
Barkote	Badtaila	Pauri RF	1	III	C	8215.425
Barkote	Badtaila	Tusola PRF	1	III	C	1675.450
Pallahara	Malyagiri	Malyagiri RF	2	II	A	355.041

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Pallahara	Malyagiri	Malyagiri RF	3	II	A	154.305
Pallahara	Malyagiri	Malyagiri RF	4	II	A	510.300
Pallahara	Malyagiri	Malyagiri RF	5	II	A	787.725
Pallahara	Malyagiri	Malyagiri RF	6	II	A	467.775
Pallahara	Malyagiri	Malyagiri RF	7	II	A	384.750
Pallahara	Malyagiri	Malyagiri RF	8	II	A	409.050
Pallahara	Malyagiri	Malyagiri RF	9	II	A	336.150
Pallahara	Malyagiri	Malyagiri RF	10	II	A	321.975
Pallahara	Malyagiri	Malyagiri RF	11	II	A	332.100
Pallahara	Malyagiri	Malyagiri RF	12	II	A	542.700
Pallahara	Malyagiri	Malyagiri RF	13	II	A	431.345
Pallahara	Malyagiri	Malyagiri RF	14	II	A	372.600
Pallahara	Malyagiri	Malyagiri RF	15	II	A	417.150
Pallahara	Malyagiri	Mankarchua RF	1	II	A	392.850
Pallahara	Malyagiri	Mankarchua RF	2	II	A	350.730
Pallahara	Malyagiri	Mankarchua RF	3	II	A	277.020
Pallahara	Malyagiri	Mankarchua RF	4	II	A	293.625
Pallahara	Malyagiri	Tamkia RF	1	II	C	513.540
Pallahara	Malyagiri	Old Pauri RF	1	III	C	6783.750
Khamar	Danda	Danda RF	1	II	B	357.445
Khamar	Danda	Danda RF	2	II	B	324.810
Khamar	Danda	Danda RF	3	II	B	385.155
Khamar	Danda	Danda RF	4	II	B	355.590
Khamar	Danda	Malyagiri RF	1	II	A	336.150
Khamar	Danda	Malyagiri RF	16	II	A	419.175
Khamar	Danda	Malyagiri RF	17	II	A	184.275
Khamar	Danda	Malyagiri RF	18	II	A	317.925
Khamar	Danda	Malyagiri RF	19	II	A	350.325
Khamar	Danda	Malyagiri RF	20	II	A	298.680
Khamar	Danda	Malyagiri RF	21	II	A	342.630
Khamar	Danda	Malyagiri RF	22	II	A	496.125
Khamar	Danda	Malyagiri RF	23	II	A	411.075
Khamar	Danda	Malyagiri RF	24	II	A	409.050
Khamar	Danda	Malyagiri RF	25	II	A	317.925
Khamar	Danda	Malyagiri RF	26	II	A	498.150
Khamar	Danda	Malyagiri RF	27	II	A	451.575
Khamar	Danda	Malyagiri RF	28	II	A	370.575
Khamar	Danda	Malyagiri RF	29	II	A	180.225
Khamar	Danda	Malyagiri RF	30	II	A	259.180
Khamar	Danda	Biripal RF	1	III	A	437.400
Khamar	Danda	Jambua RF	1	III	C	246.600
		Total				108250.800

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6.5. Special Objectives of Management:

6.5.1. The special objectives of management of this Working Circle have been given in the table below.

Table No. 270

Objectives of Management for bamboo (overlapping) W.C

Sl.No.	Special objectives of Management
1	To encourage and obtained maximum natural regeneration in all clumps.
2	To improve the size and vigor of the retaining culms by silvicultural operation.
3	To improve the condition of forest cover on the hill terrain by subsidiary silvicultural operation.
4	To reduce the extent of fire by proper scientific management and maintain the middle story for the interest of soil conservation and ecological stability.
5	To increase revenue and provide works to the local people.
6	To remove dead, dry and top broken culms in all treatment type area to derive maximum sustained yield.
7	To increase the clumps per hector by artificial regeneration and minimizing the demand of bamboo of the local people.

6.6. Analysis and Valuation of the Crop:

6.6.1. Stock Map : - The entire area covered by this Working Circle have been shown on the stock map. Sample points enumeration in the managed area have been done covering an area of 0.1 ha & strip, keeping point as the center of the plot. Longitude and latitude of the sample points have been recorded. The numbers of clumps in the unit area and the number of culms in each clump have been recorded. The field staff has prepared stock map for the bamboo area.

6.6.2. Range and Mean of Quality : - The range of the quality of bamboo is varying from III to I, where as the mean quality is II. The numbers of culms in each clump have been considered for measure of relative productive capacity of this tract. The relationship of quality classes of bamboo with his height and the minimum number of culms to be retained in each quality clump is given in the table below.

Table No. 271

Relationship of quality classes, height and culms to be retained per clump

Name of species	Quality class	Height of culms in meter	Number of culms to be retained in one clump	Age in year
Bamboo	I	> 09.00	20	All
	II	06.00 to 09.00	15	All
	III	< 06.00	10	All

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6.6.3. Age Class Distribution : - All age classes of bamboo are present in this tract. But their number in different age classes differ from each other. In the inventory data it is found that as the age of bamboo increases the number of bamboo decreases. The reason of decrease in the number of bamboo is illicit cutting.

6.6.4. Selection of Sample Units : - The longitude and latitude of the sample point are recoded. There are 141 number of sample points are taken for inventory. Keeping point in the middle, rectangular size sample unit is formed having 40.00 mt x 25.00 mt & strip. The area of each sample unit is 0.1 ha & strip .

6.6.5. Type of Enumeration : - Partial enumeration in separate sample units has been carried out to ascertain the growing stock in this tract. The exact numbers of culms in each clump with respect to their age have been recorded. Top height of each clump is also recorded at the time of inventory of the unit.

6.6.6. Status of Regeneration : - All first year bamboo is called Karadi. Branches have not been developed and culms sheath is present in between two nodes of Karadi. The data collected in regeneration survey have been analyzed in Chapter II-A of Part-I. The status of regeneration in the area allotted to Bamboo (overlapping) Working Circle is found moderate. The regeneration status of bamboo in different blocks is as per the enumeration data.

6.6.7. Special Feature : - There are significant changes observed in the forest area managed during the out going Plan period. Bamboo demand of the inhabitant of this locality is not full filled from the forest of this zone. The number of clump in considerable reduced in part of the coupes area, which was previously managed for extraction of bamboo. Therefore the extent of yield has been reduced. Forest fire is an important tragedy to the forest of this tract.

6.7. Silvicultural System:

6.7.1. System : - The silvicultural system prescribed is called 'Culms selection-cum-clump improvement'. In this systems two complimentary operations shall be carried out simultaneously. The first one is to select the matured culms for cutting followed by some principle and the second one is to improve each clump condition by adopting tending and other cultural operation.

6.7.2. Reasons : - Availability of bamboo of all age groups in hilly terrine can only be worked in this system. Congested culms shall be nursed up under the best possible condition of growth. The inaccessibility of most of the forest allotted to this Working Circle, which are in hilly terrain, the preponderance of low quality and often defective clump mixed intimately with a miscellaneous crop and the prevalence of annual fires makes the 'Culms selection-cum-clump improvement' the only practical system of working these forest.

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6.8. Rotation:

6.8.1. Rotation : - There is no any experimental plot in this division to determine exactly the year at which an individual culms lives. The planned number of years between regeneration and maturity of a crop will vary depending on its site quality. Rotation should be a multiplication of the cutting cycle. A cutting cycle of 04 years has been fixed for all cutting series in this over lapping Working Circle. As per Sri Harry G. Champion and Sri S. K Seth an individual culms lives for above 07 to 14 years. The life period of bamboo species have been given in the table below.

Table No. 272

Life period of bamboo

Sl. No.	Name of species	Life period in year
1	Dendrocalamus strictus	07
2	Oxytenanthera abyssiniaca	07
3	Dendrocalamus hamiltonii	10
4	Bambusa tulda	12
5	Bambusa polymorpha	14

Sources - Sri Harry G. Champion and Sri S. K Seth

6.9. Exploitable Diameters:

6.9.1. The exploitable girth of different species have been fixed basing on the size to which it can not developed unsoundness and give maximum financial return. Bamboo attends maximum size at the end of 1st year and it is found suitable for cutting at the age of 04 years. Exploitable diameter in case of bamboo has not been fixed.

6.10. Cutting Cycle:

6.10.1. Cutting Cycle : - It has been fixed basing on the period of the Working Plan or the number of coupes in each cutting series. As per Para 5 of the Working Plan Code and for complete execution of work in each cutting series, the cutting cycle of 04 years has been fixed.

6.11. Calculation of the Yield:

6.11.1. Clump to Culms Analysis Method : - The area included in this revised Plan has irregular nature of forest. The yield is calculated on clump to culms analysis method. In the inventory, the number of culms to be removed in each clump has been shown. The culmts to be removed in each clump are based on the cutting rules and the quality of the clumps.

6.11.2. Yield : - Basing on the inventory data, the out tern of bamboo in each cutting series is calculated in term of sale unit, which is given in the table below.

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Table No. 273

Out turn of bamboo in term of sale unit

Range	Cutting series	Name of block	Comp't No.	Notified area	No. of culms to be cut	Average length of culms in m	Total length of culms	Sale unit
Deogarh	Pradhanpat	Pradhanpat RF	1	373.896	2243	6.33	14198	5.92
Deogarh	Pradhanpat	Pradhanpat RF	2	296.136	1777	6.33	11248	4.69
Deogarh	Pradhanpat	Pradhanpat RF	3	301.320	1808	6.33	11445	4.77
Deogarh	Pradhanpat	Pradhanpat RF	4	246.240	1477	6.33	9349	3.9
Deogarh	Pradhanpat	Pradhanpat RF	5	286.416	1718	6.33	10875	4.53
Deogarh	Pradhanpat	Pradhanpat RF	6	403.704	2422	6.33	15331	6.39
Deogarh	Pradhanpat	Pradhanpat RF	7	434.808	2609	6.33	16515	6.88
Deogarh	Pradhanpat	Pradhanpat RF	8	836.730	5020	6.33	31777	13.24
Deogarh	Pradhanpat	Pradhanpat RF	9	471.987	2832	6.33	17927	7.47
Deogarh	Pradhanpat	Pradhanpat RF	10	416.664	2500	6.33	15825	6.59
Deogarh	Pradhanpat	Pradhanpat RF	11	517.833	3107	6.33	19667	8.19
Deogarh	Pradhanpat	Pradhanpat RF	12	419.580	2517	6.33	15933	6.64
Deogarh	Pradhanpat	Pradhanpat RF	13	508.032	3048	6.33	19294	8.04
Deogarh	Pradhanpat	Pradhanpat RF	14	493.452	2961	6.33	18743	7.81
Deogarh	Pradhanpat	Pradhanpat RF	15	314.928	1890	6.33	11964	4.99
Deogarh	Pradhanpat	Rambhadevi RF	16	88.209	265	6.28	1664	0.69
Deogarh	Pradhanpat	Rambhadevi RF	17	199.015	597	6.28	3749	1.56
Deogarh	Pradhanpat	Rambhadevi RF	18	167.670	503	6.28	3159	1.32
Deogarh	Pradhanpat	Rambhadevi RF	19	260.868	783	6.28	4917	2.05
Deogarh	Pradhanpat	Rambhadevi RF	20	401.022	1203	6.28	7555	3.15
Deogarh	Pradhanpat	Rambhadevi RF	21	182.997	549	6.28	3448	1.44
Deogarh	Pradhanpat	Rambhadevi RF	22	241.299	724	6.28	4547	1.89
Deogarh	Pradhanpat	Rambhadevi RF	23	132.678	398	6.28	2499	1.04
Deogarh	Pradhanpat	Rambhadevi RF	24	277.749	833	6.28	5231	2.18
Deogarh	Pradhanpat	Rambhadevi RF	25	215.784	647	6.28	4063	1.69
Deogarh	Pradhanpat	Rambhadevi RF	26	149.688	449	6.28	2820	1.18
Deogarh	Pradhanpat	Kansar RF (P)	1 (P)	4879.000	117096	6.36	744731	310.3
Deogarh	Pradhanpat	Kansar RF (P)	1 (P)	4879.850	117117	6.36	744864	310.36
	Total			18397.583	279093		0	738.90
Deogarh	Pravasuni	Pravasuni RF	3	211.410	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	4	341.415	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	7	357.615	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	8	371.385	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	9	373.815	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	10 (p)	150.000	0	6.76	0	0

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Deogarh	Pravasuni	Pravasuni RF	11 (P)	70.027	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	12	471.420	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	13	279.450	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	14	223.560	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	15	324.000	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	16	223.155	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	17	523.665	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	18	304.560	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	19	226.660	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	20	214.650	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	21	175.100	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	22	407.403	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	23	595.755	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	24	297.675	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	25	435.375	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	30	356.400	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	37 (p)	90.000	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	38	292.105	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	39	284.986	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	40	66.585	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	41	228.825	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	42	373.005	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	43	270.737	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	44	111.412	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	45	84.810	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	46	558.090	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	47	293.625	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	48	505.440	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	49	293.625	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	50	54.859	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	51	129.575	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	52	192.375	0	6.76	0	0
Deogarh	Pravasuni	Pravasuni RF	53	315.900	0	6.76	0	0
Deogarh	Pravasuni	Khajuria RF	1	522.936	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	5	331.776	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	6	364.500	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	7	432.216	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	8	516.456	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	9	361.584	0	6.23	0	0

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Deogarh	Pravasuni	Khajuria RF	10	356.400	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	11	690.120	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	12	459.432	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	13	366.120	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	14	501.552	0	6.23	0	0
Deogarh	Pravasuni	Khajuria RF	15 (P)	105.000	0	6.23	0	0
Deogarh	Pravasuni	Chilantikhol PRF	1	2316.610	6949	6.37	44265	18.44
Deogarh	Pravasuni	Kandarp-Lambdura PRF	1	1666.400	0	6.16	0	0
Deogarh	Pravasuni	Telikusum PRF	1	409.050	0	5.12	0	0
	Total			20480.601	6949		0	18.44
Reamal	Kansar	Kansar RF (P)	1 (P)	2439.720	58553	6.36	372397	155.17
Reamal	Kansar	Rambhadevi RF	1	231.456	694	6.28	4358	1.82
Reamal	Kansar	Rambhadevi RF	2	131.220	394	6.28	2474	1.03
Reamal	Kansar	Rambhadevi RF	3	104.328	313	6.28	1966	0.82
Reamal	Kansar	Rambhadevi RF	4	101.104	303	6.28	1903	0.79
Reamal	Kansar	Rambhadevi RF	5	211.354	634	6.28	3982	1.66
Reamal	Kansar	Rambhadevi RF	6	160.137	480	6.28	3014	1.26
Reamal	Kansar	Rambhadevi RF	7	94.182	283	6.28	1777	0.74
Reamal	Kansar	Rambhadevi RF	8	122.319	367	6.28	2305	0.96
Reamal	Kansar	Rambhadevi RF	9	68.304	205	6.28	1287	0.54
Reamal	Kansar	Rambhadevi RF	10	92.293	277	6.28	1740	0.73
Reamal	Kansar	Rambhadevi RF	11	91.346	274	6.28	1721	0.72
Reamal	Kansar	Rambhadevi RF	12	130.104	390	6.28	2449	1.02
Reamal	Kansar	Rambhadevi RF	13	170.233	511	6.28	3209	1.34
Reamal	Kansar	Rambhadevi RF	14	114.453	343	6.28	2154	0.9
Reamal	Kansar	Rambhadevi RF	15	115.344	346	6.28	2173	0.91
Reamal	Kansar	Gogua RF	1	198.936	597	6.05	3612	1.51
Reamal	Kansar	Gogua RF	2	247.876	744	6.05	4501	1.88
Reamal	Kansar	Gogua RF	3	232.875	699	6.05	4229	1.76
Reamal	Kansar	Gogua RF	4	410.103	1230	6.05	7442	3.1
Reamal	Kansar	Gogua RF	5	209.223	628	6.05	3799	1.58
Reamal	Kansar	Gogua RF	6	206.550	620	6.05	3751	1.56
Reamal	Kansar	Gogua RF	7	407.511	1223	6.05	7399	3.08
Reamal	Kansar	Gogua RF	8	459.675	1379	6.05	8343	3.48
Reamal	Kansar	Gogua RF	9	270.216	811	6.05	4907	2.04
Reamal	Kansar	Gogua RF	10	342.144	1026	6.05	6207	2.59
Reamal	Kansar	Gogua RF	11	230.040	690	6.05	4175	1.74
Reamal	Kansar	Gogua RF	12	200.232	601	6.05	3636	1.52
Reamal	Kansar	Gogua RF	13	180.144	540	6.05	3267	1.36

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Reamal	Kanaur	Tankia PRF	1	502.830	0	5.55	0	0
Reamal	Kanaur	Kankarkhol PRF	1	1911.610	0	6.5	0	0
Reamal	Kanaur	Naikul PRF	1	1945.390	0	5.92	0	0
Reamal	Kanaur	Kankarkhol PRF	1	3858.830	0	6.5	0	0
	Total			16192.082	75155		0	197.61
Barkote	Badtaila	Badtaila RF	1	208.777	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	2	85.010	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	3	91.935	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	4	129.681	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	5	58.766	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	6	152.195	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	7	193.914	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	8	375.212	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	9	449.550	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	10	197.640	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	11	241.056	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	12	316.402	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	13	247.375	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	14	237.897	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	15	222.912	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	16	162.648	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	17	186.624	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	18	214.529	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	19	177.107	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	20	251.384	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	21	233.928	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	22	204.120	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	23	132.840	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	24	231.296	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	25	204.120	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	26	229.392	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	27	195.048	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	28	199.584	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	29	230.688	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	30	384.912	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	31	259.200	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	32	197.964	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	33	178.666	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	34	130.106	0	5.15	0	0

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Barkote	Badtaila	Badtaila RF	35	196.263	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	36	277.344	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	37	253.368	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	38	168.480	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	39	260.496	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	40	264.384	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	41	198.612	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	42	191.808	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	43	256.682	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	44	274.752	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	45	155.520	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	46	152.280	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	47	142.560	0	5.15	0	0
Barkote	Badtaila	Badtaila RF	48	169.776	0	5.15	0	0
Barkote	Badtaila	Pradhanpat RF	16	259.482	1557	6.33	9856	4.1
Barkote	Badtaila	Pradhanpat RF	17	322.440	1935	6.33	12249	5.1
Barkote	Badtaila	Pradhanpat RF	18	228.744	1372	6.33	8685	3.62
Barkote	Badtaila	Pradhanpat RF	19	265.680	1594	6.33	10090	4.2
Barkote	Badtaila	Pradhanpat RF	20	355.104	2131	6.33	13489	5.62
Barkote	Badtaila	Pradhanpat RF	21	364.144	2185	6.33	13831	5.76
Barkote	Badtaila	Pradhanpat RF	22	140.741	844	6.33	5343	2.23
Barkote	Badtaila	Pradhanpat RF	23	234.738	1408	6.33	8913	3.71
Barkote	Badtaila	Pradhanpat RF	24	385.560	2313	6.33	14641	6.1
Barkote	Badtaila	Pradhanpat RF	25	189.024	1134	6.33	7178	2.99
Barkote	Badtaila	Pradhanpat RF	26	377.136	2263	6.33	14325	5.97
Barkote	Badtaila	Pradhanpat RF	27	256.608	1540	6.33	9748	4.06
Barkote	Badtaila	Pradhanpat RF	28	312.984	1878	6.33	11888	4.95
Barkote	Badtaila	Pradhanpat RF	29	371.952	2232	6.33	14129	5.89
Barkote	Badtaila	Pauri RF	1	8215.425	0	5.76	0	0
Barkote	Badtaila	Mandasila RF	1	244.053	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	2	242.676	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	3	171.720	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	4	218.376	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	5	272.808	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	6	353.160	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	7	309.096	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	8	262.521	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	9	289.575	0	6.03	0	0
Barkote	Badtaila	Mandasila RF	10	197.640	0	6.03	0	0

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Barkote	Badtaila	Mandasila RF	11	294.840	0	6.03	0	0
Barkote	Badtaila	Panguli RF	1	478.502	0	6	0	0
Barkote	Badtaila	Panguli RF	2	519.422	0	6	0	0
Barkote	Badtaila	Panguli RF	3	380.067	0	6	0	0
Barkote	Badtaila	Panguli RF	4	423.630	0	6	0	0
Barkote	Badtaila	Panguli RF	5	256.365	0	6	0	0
Barkote	Badtaila	Panguli RF	6	239.557	0	6	0	0
Barkote	Badtaila	Panguli RF	7	515.970	0	6	0	0
Barkote	Badtaila	Panguli RF	8	399.148	0	6	0	0
Barkote	Badtaila	Thianal RF	1	816.870	0	6.33	0	0
Barkote	Badtaila	Tuzula PRF	1	1675.450	0	5.75	0	0
	Total			30996.011	24386		0	64.31
Pallahara	Malyagiri	Malyagiri RF	2	355.041	9586	6.36	60967	25
Pallahara	Malyagiri	Malyagiri RF	3	154.305	4166	6.36	26496	11.04
Pallahara	Malyagiri	Malyagiri RF	4	510.300	13778	6.36	87628	36.51
Pallahara	Malyagiri	Malyagiri RF	5	787.725	21269	6.36	135271	56.36
Pallahara	Malyagiri	Malyagiri RF	6	467.775	12630	6.36	80327	33.47
Pallahara	Malyagiri	Malyagiri RF	7	384.750	10388	6.36	66068	27.53
Pallahara	Malyagiri	Malyagiri RF	8	409.050	11044	6.36	70240	29.27
Pallahara	Malyagiri	Malyagiri RF	9	336.150	9076	6.36	57723	24.05
Pallahara	Malyagiri	Malyagiri RF	10	321.975	8693	6.36	55287	23.04
Pallahara	Malyagiri	Malyagiri RF	11	332.100	8967	6.36	57030	23.76
Pallahara	Malyagiri	Malyagiri RF	12	542.700	14653	6.36	93193	38.83
Pallahara	Malyagiri	Malyagiri RF	13	431.345	11646	6.36	74069	30.86
Pallahara	Malyagiri	Malyagiri RF	14	372.600	10060	6.36	63982	26.66
Pallahara	Malyagiri	Malyagiri RF	15	417.150	11263	6.36	71633	29.85
Pallahara	Malyagiri	Mankarchua RF	1	392.850	8643	6.5	56180	23.41
Pallahara	Malyagiri	Mankarchua RF	2	350.730	7716	6.5	50154	20.9
Pallahara	Malyagiri	Mankarchua RF	3	277.020	6094	6.5	39611	16.5
Pallahara	Malyagiri	Mankarchua RF	4	293.625	6460	6.5	41990	17.5
Pallahara	Malyagiri	Tamkia RF	1	513.540	0	6.5	0	
Pallahara	Malyagiri	Old Pauri RF	1	3391.000	0	1.25	0	0
Pallahara	Malyagiri	Old Pauri RF	1	3392.750	0	1.25	0	
	Total			14434.481	186132		0	80.94
Khamar	Danda	Danda RF	1	357.445	0	6.64	0	
Khamar	Danda	Danda RF	2	324.810	0	6.64	0	
Khamar	Danda	Danda RF	3	385.155	0	6.64	0	
Khamar	Danda	Danda RF	4	355.590	0	6.64	0	
Khamar	Danda	Biripal RF	1	437.400	3499	5.83	20399	5

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Khamar	Danda	Malyagiri RF	1	336.150	9076	6.36	57723	24.05
Khamar	Danda	Malyagiri RF	16	419.175	11318	6.36	71982	29.99
Khamar	Danda	Malyagiri RF	17	184.275	4975	6.36	31641	13.18
Khamar	Danda	Malyagiri RF	18	317.925	8584	6.36	54594	22.75
Khamar	Danda	Malyagiri RF	19	350.325	9459	6.36	60159	25.07
Khamar	Danda	Malyagiri RF	20	298.680	8064	6.36	51287	21.37
Khamar	Danda	Malyagiri RF	21	342.630	9251	6.36	58836	24.52
Khamar	Danda	Malyagiri RF	22	496.125	13395	6.36	85192	35.5
Khamar	Danda	Malyagiri RF	23	411.075	11099	6.36	70590	29.41
Khamar	Danda	Malyagiri RF	24	409.050	11044	6.36	70240	29.27
Khamar	Danda	Malyagiri RF	25	317.925	8584	6.36	54594	22.75
Khamar	Danda	Malyagiri RF	26	498.150	13450	6.36	85542	35.64
Khamar	Danda	Malyagiri RF	27	451.575	12193	6.36	77547	32.31
Khamar	Danda	Malyagiri RF	28	370.575	10006	6.36	63638	26.52
Khamar	Danda	Malyagiri RF	29	180.225	4866	6.36	30948	12.9
Khamar	Danda	Malyagiri RF	30	259.180	6998	6.36	44507	18.54
Khamar	Danda	Jambua RF	1	246.600	0	5.84	0	0
	Total			7750.040	135861		0	412.27
	Total			108250.800	727576		0	1926.47

6.11.3. Sale Unit : - The prescribed sale unit, which is the yardstick to calculate ume of production of the bamboo, is given in the table below.

Table No. 274

Sale Unit and length of bamboo

Name of amboo	Nos. of sale unit	Nos. of full bundle	Nos. of pieces	Total length in meter
alia	01	50.0	x	2400.0
nba	01	150.0	x	2400.0
S.B	01	x	350	x
D.B	01	x	175	x

6.12. Table of Cutting:

6.12.1. Coupe : - Basing on the period of the Plan, each cutting series has been divided into 04 number of coupes such as A, B, C and D. All coupes in each cutting ries have been shown on the topo sheet 1~ 50000 scale. The working year of each oup in different cutting series is given in the table below.

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Table No. 275

Annual coupe and year of working

Name of cutting series	Range	Name of Block	Compt No	Notified area	Coupe No	Year of working
Pradhanpat	Deogarh	Pradhanpat RF (P)	1 to 10	4067.901	A	2015-16, 2019-20, 2023-24
Pradhanpat	Deogarh	Pradhanpat RF (P) Rambhadevi RF (P)	11 to 15 16 to 26	4570.804	B	2016-17, 2020-21, 2024-25
Pradhanpat	Deogarh	Kansar RF (P)	1 (P)	4879.000	C	2017-18, 2021-22
Pradhanpat	Deogarh	Kansar RF (P)	1 (P)	4879.880	D	2018-19, 2022-23
Pradhanpat			Total	18397.585		
Pravasuni	Deogarh	Pravasuni RF (P)	3, 4, 7, 8, 9, 10(P),11(P), 12 to 22	5249.29	A	2015-16, 2019-20, 2023-24
Pravasuni	Deogarh	Pravasuni RF (P)	23 to 25, 30, 37(P), 38 to 53	5831.159	B	2016-17, 2020-21, 2024-25
Pravasuni	Deogarh	Khajuria RF	1, 5 to 13	5008.092	C	2017-18, 2021-22
Pravasuni	Deogarh	Chilantikhol PRF Kandarp-Lambdura PRF Telikusum PRF	1 1(P) 1	4392.06	D	2018-19, 2022-23
Pravasuni			Total	20480.601		
Kansar	Reamal	Kansar RF (P) Rambhadevi RF (P)	1 1 to 15	4377.897	A	2015-16, 2019-20, 2023-24
Kansar	Reamal	Gogua RF Tankia PRF	1 to 13 1	4098.355	B	2016-17, 2020-21, 2024-25
Kansar	Reamal	Kankarkhol PRF (P) Naikul PRF (P)	1 1	3857.000	C	2017-18, 2021-22
Kansar	Reamal	Kankarkhol PRF (P)	1	3858.83	D	2018-19, 2022-23
Kansar			Total	16192.082		
Badtaila	Barkote	Badtaila RF (P)	1 to 34	7212.478	A	2015-16, 2019-20, 2023-24
Badtaila	Barkote	Badtaila RF (P) Pradhanpat RF (P)	35 to 48 16 to 29	7006.662	B	2016-17, 2020-21, 2024-25
Badtaila	Barkote	Pauri RF	1	8215.425	C	2017-18, 2021-22
Badtaila	Barkote	Mandasila RF Panguli RF Thianal RF Tusula PRF	1 to 11 1 to 8 1 1	8561.446	D	2018-19, 2022-23
Badtaila			Total	30996.011		
Malyagiri	Pallahara	Malyagiri RF (P)	2 to 10	3727.071	A	2015-16, 2019-20, 2023-24

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Malyagiri	Pallahara	Malyagiri RF (P) Mankarchua RF Tamkia RF	11 to 15 1 to 4 1	3923.66	B	2016-17, 2020-21, 2024-25
Malyagiri	Pallahara	Old Pauri RF (P)	1 (P)	3391.000	C	2017-18, 2021-22
Malyagiri	Pallahara	Old Pauri RF (P)	1 (P)	3392.750	D	2018-19, 2022-23
Malyagiri			Total	14434.481		
Danda	Khamar	Danda RF Biripal RF	1 to 4 1	1860.400	A	2015-16, 2019-20, 2023-24
Danda	Khamar	Malyagiri RF (P)	1 & 16 to 20	1906.530	B	2016-17, 2020-21, 2024-25
Danda	Khamar	Malyagiri RF (P)	21 to 25	1976.805	C	2017-18, 2021-22
Danda	Khamar	Malyagiri RF (P) Jambua RF	26 to 30 1	2006.305	D	2018-19, 2022-23
Danda			Total	7750.040		
			Grand Total	108250.800		

6.12.2. Annual Yield : - The annual yield to be obtained in each cutting series is given in the table below.

Table No. 276

Coupe wise estimated yield

Cutting series	Yield of the bamboo coupes				
	A	B	C	D	Total
Pradhanpat	24406	20474	117096	117117	279093
Pravasuni	0	0	0	6949	6949
Kansar	64367	10788	0	0	75155
Badtaila	0	24386	0	0	24386
Malyagiri	100630	85502	0	0	186132
Danda	3499	51476	53373	47513	155861
Total	192902	192626	170469	171579	727576

6.13. Method of Executing the Cutting:

6.13.1. Demarcation : - All annual coupes will be demarcated and inspected during the end of preceding year in which the coupe is due for working. As far as possible coupes line has been made to coincide with the block or compartment boundary and natural features. At the time of demarcation, double coal tar rings at the breast height shall be given on the trees standing at a visible distance along the line or renewed, which were earlier painted. The coupe number shall be shown in the displayed signboard of the compartment.

6.13.2. Cutting Rules : - Cutting will be done soon after receipt of the inspection report for completion of demarcation from Range Officer or Assistant

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Conservator of Forest. The accessible area of the coupe had been heavily exploited by the leaseholder. Bamboo occurs in inaccessible area was remaining untouched. Bamboo area is also under pressure of illegal removal by local people. These resulted clumps in many patches have very few culms and in other patches clumps have become congested. Considering the field position, the following cutting Rules are prescribed.

6.13.3. All culms of 1st year (Karadi) and 2nd year (Mahila) shall not be cut under any circumstances. Culms of 3rd and 4th year (Pakia) will be retained in a clump such that their number shall not be less than the number of Karadi in the same clump. The minimum number of culms shall be retained in a clump on the basis of culms qualities I, II and III are 20, 15 and 10 respectively.

6.13.4. Clumps having the minimum or less than minimum prescribed number of culms shall not be commercially exploited. Only broken, dead, dry, badly damaged and malformed bamboo will be cut.

6.13.5. A clump will be distinguished as an independent one, where its periphery is easily discernible from others. Only where such a distinction is not possible, two clumps with in 01 meter distance will be regarded as one clump.

6.13.6. While retaining culms against cutting in a clump they should be well spaced and preferable in the periphery and in the order of preference as (i) Karadi, (ii) Mahila, (iii) Pakia and (iv) Older live.

6.13.7. The culms shall be cut above 15 cm and below 45 cm height from the ground level. But in no case it will be cut below the first prominent node from the ground.

6.13.8. The cut shall be made with a sharp instrument to ensure that the stump remains in tact with out splitting.

6.13.9. Lops and tops of bamboo will be simultaneously cleared at least to a distance of one meter away from the periphery of the worked clump to avoid fire hazard.

6.13.10. Rhizomes shall not be dug. Climber shall be cut from all the bamboo clumps during working of the coupe.

6.13.11. Bamboo cutting shall not be done from 1st July to 30th September. Bamboo strips will not be used in tying the bamboo bundles.

6.13.12. If sporadic flowering of the bamboo is observed, such clumps in a zone or culms in a clump will be clear felled after they have shed their seeds.

6.13.13. If gregarious flowering of bamboo is observed, all clumps will be clear felled in the zone after they have shed their seeds. Clear felling and extraction

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will be done early so that bamboo shall not be dried or deteriorated or become prone to fire damaged.

6.13.14. Lopping of bamboo either for feeding of livestock or otherwise is strictly prohibited if sporadic flowering is observed in the locality.

6.13.15. Bamboo cutting shall be completed by the end of May and the area shall be rigidly protected from fire and grazing in the year of working and the year following it if sporadic flowering is observed in the zone.

6.13.16. Morphological Characteristic : - Several restriction have been prescribed in bamboo cutting rules. In order to identify the bamboo at their different ages, the morphological characteristic is highly essential for executing agent. To determine the age of bamboo, the following distinguishing characteristics of bamboo have been prescribed in the table below.

Table No. 277

Morphological Characteristic of Bamboo

Age in year	Name	Colour	Name of it's part		
			Culms sheath	Branches	Bloom
1	Kardi	Green	Present	Present at each node	White and come off easily on finger
2	Mahila	Pale green	Absent	Present at upper node	Grayish white, seen in patches and do not come off on finger
3	Pakia	Pale green	Absent	Present at upper node	Blackish and do not come off on finger
4	Old	Pale green and red	Absent	Present at upper node	Black and do not come off on finger

6.13.17. Treatment Type : - The bamboo zones are classified into tree treatment types such as A, B and C. The specific treatment shall be carried out in the bamboo bearing area depending on its treatment type. The principles basing on which the delineation of bamboo area into different treatment type and the works to be carried out in each type are given in the table below.

Table No. 278

Treatment Type and its description

Treatment type	Description
A	Commercial cutting will be done in those clumps, which have more than the prescribed minimum number of culms as per its quality. Other wise only cultural operation will be carried out in the clumps.
B	There will be no commercial cutting in any clump. Only cultural operation will be carried out which include cutting of all dead, dried, over-mature, burnt, broken and grossly damaged bamboo. Broken or cut bamboos or high stumps in green condition, having length of 2.5 meters or more may be retained, if necessary, to maintain size of the clumps. The minimum number of culms to be retained per clumps as prescribed for various quality classes may not be strictly followed if necessity so arises. The congested bamboo clumps shall be clear-cut by forming segments. The maximum

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	number of segments, under which a congested clump shall be worked, will be three and at each working not more than one segment will be cut. Where three segments are formed, the middle segment shall be cut at the first working. In subsequent cycles, side segments should be cut.
C	Only cultural operations will be carried out in the existing bamboo clumps. The bamboo potentiality of such forests augmented by raising bamboo. The minimum area to be planted annually will be the area under this type in each coupe due for working. Tending and cultural operations in the area planted with bamboo will be done as per the standard practice.

6.13.18. Execution of Cutting and Extraction : - Bamboo shall be cut as per the cutting Rules. Cutting shall be started from one end and preceded in the systematic way so that area will not remain un work. The agent will decide the direction of cutting. At the time of cutting, retaining crops should not be damaged. The working agent will take all precautionary measure against forest fire in and around the annual working coups. All converted bamboo shall be lifted with the time limit. Cutting, bundling and lifting will be carried on simultaneously. Extension of time against different works shall not be allowed, however under unavoidable circumstances Conservator of Forest may extend the time to minimum days.

6.14. Subsidiary Silvicultural Operation:

6.14.1. Cleaning : - Retaining bamboos need special care for its establishment in the cutting area. It has been prescribed to take up cleaning in the year following the main cutting to help Karadi for its establishment. It also creates favorable condition for optimum growth of the promising culms. Cleaning shall be done departmentally.

6.14.2. Items of Operation in Cleaning : - (i) Cutting and extraction of bamboo in the un worked clumps. (ii) Extraction of balance felled materials if any. (iii) All cutting debris shall be removed and the clump shall be left cleaned. (iv) Cutting of climbers to be anticipated to climb in the clump. (v) Stone and boulder packing around the clump so that no damaged shall be caused to the rhizomes and the rootstock. (vi) Soil filling in the clump so that the exposed rhizomes shall be covered with soil scarped from the uphill side on a hilly or undulating terrain.

6.15. Artificial Regeneration:

6.15.1. The renewal of a bamboo clumps by planting in B and C treatment type area has been prescribed, where less than 100 number of clumps per ha are exist. There are some small gaps noticed in this area. Bamboo should be planted in the permanent gaps of each coupe, just after annual cutting.

6.15.2. Plantation : - All the gaps in the treatment type B and C coupe of each cutting series are to be surveyed and reflected in the map at the time of demarcation. An average of 50 number of bamboo seedling will be planted per hector. The Divisional Forest Officer will intimate the amount required for the plantation in time as per the cost norm given in the financial forecast chapter.

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6.16. Other Regulation:

6.16.1. Grazing : - The coupe shall be closed to grazing for a period of 01 years after the working year. Practically it is not easy to maintain this restriction inside the forest over a period of 01 year. It is prescribed to issue notice to all the fringe villages nearer to the working coupe about such restriction. The remaining area is open to grazing subject to the provision of the Orissa forest (Grazing of the cattle) Rules 1980.

6.16.2. Lopping : - The local people lop bamboo of different species to use as leaf fodder for their domestic animals regularly. Repeated lopping year after year weakens the bamboo and it becomes prone to many diseases. In course of time, such bamboo dies leaving behind no new rhizome to take their place. Lopping is discouraged. Any regulation for lopping in not prescribed.

6.16.3. Fire protection: - All working coupes shall be rigidly protected from forest fire for a minimum period of 01 years after the coupe working. As per previous record all the forest area were affected by fire in every year. Protection of fire in the working area can be practically possible by watching it from the month of February to June in every year. Provision of watcher has been prescribed and the annual allotment required for fire protection is given in the separate chapter.

6.16.4. Restriction of Cutting Along River, Roads and Hill Slopes : - Bamboo clumps exist along the roadside, rivers and nalas bank at a perpendicular distance of 20 mt shall not be cut.

6.16.5. Works of improvement : - The area constituted in this working circle is a mostly hilly slope. The flow of rain water increase suddenly and there by causing heavy soil erosion. The area becomes dry just after the rainy season. Conservation of soil and water in this terrain is very difficult. Plantation across the smaller Nala and along the bank of the bigger Nala is prescribed. Depending on the site quality, suitable fodder species for the Wild animals shall be chosen for plantation by the Divisional Forest Officer.

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CHAPTER - VII

JOINT FOREST MANAGEMENT (Overlapping) WORKING CIRCLE

7.1. General Constitution of Working Circle:

7.1.1. There are 447 JFM committees in the division and they are protecting 59370.7708 ha of forest, Therefore 59370.7708 ha have been allotted to this overlapping Working Circle. The area allotted to this Working Circle will remain dynamic and is likely to increase as more and more degraded forest is allotted to the VSS. It is overlapping Selection, Rehabilitation, Protection and plantation Working Circle. This area is treated as degraded forest. 01 to 02 exploitable trees exist per hector but those trees are silviculturally not fit for felling. Proper protection of the area against grazing and fire is also not ensured for which the existing crops and the site condition have deteriorated further and the rate of erosion accelerated.

7.1.2. One of the remarkable features of the National Forest Policy, 1988 was that it prescribed for active involvement of the people in protection, conservation and management of the forests. The State of Odisha has been a pioneer amongst the States in involving the village community in protection and management of the forests. Odisha brought out the Odisha Village Forest Rules in 1985 and the first step for involving the people in forest protection was through Government Resolution No. 10F (Pron.) 47/88/ 17240/ FFAH dt.1.8.1988. In this Resolution, the villagers were assigned a specific role in the protection of Reserve Forests adjoining their villages and were in return granted, under Section-24 of the Orissa Forest Act, 1972, certain concessions in the matter of meeting their bonafide requirement of firewood and small timber. This Resolution was amended vide Resolution No.10F (Pron.) - 47/88/23638/FFAH dt.13.10.88, which prescribed that the village level Forest Protection Committee (FPC) should be constituted in consultation with the local villagers and that the Non -official members of the village level FPC may be selected by convening a meeting of the concerned villagers. This Resolution was changed subsequently by Resolution No.10F (Pron.) 4/90/29825/FFAH dt.11.12.1990 in which Protected Forests were also included for assignment to adjoining villages.

7.1.3. To make the involvement of villagers more effective, the Government of Odisha, issued Resolution No.10F (Pron.) 20/93-16700/FandE dt.3.7.1993, which dealt in an exhaustive manner the involvement of the local communities in protection of adjoining forests, formations of Vana Samraskhyan Samiti (VSS) and their Executive Committees, duties and responsibilities of the VSS and their Executive Committees, preparation of JFM Plan, usufructuary benefits for the VSS and provision of MOU etc. As per this resolution VSS are being constituted and degraded Government forests are being allotted to them for protection and management.

7.1.4. The JFM (overlapping) Working Circle includes the Working Plan area that is already under the protection of VSS constituted as per the Joint Forest Mansgement Resolution of the State. Other potential areas where such Committee can be constituted during the course of this Plan have also been shown in the map.

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7.1.5. The areas of degraded forest, which are being protected by VSS outside the Plan area have been listed as Khesra or Revenue forests. The prescriptions given for this Circle may also be extended to all forest area of VSS. The area of Village Forests in Deogarh Division is extended over 686.49 ha. The VFCs, which were constituted, to manage and protect these forests as per Village Forest Rules, 1985 are now continuing as VSS. The prescriptions for this Working Circle may also be extended to the other areas, where VSS will be formed during the course of implementation of this Working Plan. All new areas allotted to VSS will automatically become part of this Working Circle. List of all VSS and allotted area of Deogarh Division is given in the table below.

Table No. 279

Range wise distribution of all VSS

Name of the Range	Name of the Section	Sl.No.	Name of VSS/EDC	Total area allotted to VSS in Ha
Deogarh	Tileibani	1	Amulpani	300.0000
Deogarh	Tileibani	2	Asurkhol	160.0000
Deogarh	Tileibani	3	Badbaliposi	136.0000
Deogarh	Kansar	4	Bhagamunda	126.0000
Deogarh	Deogarh	5	Balanda	94.0000
Deogarh	Kansar	6	Bangalimunda	100.0000
Deogarh	Deogarh	7	Baniakilinda	105.0000
Deogarh	Tileibani	8	Barghat	106.0000
Deogarh	Deogarh	9	Basudevpur	100.0000
Deogarh	Kansar	10	Bhalodari	120.0000
Deogarh	Kansar	11	Bijanali	83.0000
Deogarh	Kansar	12	Bilcighati	100.0000
Deogarh	Deogarh	13	Brahmasadhubahali	45.0000
Deogarh	Laimura	14	Budhikutuni	154.0000
Deogarh	Tileibani	15	Bukhabeda	87.0000
Deogarh	Laimura	16	Chandiposi	90.0000
Deogarh	Laimura	17	Deopani	150.0000
Deogarh	Kansar	18	Dholpada	50.0000
Deogarh	Laimura	19	Dimirikuda	150.0000
Deogarh	Laimura	20	Dudhapasi	150.0000
Deogarh	Kansar	21	Gajaribani	70.0000
Deogarh	Kansar	22	Hetkhamar	84.0000
Deogarh	Kansar	23	Jaisandha	65.0000
Deogarh	Tileibani	24	Jareikela	135.0000
Deogarh	Tileibani	25	Jharagogua	158.0000
Deogarh	Laimura	26	Jharmunda	111.0000
Deogarh	Laimura	27	Kadalimunda	87.0000
Deogarh	Tileibani	28	Kailash	108.0000
Deogarh	Deogarh	29	Kalamati	83.0000

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Deogarh	Deogarh	30	Kalkath	40.0000
Deogarh	Kansar	31	Kaliakhamar	119.0000
Deogarh	Deogarh	32	Kamamunda	98.0000
Deogarh	Deogarh	33	Kamarmunda	70.0000
Deogarh	Kansar	34	Kanteikoli	252.0000
Deogarh	Tileibani	35	Kapasira	90.0000
Deogarh	Kansar	36	Karadapal	40.0000
Deogarh	Tileibani	37	Katang pani	90.0000
Deogarh	Kansar	38	Khalinali	81.5000
Deogarh	Tileibani	39	Kharamunda	80.0000
Deogarh	Kansar	40	Kumurapali	120.0000
Deogarh	Deogarh	41	Kurad	150.0000
Deogarh	Tileibani	42	Kureibahal	140.0000
Deogarh	Deogarh	43	Kuspanga	52.0000
Deogarh	Deogarh	44	Kutraposi	35.0000
Deogarh	Tileibani	45	Laxmipur	141.0000
Deogarh	Laimura	46	Ludhar	149.0000
Deogarh	Kansar	47	Majhipali	115.0000
Deogarh	Deogarh	48	Masinita (H)	80.0000
Deogarh	Kansar	49	Mengiribahal	150.0000
Deogarh	Deogarh	50	Nalabandha	45.0000
Deogarh	Deogarh	51	Niktimal	45.0000
Deogarh	Kansar	52	Nirgunipali	70.0000
Deogarh	Deogarh	53	Nuabhuin	85.0000
Deogarh	Kansar	54	Pallunipada	223.5000
Deogarh	Tileibani	55	Pravasuni	80.0000
Deogarh	Kansar	56	Podadihi	50.0000
Deogarh	Kansar	57	Similiguda & Tendakata	338.5000
Deogarh	Kansar	58	Sradhapur	60.0000
Deogarh	Deogarh	59	Subarnapali	60.0000
Deogarh	Deogarh	60	Suguda	120.0000
Deogarh	Tileibani	61	Tainsar	147.0000
Deogarh	Tileibani	62	Tileibani	150.0000
Deogarh	Kansar	63	Tikilijharan	150.0000
Deogarh	Laimura	64	Bhaluguha	103.8132
Deogarh	Laimura	65	Pahalamara	146.4754
Deogarh	Deogarh	66	Hadamunda	200.0000
Deogarh	Deogarh	67	Jhaliamura	152.0993
Deogarh	Tileibani	68	Kanteikuli	65.0000
Deogarh	Kansar	69	Gundeimara	181.9270
Deogarh	Tileibani	70	Baragadia	81.4569
Deogarh	Tileibani	71	Pravasuni	92.4758
Deogarh	Tileibani	72	Jualibhanga	128.5805

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Deogarh	Tileibani	73	Bilaighati	127.2164
Deogarh	Laimura	74	Sahajbahal	148.3739
Deogarh	Laimura	75	Purunapani	123.7017
Deogarh	Laimura	76	Amulpani	151.5190
Deogarh	Tileibani	77	Belamara	100.0000
Deogarh	Laimura	78	Bhalukhol	100.0000
Deogarh	Laimura	79	Chilantikhol	100.0000
Deogarh	Kansar	80	Dangakhol	100.0000
Deogarh	Laimura	81	Desinkuli	100.0000
Deogarh	Kansar	82	Dharmachandrapur	100.0000
Deogarh	Laimura	83	Durijangal	100.0000
Deogarh	Tileibani	84	Gailo	100.0000
Deogarh	Deogarh	85	Kadamdarh Colony	100.0000
Deogarh	Kansar	86	Karadapal	100.0000
Deogarh	Kansar	87	Palakudar	100.0000
Deogarh	Deogarh	88	Podapada	100.0000
Deogarh	Tileibani	89	Budhibahal	100.0000
Deogarh	Laimura	90	Tasarda	100.0000
Deogarh	Laimura	91	Tileimal	100.0000
Deogarh	Deogarh	92	Sukhapadan	100.0000
Deogarh	Laimura	93	Rukuda	86.4280
Deogarh	Deogarh	94	Katei	105.2420
Deogarh	Tileibani	95	Mandarnali	122.6010
Total	Deogarh Range		95 VSS	10640.4101
Barkote	Kalla	96	Indranijharan	47.0000
Barkote	Kalla	97	Akhayasila	110.8000
Barkote	Kalla	98	Amgaon	292.0000
Barkote	Balam	99	Baghamunda	126.0000
Barkote	Thianal	100	Baidharnagar	82.0000
Barkote	Kalla	101	Balanda	80.0000
Barkote	Balam	102	Balinali	36.5000
Barkote	Balam	103	Balipasi	85.0000
Barkote	Thianal	104	Bamparda	186.0000
Barkote	Balam	105	Basaloi	106.0000
Barkote	Kalla	106	Bhakta badkudar	70.0000
Barkote	Dantaribahal	107	Bhalupali	10.2000
Barkote	Ballam	108	Bichhakani	40.0000
Barkote	Balam	109	Bijayanagar	160.0000
Barkote	Balam	110	Brahmanimal	150.0000
Barkote	Balam	111	Brundavanpur	96.0000
Barkote	Kalla	112	Budhakhaman	100.0000
Barkote	Dantaribahal	113	Chaitanpali	74.0000
Barkote	Barkote	114	Chakadihi	150.0000

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Barkote	Balam	115	Chakulia	331.0000
Barkote	Thianal	116	Charimancha	100.0000
Barkote	Thianal	117	Chasagurjang	66.9600
Barkote	Balam	118	Chhuriabahal	74.0000
Barkote	Balam	119	Dandasingha	86.0000
Barkote	Thianal	120	Deburimunda	40.0000
Barkote	Thianal	121	Derapather	30.0000
Barkote	Barkote	122	Dharipathar	80.0000
Barkote	Ballam	123	Dharampur	50.0000
Barkote	Ballam	124	Ghurudukhaman	80.0000
Barkote	Thianal	125	Golabandha	100.0000
Barkote	Kalla	126	Goppur	220.0000
Barkote	Ballam	127	Goudnali	24.0000
Barkote	Thianal	128	Goyalmora	87.0000
Barkote	Barkote	129	Gunduripasi	119.0000
Barkote	Thianal	130	Gurusang	100.0000
Barkote	Kalla	131	Harekrishnapur	407.0000
Barkote	Barkote	132	Hariharpur	200.0000
Barkote	Kalla	133	Jagannathpur	320.0000
Barkote	Kalla	134	Jalisuan	35.0000
Barkote	Barkote	135	Jhumpra	82.0000
Barkote	Barkote	136	Kadopada	132.0000
Barkote	Kalla	137	Kalla	124.0000
Barkote	Barkote	138	Kantapal	40.0000
Barkote	kaLLa	139	Keshanpur	90.0000
Barkote	Barkote	140	Khadinali	95.0000
Barkote	Ballam	141	Khajuribahal	85.0000
Barkote	Thianal	142	Khandamsahi	12.0000
Barkote	Thianal	143	Khesla	250.0000
Barkote	Barkote	144	Khulundikudar	208.0000
Barkote	Barkote	145	Khuntabahal	48.0000
Barkote	Thianal	146	Kishan gayalmara	48.0000
Barkote	Thianal	147	Kolsura	100.0000
Barkote	Thianal	148	Landijhari	26.0000
Barkote	Thianal	149	Laxmipur	50.0000
Barkote	Dantaribahal	150	Mahupal	34.0000
Barkote	kalla	151	Makfarsonpur	178.0000
Barkote	Thianal	152	Mandasila (B)	50.0000
Barkote	Barkote	153	Mardang	45.0000
Barkote	Kalla	154	Markandapaur	24.0000
Barkote	Kalla	155	Masinita (K)	187.0000
Barkote	Dantaribahal	156	Nagdihi	106.0000
Barkote	Kantala	157	Namgaon	185.0000

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Barkote	Dantaribahal	158	Purukunda	41.0000
Barkote	Dantaribahal	159	Ragada	82.0000
Barkote	Balam	160	Rangamatia	360.0000
Barkote	Barkote	161	Ranja	16.0000
Barkote	Thianal	162	Ratab	50.0000
Barkote	Ballam	163	Rengalbahal	120.0000
Barkote	Kalla	164	Saida	176.0000
Barkote	Thianal	165	Sanmanpur	10.0000
Barkote	Kalla	166	Sarankhol	120.0000
Barkote	Kalla	167	Sarankote	256.0000
Barkote	Balam	168	Sarasposi	40.0000
Barkote	Thianal	169	Saruali	100.0000
Barkote	Thianal	170	Siarikatei	50.0000
Barkote	Barkote	171	Sibapali	87.0000
Barkote	Kalla	172	Singsal	300.0000
Barkote	Barkote	173	Sirapali	92.0000
Barkote	Thianal	174	Taisira	136.0000
Barkote	Kalla	175	Talbahali	63.0000
Barkote	Barkote	176	Thakurpali	95.0000
Barkote	Thianal	177	Thianal	50.0000
Barkote	Dantaribahal	178	Utuniamunda	46.0000
Barkote	Barkote	179	Gopalpali	66.1665
Barkote	Barkote	180	Kaunsibahal	132.1729
Barkote	Barkote	181	Kelda	105.0031
Barkote	Barkote	182	Salohi	70.9493
Barkote	Kalla	183	Masinita(A)	91.2792
Barkote	Kalla	184	Ghantiposi	88.8294
Barkote	Kalla	185	Nuakesaala	69.2759
Barkote	Kalla	186	Gopapur	100.8939
Barkote	Kalla	187	Kaliapal	149.5883
Barkote	Barkote	188	Talabahali	153.6827
Barkote	Barkote	189	Jayapichhula	151.3953
Barkote	Kalla	190	Netrabahal	130.2666
Barkote	Barkote	191	Brahmanidei	89.4810
Barkote	Kalla	192	Chakrapali (T)	89.7229
Barkote	Dantaribahal	193	Barbahal	98.6282
Barkote	Dantaribahal	194	Kusumkata	51.7348
Barkote	Kalla	195	Kudagada	70.3281
Barkote	Kala	196	Adyapur	100.0000
Barkote	Barkot	197	Chakulia	100.0000
Barkote	Barkot	198	Chapbahal	100.0000
Barkote	Kala	199	Damita	100.0000
Barkote	Tantaribahal &Balam	200	Dangapal	100.0000

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Barkote	Tantaribahal &Balam	201	Dimiripasi	100.0000
Barkote	Barkot	202	Kamchhada	100.0000
Barkote	Thianal	203	Kansar	100.0000
Barkote	Tantaribahal &Balam	204	Makarmunda	100.0000
Barkote	Kala	205	Pacheripani	100.0000
Barkote	Kala	206	Rugudkudar	100.0000
Barkote	Tantaribahal &Balam	207	Tusula	100.0000
Barkote	kala	208	Ramachandrapur	100.0000
Barkote	Barkot	209	Ratanpalli	100.0000
Barkote	Dantaribahal	210	Baishnabapali	70.0910
Barkote	Dantaribahal	211	Beteijharan	102.8150
Barkote	Barkote	212	Sirigida	175.6270
Barkote	Dantaribahal	213	Rambhei	163.6440
Barkote	Dantaribahal	214	Talkholi	136.9510
Total	Barkote Range		119 VSS	12798.9861
Reamal	Reamal	215	Adash	100.0000
Reamal	Reamal	216	Akhabuda	36.8000
Reamal	Reamal	217	Andhari	87.0000
Reamal	Kundheigola	218	Arkhapal	87.0000
Reamal	Reamal	219	Badabahal	14.6000
Reamal	Rengalbeda	220	Badkuanarkhol	85.0000
Reamal	Palsama	221	Baghbar	275.0000
Reamal	Palsama	222	Baradanali	150.0000
Reamal	Rengalbeda	223	Begunianali - Basantapur	66.5800
Reamal	Nuadihi	224	Belamunda	159.0000
Reamal	Nuadihi	225	Bhaliapal	87.0000
Reamal	Nuadihi	226	Bhaluchaba	150.0000
Reamal	Nuadihi	227	Bhaluchua	70.0000
Reamal	Nuadihi	228	Bilaeghati	65.0000
Reamal	Palsama	229	Brahmanipali	88.0000
Reamal	Rengalbeda	230	Budhikhutuni	75.0000
Reamal	Rengalbeda	231	Budido	58.0000
Reamal	Kundheigola	232	Chadeimora	40.0000
Reamal	Reamal	233	Chandrapur	170.0000
Reamal	Palsama	234	Chirgunikudar	229.8600
Reamal	Rengalbeda	235	Dangakhol	240.0000
Reamal	Reamal	236	Darjimunda	30.0000
Reamal	Reamal	237	Dasgharia	200.0000
Reamal	Palsama	238	Dehuripal	104.0000
Reamal	Rengalbeda	239	Ghamamunda	104.0000
Reamal	Palsama	240	Ghodapaka	72.0000

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Reamal	Palsama	241	Godamal	40.0000
Reamal	Rengalbeda	242	Gundiapali	78.0000
Reamal	Rengalbeda	243	Gujahuli	58.0000
Reamal	Reamal	244	Hariharpur - Khandamunda	95.0000
Reamal	Rengalbeda	245	Iswarpali	57.0000
Reamal	Reamal	246	Jadagola	140.0000
Reamal	Reamal	247	Jhimpabira	30.0000
Reamal	Kundheigola	248	Kamarpal	65.0000
Reamal	Reamal	249	Kankarkhol	40.0000
Reamal	Palsama	250	Kantabahal	349.9800
Reamal	Rengalbeda	251	Kendughat	16.8000
Reamal	Reamal	252	Khairrandha	98.0000
Reamal	Kundheigola	253	Khandadhuan	113.0000
Reamal	Nuadihi	254	Khilei	260.8000
Reamal	Kundheigola	255	Koradaposi	20.0000
Reamal	Palsama	256	Laxmipur	340.5100
Reamal	Nuadihi	257	Malarbahal	150.0000
Reamal	Reamal	258	Malichuan	150.0000
Reamal	Reamal	259	Nakhabahal	135.0000
Reamal	Reamal	260	Naulipara	55.0000
Reamal	Palsama	261	Palsama	120.0000
Reamal	Reamal	262	Paramunda	35.5800
Reamal	Nuadihi	263	Phuljhari	63.0000
Reamal	Kundheigola	264	Poipani	127.0000
Reamal	Reamal	265	Pudapada	107.0000
Reamal	Kundheigola	266	Rairatanpur	107.0000
Reamal	Reamal	267	Rampali	71.0000
Reamal	Rengalbeda	268	Ratanpur Khalinali	55.0000
Reamal	Reamal	269	Reamal	80.0000
Reamal	Kundheigola	270	Rutanali	67.4000
Reamal	Kundheigola	271	Sadhubahali	150.0000
Reamal	Kundheigola	272	Sanghapasi	250.0000
Reamal	Palsama	273	Satkiari	45.4500
Reamal	Reamal	274	Siaria	164.0000
Reamal	Nuadihi	275	Siarimalia	133.0000
Reamal	Reamal	276	Similoi	125.0000
Reamal	Kundheigola	277	Surangipal	50.0000
Reamal	Rengalbeda	278	Talkundi	35.0000
Reamal	Reamal	279	Tarang	60.0000
Reamal	Reamal	280	Tinkibir (A)	40.0000
Reamal	Reamal	281	Tinkibir (B)	45.0000
Reamal	Palsama	282	Udaypur	64.0000
Reamal	Rengalbeda	283	Kaunsitoila	14.4000

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Reamal	Reamal	284	Timur	162.5258
Reamal	Reamal	285	Medinipur	128.9983
Reamal	Palsama	286	Similta	83.9793
Reamal	Nuadihi	287	Kadalipal	51.3937
Reamal	Kundheigola	288	Kapagola	130.0000
Reamal	Kundheigola	289	Deojharan	111.0343
Reamal	Palsama	290	Similihota	126.6211
Reamal	Reamal	291	Sunaripara	144.5205
Reamal	Reamal	292	Kirtanpali	109.7084
Reamal	Kundheigola	293	Chingurijharan	111.6008
Reamal	Kundheigola	294	Lulang	138.5521
Reamal	Reamal	295	Burbuda	127.6813
Reamal	Kundheigola	296	Pitasika	60.4007
Reamal	Kundheigola	297	Panchamahala	82.3593
Reamal	Nuadihi	298	Nuadihi	52.6750
Reamal	Rengalbeda	299	Deojharan(Rengalbeda)	100.0000
Reamal	Reamal	300	Kainsar	100.0000
Reamal	Kundheigola	301	Kaunsipal	100.0000
Reamal	Kundheigola	302	Khandiamunda	100.0000
Reamal	Kundheigola	303	Kurudkhol	100.0000
Reamal	Palsama	304	Kuskulia	100.0000
Reamal	Nuadihi	305	Danardanpali	100.0000
Reamal	Reamal	306	Telimunda	100.0000
Reamal	Palsama	307	Jambunali	100.0000
Reamal	Reamal	308	Jharjhari	100.0000
Reamal	Rengalbeda	309	Dangaghat(Bada)	100.0000
Reamal	Nuadihi	310	Kantimal	100.0000
Reamal	Kundheigola	311	Haladiakhol	106.0790
Reamal	Rengalbeda	312	Jharpara	79.9370
Reamal	Rengalbeda	313	Sindurkhol	99.5080
Reamal	Nuadihi	314	Sankarpur	99.0950
Total	Reamal Range		100 VSS	10351.4296
Pallahara	Jamardihi	315	Atalanka, Mohanpur	365.0000
Pallahara		316	Asanpani	30.0000
Pallahara	Pallahara	317	Balim	322.0000
Pallahara	Jamardihi	318	Barnamuhan	375.0000
Pallahara	Pallahara	319	Batisuan	271.5000
Pallahara	Jamardihi	320	Bhimakanda	492.0000
Pallahara	Kantala	321	Dalo Rajamunda	30.0000
Pallahara	Pallahara	322	Dimiria	60.0000
Pallahara	Jamardihi	323	Dudipani	775.0000
Pallahara	Pallahara	324	Illisuan & Badjhar	305.0000
Pallahara	Kantala	325	Jamara	332.0000

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Pallahara	Jamardihi	326	Jamardihi	58.7400
Pallahara	Jamardihi	327	Janakapani	372.0000
Pallahara	Kantala	328	Jharalo	183.0000
Pallahara	Kantala	329	Jharbeda Namposi	16.0000
Pallahara	Pallahara	330	Jhariakhaman Jharabahal	25.0000
Pallahara	Pallahara	331	Jhimiripali & Bagdari	320.8000
Pallahara	Jamardihi	332	Jolunda	134.6600
Pallahara	Kantala	333	Kadalibari & Talbahali	190.0000
Pallahara	Pallahara	334	Kamparkela	198.0000
Pallahara	Kantala	335	Kantala	340.0000
Pallahara	Kantala	336	Kantanali	130.0000
Pallahara	Pallahara	337	Kardapal	200.0000
Pallahara	Pallahara	338	Kerjang	150.0000
Pallahara	Kantala	339	Khulodi	280.0000
Pallahara	Pallahara	340	Kulipal	210.0000
Pallahara	Pallahara	341	Kumbhibahal	285.0000
Pallahara		342	Kuturia Pravasuni	30.0000
Pallahara	Pallahara	343	Laxmipriyapur	44.0000
Pallahara	Jamardihi	344	Makarchuan	100.0000
Pallahara	Jamardihi	345	Moharapani	218.0000
Pallahara	Pallahara	346	Muktapur	246.0000
Pallahara	Jamardihi	347	Nagira	365.0000
Pallahara	Jamardihi	348	Patamund	120.0000
Pallahara	Pallahara	349	Phapand Baliposi	319.0000
Pallahara	Kantala	350	Raipal	302.0000
Pallahara	Pallahara	351	Ranjana	71.0600
Pallahara	Pallahara	352	Ranjo Nuasahi	86.0000
Pallahara	Jamardihi	353	Rugudihi	245.0000
Pallahara	Pallahara	354	Samal Rayadihi	415.0000
Pallahara	Pallahara	355	Siaria	345.0000
Pallahara	Jamardihi	356	Sibida	285.0000
Pallahara	Pallahara	357	Seegarh	460.0000
Pallahara	Pallahara	358	Sreerampur	72.2000
Pallahara	Kantala	359	Susabnali	20.0000
Pallahara	Jamardihi	360	Tabhapal	104.0000
Pallahara	Pallahara	361	Tampar	248.0000
Pallahara	Pallahara	362	Tirib	45.0000
Pallahara	Pallahara	363	Vejipada	40.0000
Pallahara	Jamardihi	364	Krutibaspur	129.3153
Pallahara	Pallahara	365	Kerjenga	122.3444
Pallahara	Kantala	366	Kantanali	63.8601
Pallahara	Pallahara	367	Sairha	129.4932
Pallahara	Jamardihi	368	Similipal	95.8015

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Pallahara	Jamardihi	369	Kamparkela	56.6281
Pallahara	Kantala	370	Gudapada	65.2077
Pallahara	Kantala	371	Namgaon	117.5507
Pallahara	Kantala	372	Taptajharan	70.5554
Pallahara	Jamardihi	373	Bhandhabhuin	158.0000
Pallahara	Jamardihi	374	Bhimakand	160.0000
Pallahara	Jamardihi	375	Itti	178.0000
Pallahara	Kantala	376	Kadalibari	154.0000
Pallahara	Jamardihi	377	Kolipali	164.0000
Pallahara	Jamardihi	378	Naikanipali	138.0000
Pallahara	Kantala	379	Nuguda	176.0000
Pallahara	Pallahara	380	Sambala	138.0000
Pallahara	Jamardihi	381	Timi	145.0000
Pallahara	Jamardihi	382	Pechamundi	166.0000
Total	Pallahara Range		68 VSS	13058.7164
Khamar	Khamar	383	Aluri	274.0000
Khamar	Khamar	384	Arjunjhari	150.0000
Khamar		385	Badsada	100.0000
Khamar	Khamar	386	Bahadakani	284.0000
Khamar	Khamar	387	Barkalapal	370.0000
Khamar	Nuagaon	388	Bankholi	106.0000
Khamar	Khamar	389	Barkotia	80.0000
Khamar	Khamar	390	Besalia	150.0000
Khamar	Nuagaon	391	Bhojpur	395.0000
Khamar	Nuagaon	392	Biralmunda	205.0000
Khamar	Nuagaon	393	Chungmatia	394.0000
Khamar	Nuagaon	394	Deybahali	40.0000
Khamar	Nuagaon	395	Hansla	260.0000
Khamar	Khamar	396	Hatibindha	380.0000
Khamar	Nuagaon	397	Injidi	219.0000
Khamar	Khamar	398	Jambua	360.0000
Khamar	Sahargurjang	399	Jaymal	318.0000
Khamar	Khamar	400	Jenapada	275.0000
Khamar	Sahargurjang	401	Jharkilinda	72.0000
Khamar	Kantala	402	Kalanda	104.8000
Khamar		403	Karadapal	70.0000
Khamar	Khamar	404	Khamar	287.0000
Khamar	Nuagaon	405	Kochiabeda	134.0000
Khamar	Khamar	406	Kutarimunda	390.0000
Khamar	Nuagaon	407	Kunjam	416.0000
Khamar		408	Laxmipur	206.0000
Khamar	Nuagaon	409	Mundiribeda	86.6100
Khamar	Nuagaon	410	Nuagaon	367.0000

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Khamar	Khamar	411	Odash	93.5500
Khamar	Khamar	412	Padaposi	341.0000
Khamar	Khamar	413	Parachhat	215.0000
Khamar	Nuagaon	414	Paramanandapur	180.0000
Khamar	Khamar	415	Patatangar	285.0000
Khamar	Khamar	416	Priyambadapur	35.0000
Khamar	Khamar	417	Purunspani	309.0000
Khamar	Nuagaon	418	Rangiapal	225.0000
Khamar	Sahargurjang	419	Ranja	80.0000
Khamar	Nuagaon	420	Rohila	40.0000
Khamar	Sahargurjang	421	Sahargurjang	407.0000
Khamar	Nuagaon	422	Sanda & Raghunathpur	320.0000
Khamar	Khamar	423	Sankhamur	260.0000
Khamar	Khamar	424	Satyabandha	390.0000
Khamar	Khamar	425	Tambur	280.0000
Khamar	Khamar	426	Kurumulla	99.7910
Khamar	Khamar	427	Bhetia	87.6058
Khamar	Khamar	428	Rohira	148.6850
Khamar	Khamar	429	Basudevpur	48.9258
Khamar	Khamar	430	Khantapasi	100.3471
Khamar	Khamar	431	Dongapala	63.5465
Khamar	Khamar	432	Sandhauragoth	113.3183
Khamar	Khamar	433	Paunshia	131.3209
Khamar	Khamar	434	Hatibindha	108.0722
Khamar	Nuagaon	435	Pita	80.0000
Khamar	Nuagaon	436	Burbura	138.0000
Khamar	Nuagaon	437	Magarmuhan	148.0000
Khamar	Nuagaon	438	Malarbeda	157.0000
Khamar	Khamar	439	Balabhadrapur	163.0000
Khamar	Khamar	440	Sukadebpur	152.0000
Khamar	Khamar	441	Sapadhara	125.0000
Khamar	Nuagaon	442	Tandiberni	162.0000
Khamar	Nuagaon	443	Birlamunda	142.0000
Khamar	Khamar	444	Chakradharpur	144.0000
Khamar	Nuagaon	445	Chhanchunia	95.8300
Khamar	Nuagaon	446	Padiamunda	59.9900
Khamar	Nuagaon	447	Madhupur	98.8360
Total	Khamar Range		65 VSS	12521.2286
Grand total of Deogarh Division.			447 VSS	59370.7708
Sources - Divisional Forest Officer, Deogarh.				

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7.1.6. The Range wise distribution of area over 59370.7708 ha in different blocks allotted to this overlapping Working Circle is given in the table below.

Table No. 280			
Range wise distribution of JFM area			
S.No	Name of Range	No. of VSS	Area Allotted
1	Pallahara	68	13058.7164
2	Khamar	65	12521.2286
3	Barkote	119	12798.9861
4	Deogarh	95	10640.4101
5	Reamal	100	10351.4296
	Total	447	59370.7708

7.2. General Character of Vegetation:

7.2.1. Composition : - The crown density of the crops standing over the area varies from 0.2 to 0.4. It consists of mostly hardy species. The soil is highly eroded and susceptible to sheet and gully erosion. In some patches the topsoil have been washed away exposing the hard morums and rocky surface. Sal is the principal species. The area is dominated by miscellaneous vegetation like Rohini, Karla, Anla, Jamu, Kurei, Dhaura, Dhatuki, Kanteikoli etc. The crop standing over this area conforms to Northern dry deciduous forest and dry peninsular sal forest. Due to intense biotic interference most of these forests have become degraded. Many degraded patches, which are now under the protection of VSS, have started showing signs of rejuvenation especially in Revenue Forest.

7.2.2. The growing stock per hectare in these forest area is relatively poor since the forest crop is largely degraded with few patches of shrubby growth. All these areas have potential for rapid improvement since they have rooted waste, coppice shoots and pole crop. Degradation of these forests have taken place due to relentless biotic pressure on these forests and these area are remaining in a degraded state due to the continue pressure of people and cattle for the biomass growing in these forests. It is expected that with the formation of VSS and allotment of these degraded forests to the villagers most of the biotic pressure will be reduced allowing for rejuvenation of the crop.

7.2.3. Age Class : - The sal crop and its associates constitute of all age classes. In the sample inventory over an area of 0.1 ha & strip, trees are grouped in two number of girth classes. Girth class from 30 cm and above has been recorded but girth class from below 30 cm has not been recorded. The age class of sal in the girth class of 30 to 40 cm is 10 to 20 years. Similarly the age class of sal in the girth class of 150 cm and above is more than 100 years.

7.2.4. Distribution : - The area allotted to this overlapping Working Circle is distributed in all Ranges, which comprises 44.77 % of the total managed area of the Working Plan. Sal distributed in pure form in plain and valley area, where as it is sporadically distributed in mixed forest in the hill portion.

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7.2.5. Density : - The density of the crop included in this overlapping Working Circle varies from 0.2 to 0.4. In plain and valley area the density varies from 0.3 to 0.4, where as in hilly area the density varies from 0.2 to 0.3. The variation of density is due to the adjoining environmental influence and the fertility of the area.

7.2.6. Growing Stock : - The crop standing over the area is consisting mostly of inferior hardy species. The actual number of established trees in each forest block included in this overlapping Working Circle has not been counted in this revision. Also the actual number of trees established in each forest block has not been counted in the past. An average of 50 number of established trees of 30 cm and above girth at breast height exist over an area of 0.1 ha as per the inventory data of sample point.

7.2.7. Status of Regeneration : - The area included in Joint Forest Management (overlapping) Working Circle have no sufficient stock. The renewal of forest crop is purely depending on nature. The regeneration survey over an area of 2 mt x 2 mt has been conducted simultaneously with the inventory of each sample point. The regeneration data have been analyzed and the status of regeneration is found inadequate.

7.2.8. Climber Menace : - Climber is affecting the growth of trees and quality of timber. Some time trees are either uprooted or died due to climber attack. The growth of the climber is very first and within one to two years it covers the crown of the tree. The climbers are to be cut twice with the Plan period to avoid its menace.

7.2.9. Weed Growth : - Unwanted plants are common in the forest floor. During rainy season vast number of weeds grow in the forest floor of this tract. Weeds tend to interfere with the growth of individuals of favored species. Annual weeds died during the month of February. Dry weeds invite forest fire, which causes damage to seedling.

7.2.10. 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.

7.3. Joint Forest Management Series and Sections:

7.3.1. Joint Forest Management Series : - This Working Circle constituted with 05 number of joint forest management series depending on distribution of area. Joint forest management section has not been formed. The area allotted to different joint forest management series is given in the table below.

Table No. 281

Joint Forest Management Series

Sl No.	Range and it's JFM area in ha		JFM series	Area of JFM series in ha.
1	Pallahara	13058.7164	Pallahara	13058.7164
2	Khamar	12521.2286	Khamar	12521.2286
3	Barkote	12798.9861	Barkote	12798.9861
4	Deogarh	10640.4101	Deogarh	10640.4101
5	Reamal	10351.4296	Reamal	10351.4296
	Total	59370.7708		59370.7708

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7.3.2. Reason for Constitution of Joint Forest Management Series : - Joint forest management series had not been formed in the out going Plan. There are 05 number of joint forest management series now formed for convenience of working, availability of VSS, distribution of area etc.

7.4. Special Objectives of Management:

7.4.1. The forest area adjoining to villages is under the pressure of collection of firewood, poles and timber. Grazing and fire is common. To avoid those old practices this Joint Forest Management (overlapping) Working Circle is constituted with the special objectives of management, which have been given in the table below.

Table No. 282

Objectives of Management of JFM area

Sl No.	Special objectives of management
1	To manage and protect the forest with the active participation of the communities.
2	To enhance productivity by proper soil and moisture conservation.
3	To protect forest from fire and grazing with the active support of the villagers.
4	To treat communities as stakeholder in forest protection and management.
5	To recreate green cover over the barren area with people participation.
6	To create favorable condition for habitat and multiplication of the Wild Life.
7	To create income generating activities in the villages protecting the forests.
8	To study the scope of enhancing the network of VSS protection areas.

7.5. Analysis and Valuation of the Crop:

7.5.1. Stock Map : - The entire area covered by Joint Forest Management (overlapping) Working Circle have been shown on the stock map. Sample points enumeration in the managed area have been done covering an area of 0.1 ha, keeping point as the center of the plot. Stock map have been prepared by Field staff after analyzing the inventory data of sample points.

7.5.2. Age Class Distribution : - All age classes of trees of different species are present in this tract. But their number in different age classes differ from each other. In the inventory data it is found that as the age of trees increases the number of tree decreases. The reasons of decrease in the number of tree are illicit felling, uprooted and death.

7.5.3. Selection of Sample Units : - The longitude and latitude of the sample point are recoded. There are 1148 number of point enumeration & strip enumeration are taken for inventory. Keeping point in the middle, rectangular size sample unit is formed having 40.00 mt x 25.00 mt & strip.

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7.5.4. Type of Enumeration : - Partial enumeration in separate sample units has been carried out to ascertain the growing stock in this tract. The exact girth, which is 30 cm or more at breast height, has been recorded for all species at the time of inventory of the unit.

7.5.5. Status of Regeneration : - The regeneration survey is carried out in a plot of size 2 mt x 2 mt in the middle of each sample unit. The data collected in regeneration survey have been analyzed in Chapter II-A of Part-I. The status of regeneration in the area allotted to Joint Forest Management (overlapping) Working Circle is found inadequate.

7.5.6. Special Feature : - The condition of the forest in the VSS area is improved due to protection. Firewood and small timber demand of the inhabitant of this locality are full filled from the forest, which are not managed in this revision. Forest fire is an important tragedy to the forest of this tract.

7.6. Silvicultural System:

7.6.1. System : - No conventional silvicultural system is prescribed for Joint Forest Management (overlapping) Working Circle. The trees attended exploitable girth shall be retained during the Plan period. This Working Circle is an overlapping circle and hence the silvicultural system to be followed depends on the prescriptions outlined for the main Working Circle to which if the block is primarily allotted. Moreover, the system of working in these particular areas would be guided by the Micro Plans prepared in conformity with the prescriptions of the main Working Circle, jointly by the DFO and VSS for the individual VSS allotted areas. The intermediate and final felling to be proposed in the Micro Plans should be clearly mentioned and the yield needs to be fixed by taking into account all the safeguards.

7.6.2. Reasons : - The area allotted to this overlapping Working Circle mostly contain degraded forest with extensive eroded patches. The main object of management is to protect the existing growth and restock the blank patches through artificial regeneration. There will be no exploitation except removal of uprooted trees. The operations to be carried out involve protection, tending, reforestation and suitable soil and moisture conservation measure that will be silviculturally compatible to the site condition.

7.7. Rotation:

7.7.1. Rotation : - The planned number of years between regeneration and maturity of a crop will vary depending on its site quality. Rotation should be a multiplication of the joint forest management cycle. The rotation will be the average age at which a tree is considered mature for felling. A joint forest management cycle of 10 year has been fixed for all JFM series in this Working Circle. Basing on joint forest management cycle, the Rotation of all principal species has been given in the table below.

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Table No. 283			
Rotation of 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
7	Mundi	60	110
8	Kendu	120	220
9	Bandhan	100	150
10	Kasi	80	120
11	Tentala	120	180

7.8. Exploitable Diameters:

7.8.1. The exploitable girth of different species have been fixed basing on the size to which tree can not develop unsoundness and give maximum financial return. The exploitable girth of the species in different forest blocks is given below.

Table No. 284		
Exploitable Diameters		
Name of the Blocks	Name of the trees	Exploitable g.b.h in cm
Khajuria,Prabhasuni,Kansar, Badtaila,Pauri,Malyagiri,Old Pauri,Chilantikhol,Mandasila And Kuladera.	1. Sal	135
	2. Bija, Haldu and Mundi	120
	3. Bandhan and Sisoo	105
	4. Asan, Dhaura and Semul	150
	5. All other species	135
In balance Blocks	1. Sal	120
	2. Bija, Haldu and Mundi	135
	3. Bandhan and Sisoo	105
	4. Asan,Dhaura and Semul	165
	5. All other species	150

7.9. Joint Forest Management Cycle:

7.9.1. Joint Forest Management Cycle : - It has been fixed basing on the period of the Working Plan or the number of coupes in each joint forest management series. As per Para 05 of the Working Plan Code and for complete execution of work in each joint forest management series, the joint forest management cycle of 10 year has been fixed.

7.9.2. Choice of 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.

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Table No. 285			
Choice of Species			
Principal species	Secondary species	Guest species	Inferior species
Sal, Bija, Ashan, Sisoo, Bandhan, Haldu, Gambhari, and Kasi	Dhaura, Kendu, Jamu, Senha, Semuli, Khair, Moi, Tentera, Siris, bamboo and Mundi	Mango, Bel, Kusum, Karanja, Harida, Bahada, Tamarind, Mahula, Kochila, Sunari, Genduli and Nimba	All other species

7.10. Calculation of the Yield:

7.10.1. The area included in this revised Plan have irregular nature of forest. The distribution of girth classes is abnormal. Maximum attempt have been made to allot one or two VSS area into one annual unit. This will facilitate for demarcation or identification of annual units.

7.10.2. Yield calculation : - Felling of exploitable green trees are prohibited in Joint Forest Management (overlapping) Working Circle except that of SWC. Only uprooted and illicit felled trees are to be marked for extraction. So yield calculation is not applicable in Joint Forest Management (overlapping) Working Circle.

7.11. Table of Joint Forest Management Unit:

7.11.1. Unit : - Basing on the period of the Plan, each joint forest management series has been divided into 10 numbers of units. All units in each joint forest management series have been shown on the topo sheet 1~ 50000 scale. The working year of each unit in different joint forest management series is given in the table below.

Table No. 286				
Pallahara Joint Forest Management Series				
JFM series	Name of VSS	Area in ha	Unit No.	Year of working
Pallahara	Atalanka (Mohanpur), Asanpani, Balim, Barnamuhan, Batisuan, Bhimakanda, Dalo Rajamunda, Dimiria, Dudipani	2720.5000	I	2015 -16 2020 -21
Pallahara	Illisuan & Badjhar, Jamara, Jamardihi, Janakapani, Jharalo, Jharbeda Namposi, Jhariakhaman Jharabahal, Jhimiripali & Bagdari, Jolunda, Kadalibari & Talbahali, Kamparkela, Kantala, Kantanali	2605.2000	II	2016 -17 2021-22
Pallahara	Kardapal, Kerjang, Khulodi, Kulipal, Kumbhibahal, Kuturia Pravasuni, Laxmipriyapur, Makarchuan, Moharapani, Muktapur, Nagira, Patamund, Phapand Baliposi.	2567.0000	III	2017-18 2022 -23
Pallahara	Raipal, Ranjana, Ranjo Nuasahi, Rugudihi, Samal Rayadihi, Siaria, Sibida, Seegarh, Sreerampur, Susabnali, Tabhapal, Tampar	2653.2600	IV	2018 -19 2023 -24

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Pallahara	Tirib, Vejipada, Krutibaspur, Kerjenga, Kantanali, Sairha, Similipal, Kamparkela, Gudapada, Namgaon, Taptajharan, Bhandhabhuin, Bhimakand, Itti, Kadalibari, Kolipali, Naikanipali, Nuguda, Sambala, Timi, Pechamundi	2512.7564	V	2019 -20 2024 -25
Pallahara	Total	13058.7164		

Table No. 287

Khamar Joint Forest Management Series

JFM series	Name of VSS	Unit area in ha	Unit No.	Year of working
Khamar	Aluri, Arjunjhari, Badasada, Bahadakani, Barkalapal, Bankholi, Barkotia, Besalia, Bhojpur, Biralmunda, Chungmatia, Deybahali.	2548.0000	I	2015 -16 2020 -21
Khamar	Hansala, Hatibindha, Injidi, Jambua, Jaymal, Jenapada, Jharkilinda, Kalanda, Karadapal, Khamar, Kochiabeda	2479.8000	II	2016 -17 2021 -22
Khamar	Kutarimunda, Kunjam, Laxmipur, Mundiribeda, Nuagaon, Odash, Padaposi, Parachhat, Paramanandapur, Patatangar	2580.1600	III	2017 -18 2022 -23
Khamar	Priyambadapur, Purunapani, Rangiapal, Ranja, Rohila, Sahargurjang, Sanda & Raghunathpur, Sankhamur, Satyabandha, Tambur, Kurumulla, Bhetia.	2533.3968	IV	2018 -19 2023 -24
Khamar	Rohira, Basudevpur, Khantapasi, Dongapala, Sandhauragoth, Paunshia, Hatibindha, Pita, Burbura, Magarmuhan, Malarbeda, Balabhadrapur, Sukadebpur, Sapadhara, Tandiberni, Birlamunda, Chakradharpur, Chhanchunia, Padiamunda, Madhupur	2379.8718	V	2019 -20 2024 -25
Khamar	Total	12521.2286		

Table No. 288

Barkote Joint Forest Management Series

JFM series	Name of VSS	Unit area in ha	Unit No.	Year of working
Barkote	Indranijharan, Akhayasila, Amgaon, Baghamunda, Baidharnagar, Balanda, Balinali, Balipasi, Bampaarda, Basaloi, Bhakta badkudar, Bhalupali, Bichhakani, Bijayanagar, Brahmanimal, Brundavanpur, Budhakhaman, Chaitanpali, Chakadihi, Chakulia, Charimancha, Chasagurjang, Chhuriabahal.	2573.4600	I	2015 -16 2020 -21

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Barkote	Dandasingha, Dehurimunda, Derapather, Dharipathar, Dharampur, Ghurudukhaman, Golabandha, Goppur, Goudnali, Goyalmora, Gunduripasi, Gurusang, Harekrishnapur, Hariharpur, Jagannathpur, Jalisuan, Jhumpra, Kadopada, Kalla, Kantapal, Keshanpur, Khadinali.	2541.0000	II	2016 -17 2021 -22
Barkote	Khajuribahal, Khandamsahi, Khesla, Khulundikudar, Khuntabahal, Kishan gayalmara, Kolsura, Landijhari, Laxmipur, Mahupal, Makfarsonpur, Mandasila (B), Mardang, Markandapaur, Masinita (K), Nagdihi, Namgaon, Purukunda, Ragada, Rangamatia, Ranja, Ratab, Rengalbahal, Saida, Sanmanpur Sarankhol.	2611.0000	III	2017 -18 2022 -23
Barkote	Sarankote, Sarasposi, Saruali, Sjiarikatei, Sibapali, Singsal, Sirapali, Taisira, Talbahali, Thakurpali, Thianal, Utuniamunda, Gopalpali, Kaunsibahal, Kelda, Salohi, Masinita (A), Ghantiposi, Nuakesaala, Gopapur, Kaliapal, Talabahali, Jayapichhula	2494.2365	IV	2018 -19 2023 -24
Barkote	Netrabahal, Brahmanidei, Chakrapali (T), Barbahal, Kusumkata, Kudguda, Adyapur, Chakulia, Chapbahal, Damita, Dangapal, Dimiripasi, Kamchhada, Kanxar, Makarmunda, Pacheripani, Rugudkudar, Tusula, Ramachandrapur, Ratanpalli, Baishnabapali, Beteijharan, Sirigida, Rambhei, Talkholi	2579.2896	V	2019 -20 2024 -25
Barkote	Total	12798.9861		

Table No. 289

Deogarh Joint Forest Management Series

JFM series	Name of VSS	Unit area in ha	Unit No.	Year of working
Deogarh	Amulpani, Asurkhol, Badbaliposi, Bhagamunda, Balanda, Bangalimunda, Baniakilinda, Barghat, Basudevpur, Bhaludari, Bijanali, Bileighati, Brahmasadhubahali, Budhikutuni, Bukhabeda, Chandiposi, Deopani, Dholpada.	2106.0000	I	2015 -16 2020 -21
Deogarh	Dimirikuda, Dudhapasi, Gajaribani, Hetkhamar, Jaisandha, Jareikela, Jharagogua, Jharmunda, Kadalimunda, Kailash, Kalamati, Kalkath, Kaliakhamar, Kamamunda, Kamarmunda, Kanteikoli, Kapasira, Karadapal, Katang pani, Kahalinali, Kharumunda.	2161.5000	II	2016 -17 2021 -22
Deogarh	Kumurapali, Kurad, Kureibahal, Kuspanga, Kutraposi, Laxmipur, Ladhar, Majhipali, Masinita (H), Mengiribahal, Nalabandha,	2189.0000	III	2017 -18 2022 -23

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	Niktimal, Nirgunipali, Nuabhuin, Pallunipada, Pravasuni, Podadihi, Similiguda & Tendakata, Sradhapur, Subarnapali.			
Deogarh	Suguda, Tainsar, Tileibani, Tikilijharan, Bhaluguha, Pahalamara, Hadamunda, Jhaliamura, Kanteikuli, Gundeimara, Baragadia, Pravasuni, Jualibhanga, Bilaighati, Sahajbahal, Purunapani.	2118.1201	IV	2018 -19 2023 -24
Deogarh	Amulpani, Belamara, Bhalukhol, Chilantikhol, Dangakhol, Desinkuli, Chrmachandrapur, Durijangal, Gailo, Kadamdarh Colony, Karadapal, Palakudar, Podapada, Budhibahal, Tasarda, Tileimal, Sukhapadan, Rukuda, Katei, Mandarnali.	2065.7900	V	2019 -20 2024 -25
Deogarh		10640.4101		

Table No. 290

Reamal Joint Forest Management Series

JFM series	Name of VSS	Unit area in ha	Unit No.	Year of working
Reamal	Adash, Akhabuda, Andhari, Arkhapal, Badabahal, Badkuanarkhol, Baghbar, Baradanali, Begunianali -Basantapur, Belamunda, Bhaliapal, Bhaluchaba, Bhaluchua, Bilaeghati, Brahmanipali, Budhikhutuni, Budido, Chadeimora, Chandrapur, Chirgunikudar	2093.8400	I	2015 -16 2020 -21
Reamal	Dangakhol, Darjimunda, Dasgharia, Dehuripal, Ghamamunda, Ghodapaka, Godamal, Gundiapali, Gujahuli, Hariharpur - Khandamunda, Iswarpali, Jadagola, Jhimpabira, Kamarpal, Kankarkhol, Kantabahal, Kendughat, Khairrandha, Khandadhuan, Khilei.	2191.5800	II	2016 -17 2021 -22
Reamal	Koradaposi, Laxmipur, Malarbahal, Malichuan, Nakhabahal, Naulipara, Palsama, Paramunda, Phuljhari, Poipani, Pudapada, Rairatanpur, Rampali, Ratanpur Khalinali, Reamal, rutanali, Sadhubahali, Sanghaposi.	2083.4900	III	2017 -18 2022 -23
Reamal	Satkiari, Siaria, Siarimalia, Similoi, Surangipal, Talkundi, Tarang, Tinkibir (A), Tinkbir (B), Udaypur, Kaunsitoila, Timur, Medinipur, Similta, Kadalipal, Kapagola, Deojharan, Similihota, Sunaripara, Kirtanpali, Chingurijharan.	1936.2322	IV	2018 -19 2023 -24

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Reamal	Lulang, Burbuda, Pitasika, Panchamahala, Nuadihi, Deojharan(Rengalbeda), Kainsar, Kaunsipal, Khandiamunda, Kurudkhol, Kuskulia, Danardanpali, Telimunda, Jambunali, Jharjhari, Dangaghat (Bada), Kantimal, Haaladiakhol, Jharpara, Sindurkhol, Sankarpur.	2046.2874	V	2019 -20 2024 -25
Total		10351.4296		

7.12. Method of Executing the Joint Forest Management:

7.12.1. Demarcation : - All annual unit will be inspected during cold weather previous to the year in which it falls due for working. As far as possible one or more VSS protected area is allotted one unit. The unit number shall be shown in the displayed signboard of the VSS area.

7.12.2. Micro Plan: - The Micro Plans should be prepared for each VSS irrespective of whether money for implementation is available or not. Planning should be done first and efforts should be made to obtain funds from different sources like State Budget, District Budget, DRDA, MP and MLA grants and any other sources. While preparing the Micro Plans, tools like GIS could also be used for better planning. For this, the help of ORSAC and NGOs can also be taken.

7.12.3. As per the JFM Resolution of the State, Micro Plans are prepared for the area allotted to the VSS. Since degraded forest areas have been recently allotted to the VSS, these forests are still in a degraded state and have been allotted to the Rehabilitation or Selection Working Circle. It is expected that the broad treatment for the crop and soil and moisture conservation will be similar. The VSS Micro Plans will be site specific treatment plan and will generally follow the prescription of the main Working Circle. In case of any major discrepancy it will be brought to the notice of the Conservator of Forests.

7.12.4. P.R.A : - 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. A map to 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 over all prescriptions of this Working Plan.

7.12.5. Wherever plantations exist in VSS allotted area, these plantations should be thinning and pruned as per requirement. Sweeping off the floor of plantations for leaves and twigs should be avoided since it affects the cycling of nutrients. Grazing and fire protection should be provided to all plantations. These

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prescriptions should serve as a guideline while preparing the Micro Plans in these areas. Efforts should be made as far as possible to identify the contiguous patches of RF and KF and these areas should be planted with suitable species to meet the firewood and small timber needs of the villages.

7.12.6. Motivation: - It is important that the motivation level of the people to protect the forests should be sustained for a long period for the forest to respond to the protection provided. The gestation period for the forest to provide returns is quite long. During which period there may be conflicts amongst groups of people or stakeholders. Most of the time it is difficult for the Forest Department personnel to keep up the motivation level at the village level due to the multifarious role of its staff. Hence it is advisable to identify genuine NGOs or eminent local persons (like teachers, doctors, village level workers etc.) who are closely associated with the people, who can convince the people and keep up their motivation level and enthusiasm. These persons and institutions should be encouraged and if possible some remuneration should be given to them.

7.12.7. Entry Point Activities : - In each village, efforts should be made to create sustainable income generating activities which may be forest product based. Income generating activities (IGA) like Sericulture, Pisciculture, Vermiculture, Lac, and Honey collection could be encouraged through the VSS. Many NTFP items are also collected from the forests and efforts should be made to explore processing, value addition and finding good markets for these forest based products. The entry point activities done in different programmes should aim at sustainable income generation to the villages. NGOs specialising in IGA and SHG and marketing should be entrusted with promotion of livelihood amongst the members of the VSS. These NGOs could impart vocational training on sustainable livelihood and value addition for different NTFP items.

7.12.8. Reward : - Well managed VSS should be identified for rewarded. Their success stories should be given wide publicity. The other VSS members and potential VSS villages should be taken to these successful VSS villages to get inspiration and ideas. These promotional visits would help a great deal to promote the VSS movement in the division. Awards should be instituted to adjudge the best VSS of the Year in the division.

7.12.9. Training : - The capacity of the lower functionaries of the Forest Department should be improved by training and exposure visits, to help them to work along with the villagers. During training special emphasis should be on enhancement of communication skills of the staff. Proper orientation of the field staff through training, workshops and discussions on the philosophy and need of Participatory forest management should be imparted. Similarly the VSS members also need training and exchange of ideas.

7.12.10. Meeting : - The staff such as Forest Extension Officers, (FEO), and Village Forest Workers (VFW), should be utilized effectively for working closely with the VSSs. There is a general perception that the services of these staff are under utilized but they have an important role to play. They can be very helpful to the DFO

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to organize village level coordination meetings, organizing village level exhibitions, conducting village level tours of the VSS members etc, provided they are suitably oriented for the job.

7.12.11. Marking Rules : - Separate marking rules has not been prescribed for this Working Circle. However, the marking rule for the Rehabilitation Working Circle will be followed.

7.13. Subsidiary Silvicultural Operation:

7.13.1. Cleaning : - Recruit, whippy and woody seedling need special care for its establishment in the rehabilitation area. It has been prescribed to take up cleaning in the year following the main rehabilitation to help recruitment and establishment of regeneration of principal and secondary species. It also creates favorable condition for optimum growth of the promising stems. Cleaning shall be done by VSS.

7.13.2. Items of Operation in Cleaning : - (i) Cutting and extraction of the marked trees if left. (ii) Extraction of balance logs and firewood if any. (iii) Cutting of shoots of the trees damaged during extraction, if it hampers the growth of any promising shoots. (iv) Cutting of climbers to be anticipated to climb in the principal species.

7.13.3. Thinning : - Thinning is prescribed only to regulate the distribution of the growing space for improving the growth and form of trees that are left in the annual worked out area. In this prescription permanent gaps are not created because regeneration is not the object of thinning. The area included in this Working Circle is irregular natural forest. Only selection thinning in congested patches is prescribed with a thinning cycle of 05 years.

7.13.4. Items of Operation in Thinning : - Selection thinning will be carried out in all canopy classes, removing the trees of the following characteristics. (i) Inferior trees which restrict the development of their neighbours principal species from all side. (iii) All uprooted trees.

7.14. Artificial Regeneration:

7.14.1. The renewal of a forest crop by showing, planting or other artificial methods is important in the area included in this Working Circle. There are small gaps noticed in all most all blocks allotted to this Working Circle. The extent of area of individual gaps is 1.5 hectors or less. It is advised to adopt artificial regeneration in the permanent gaps of each unit, during the year of coupe working.

7.14.2. Plantation : - All the gaps in the unit of each JFM series are to be surveyed and reflected in the map at the time of inspection. Mounds of size 1 ft x 1 ft 6 inches will be formed in the gap. The seeds of the natural species existing in the area will be dibbled in the mounds during the first week of June. The VSS member

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will do the work only. No special allotment for plantation has been estimated in the Financial Forecast Chapter.

7.15. Other Regulation:

7.15.1. Grazing : - The unit shall be closed to grazing for a period of 5 years after the working. The villagers should engaged one or two cow herds for grazing of their domestic animals inside forest. The President of concerned VSS will issue the notice with a direction not to enter the herd into the working coupe. The remaining area is open to grazing subject to the provision of the Odisha forest (Grazing of the cattle) Rules 1980.

7.15.2. Lopping : - 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 in not prescribed.

7.15.3. Fire protection : - All units shall be rigidly protected from forest fire for a minimum period of 5 years after the working. As per previous record all the forest area were affected by fire in every year. Protection of fire in the working area can be practically possible by watching it from the month of February to June in every year. The member of the VSS will watch the area on rotation basis, as per their decision taken in the meeting.

7.15.4. 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 will be done at the time of unit working. 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).

7.15.5. Soil and Water Conservation Measure : - The area allotted to this Working Circle varies from gently slope to precipitous. Collection of stones in this Working Circle are discouraged. Construction of check dams at an interval of 0.5 kmt in the nalas flowing in almost all block is prescribed for water conservation. The expenditure to be made for construction of check dams during the Plan period will be as per the Micro Plan.

7.15.6. Works of Improvement : - The area constituted in this working circle is a mostly hilly slope. The flow of rain water increase suddenly and there by causing high soil erosion. The area becomes dry just after the rainy season. Conservation of soil and water in this terrain is very important. Plantation across the smaller Nala and along the bank of the bigger Nala by branch cutting or direct showing is prescribed. Depending on the site quality, suitable fodder species for the Wild animals shall be chosen by the Divisional Forest Officer.

7.15.7. Singling out of Shoot : - In the bushy area two healthy and good shoots of a stump will be selected to retain and others shall be cut. The VSS member will

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take the materials obtained by this operation. The list of plantation in different VSS is given in the table below.

7.15.8. The plantation raised (ANR, AR and Bamboo) in different VSS under FDA is given in the table below.

Table No. 291

Plantation raised in different VSS

Name of VSS	ANR in ha.		AR in ha.		Bamboo in ha.	
	Targ.	Achi.	Targ.	Targ.	Achi.	Targ.
Jhimirtipali Badbagdari	65	65	70	70	15	15
Dimiria	8	8	0	0	0	0
Sree Rampur	5	5	0	0	10	10
Jharbeda Namposi	10	10	0	0	0	0
Ranjo Nuasahi	40	40	0	0	0	0
Batisuan	40	40	10	10	10	10
Ranjana	30	30	0	0	0	0
Kalanda	10	10	0	0	70	70
Odasa	30	30	10	10	0	0
Barkotia	50	50	10	10	0	0
Khalinali	15	15	40	40	0	0
Majhipali	20	20	0	0	7	7
Similiguda	10	10	7	7	17	17
Pallunipada	10	10	10	10	20	20
Satkiari	10	10	10	10	25	25
Begunianali -Basantapur	6	6	2	2	16	16
Naulipara	10	10	18	18	0	0
Hariharpur - Khandamunda	0	0	42	42	0	0
Kankarkhol	0	0	14	14	0	0
Kamarpal	30	30	0	0	0	0
Sanghapasi	85	85	40	40	30	30
Mardang	30	30	0	0	0	0
Bhakta badkudar	47	47	0	0	23	23
Markandapur	8	8	0	0	0	0
Rengalbahal	49	49	12	12	20	20
Budhakhaman	33	33	0	0	7	7
Saruali	60	60	0	0	0	0
Siarikatei	14	14	0	0	0	0
Kishan gayalmara	8	8	0	0	0	0
Dandasingha	26	26	5	5	0	0
Purukunda	41	41	0	0	0	0
Tirib	40	40	0	0	5	5
Raipal	10	10	0	0	0	0
Laxmipriyapur	20	20	5	5	0	0
Purunapani	30	30	0	0	0	0
Jharkilinda	45	45	5	5	0	0

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Mundiribeda	60	60	10	10	0	0
Dehurimunda	20	20	5	5	10	10
Dharampur	50	50	0	0	5	5
Bamparada	140	140	10	10	5	5
Udaypur	20	20	0	0	0	0
Ratanpur Khalinali	10	10	0	0	0	0
Rutanali	20	20	0	0	0	0
Brahma -Sadhubahali	35	35	10	10	0	0
Barghat	55	55	10	10	5	5
Ambulpani	25	25	5	5	0	0
Balim	20	20	5	5	0	0
Vejipada	40	40	5	5	0	0
Parachhat	65	65	5	5	0	0
Rohila	40	40	0	0	0	0
Kochiabeda	20	20	0	0	0	0
Derapathar	30	30	0	0	0	0
Balinali	15	15	0	0	0	0
Khadinali	60	60	0	0	10	10
Koradposi	20	20	0	0	0	0
Akhabuda	20	20	0	0	0	0
Kutraposi	25	25	10	10	0	0
Kardapal(Kansar)	25	25	10	10	0	0
Niktimal	40	40	5	5	0	0
Charimanchia	45	45	5	5	0	0
Kantapal	35	35	5	5	0	0
Bichhakhani	28	28	0	0	0	0
Surangipal	45	45	5	5	0	0
Jhimpabira	30	30	0	0	0	0
Godamal	25	25	0	0	0	0
Priyambadapur	35	35	0	0	0	0
Chhanchunia	50	50	0	0	0	0
Ranja	60	60	15	15	0	0
Jhariakhaman - Jharabahal	25	25	0	0	0	0
Jankapani	32	32	0	0	0	0
Susabnali	20	20	0	0	0	0
Tileibani	40	40	0	0	0	0
Kalkath	35	35	5	5	0	0
Sradhapur	55	55	5	5	0	0
Kolsura	15	15	0	0	0	0
Talabahali	0	0	5	5	0	0
Sadhupali	0	0	5	5	0	0
Landijhari	15	15	0	0	0	0
Lodhaposi	15	15	0	0	0	0
Asannali	15	15	0	0	0	0

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7.15.9. The detail plantation position in different VSS area and the present survival percentage is given in the table below.

Table No. 292

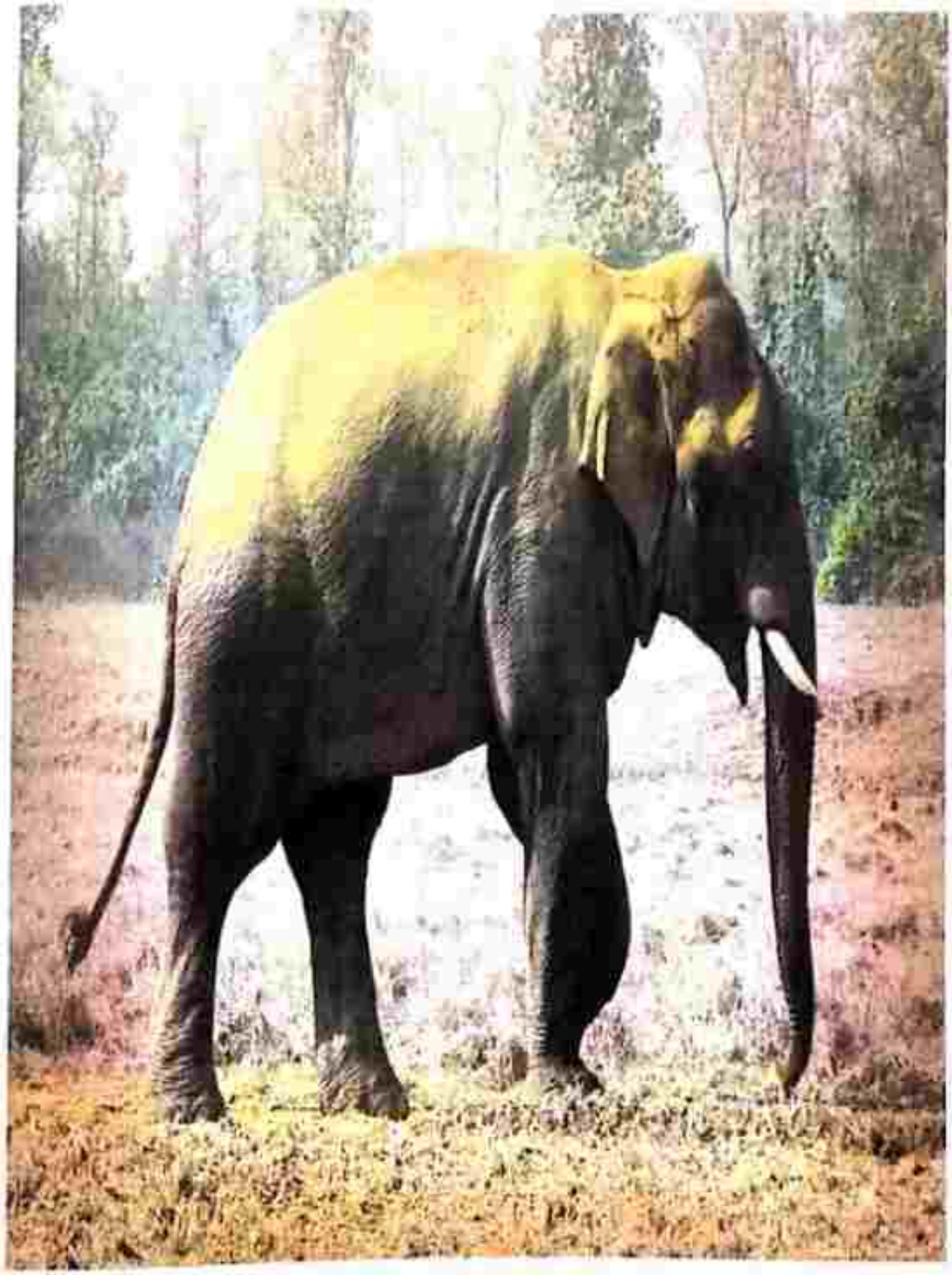
Survival percentage of plantation in VSS area

Name of V.S.S.	Block	Area in ha.	Name of species planted	Surv'l %	Height in ft.
Jhimirtipali Badbagdari	K.F.	150	Misc.	40%	12'
Dimiria	K.F.	8	Misc.	45%	10'
Sree Rampur	K.F.	15	Misc.	40%	12'
Jharbeda Namposi	K.F.	10	Misc.	50%	12'
Ranjo Nuasahi	K.F.	40	Misc.	50%	12'
Batisuan	K.F.	60	Misc.	40%	12'
Ranjana	K.F.	30	Misc.	40%	12'
Kalanda	K.F.	80	Misc.	50%	12'
Odasa	K.F.	40	Misc.	50%	12'
Barkotia	K.F.	60	Misc.	50%	12'
Khalinali	K.F.	55	Misc.	55%	12'
Majhipali	K.F.	27	Misc.	50%	12'
Similiguda	K.F.	34	Misc.	50%	12'
Pallunipada	K.F.	40	Misc.	50%	12'
Satkiari	K.F.	45	Misc.	35%	12'
Begunianali - Basantapur	K.F.	24	Misc.	50%	12'
Nauliparu	K.F.	28	Misc.	40%	12'
Hariharpur - Khandamunda	K.F.	42	Misc.	30%	12'
Kankarkhol	K.F.	14	Misc.	45%	12'
Kamarpal	K.F.	30	Misc.	50%	12'
Sanghapasi	K.F.	155	Misc.	45%	12'
Mardang	K.F.	30	Misc.	60%	12'
Bhakta badkudar	K.F.	70	Misc.	40%	12'
Markandapur	K.F.	8	Misc.	35%	12'
Rengalbahal	K.F.	81	Misc.	40%	12'
Budhakhaman	K.F.	40	Misc.	40%	12'
Saruali	K.F.	60	Misc.	45%	12'
Siarikatei	K.F.	14	Misc.	40%	12'
Kishan gayalmara	K.F.	8	Misc.	40%	12'
Dandasingha	K.F.	31	Misc.	50%	12'
Purukunda	K.F.	41	Misc.	45%	12'
Tirib	K.F.	45	Misc.	50%	10'
Raipal	K.F.	10	Misc.	52%	10'
Laxmipriyapur	K.F.	25	Misc.	50%	10'
Purunapani	K.F.	30	Misc.	50%	10'
Jharkilinda	K.F.	50	Misc.	50%	10'

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Mundiribeda	K.F.	70	Misc.	60%	10'
Dehurimunda	K.F.	35	Misc.	55%	10'
Dharampur	K.F.	55	Misc.	40%	10'
Bamparada	K.F.	155	Misc.	65%	10'
Udaypur	K.F.	20	Misc.	60%	10'
Ratanpur Khalinali	K.F.	10	Misc.	50%	10'
Rutanali	K.F.	20	Misc.	60%	10'
Brahma -Sadhubahali	K.F.	45	Misc.	30%	10'
Barghat	K.F.	70	Misc.	45%	10'
Ambulpani	K.F.	30	Misc.	55%	10'
Balim	K.F.	25	Misc.	55%	10'
Vejipada	K.F.	45	Misc.	60%	10'
Parachhat	K.F.	70	Misc.	62%	8'
Rohila	K.F.	40	Misc.	60%	8'
Kochiabeda	K.F.	20	Misc.	58%	8'
Derapathar	K.F.	30	Misc.	56%	8'
Balinali	K.F.	15	Misc.	56%	8'
Khadinali	K.F.	70	Misc.	56%	8'
Koradposi	K.F.	20	Misc.	45%	8'
Akhabuda	K.F.	20	Misc.	60%	8'
Kutraposi	K.F.	35	Misc.	60%	8'
Kardapal(Kansar)	K.F.	35	Misc.	50%	8'
Niktimal	K.F.	45	Misc.	50%	8'
Charimancha	K.F.	50	Misc.	53%	8'
Kantapal	K.F.	40	Misc.	58%	8'
Bichhakhani	K.F.	28	Misc.	55%	8'
Surangipal	K.F.	50	Misc.	52%	8'
Jhimpabira	K.F.	30	Misc.	50%	8'
Godamal	K.F.	25	Misc.	50%	8'
Priyambadapur	K.F.	35	Misc.	50%	8'
Chhanchunia	K.F.	50	Misc.	50%	8'
Ranja	K.F.	75	Misc.	50%	8'
Jhariakhaman - Jharabahal	K.F.	25	Misc.	50%	8'
Jankapani	K.F.	32	Misc.	50%	8'
Susabnali	K.F.	20	Misc.	50%	8'
Tileibani	K.F.	40	Misc.	50%	8'
Kalkath	K.F.	40	Misc.	60%	8'
Sradhapur	K.F.	60	Misc.	50%	8'
Kolsura	K.F.	15	Misc.	72%	4'
Talabahali	K.F.	5	Misc.	35%	4'
Sadhupali	K.F.	5	Misc.	65%	4'
Landijhari	K.F.	15	Misc.	75%	4'
Lodhaposi	K.F.	15	Misc.	70%	4'
Asannali	K.F.	15	Misc.	72%	4'

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WILDLIFE OVERLAPPING WORKING CIRCLE

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CHAPTER - VIII

WILDLIFE (Overlapping) WORKING CIRCLE

8.1. General Constitution of Working Circle:

8.1.1. An area of 132606.7194 ha has been allotted to wildlife (overlapping) Working Circle. The area is extended over 72 number of forest blocks. The forest area of Deogarh Division is 53.86 % of its geographical area. The distribution, continuity and density of forest of this division are very significant as compared to other division of the State. The composition and continuity of forest along with climatic condition of this zone are suitable for better growth and multiplication of variety of wildlife. The Wild animals are not only confined to the forest area but also distributed in the geographical area of 410698.00 ha. The area, which is managed under SWC, RWC, PWC, ETWC & Plantation Working Circle, is included in this overlapping Working Circle. Wildlife is an integral part of the forest and performs important functions in the ecosystem. The National Forest Policy 1988 has emphasized the need to conserve wildlife and their habitat. This Working Circle has been constituted for protection and multiplication of the existing wildlife, improvement of their habitat and conserves biodiversity.

8.1.2. This managed area forms an important habitat zone adjoining to the buffer zone to Khalasuni Sanctuary of Bamra (WL) Division. It also forms a habitat and migratory corridor for the elephants.

8.2. General Character of Vegetation:

8.2.1. Composition : - Sal constitutes the main species, which contributes about 33.16 % of the crops. On most of the hills, it ascends to the top, either pre - dominantly or mixed with it's other associates like Bija, Ashan, Bandhan, Kurum, Kasi, Bamboo, Dhaura, Sisoo, Kendu, Haldu, Gambhari etc. The regeneration is purely natural and distributed adequately all over the area. The forest types are mainly Moist and dry peninsular sal, Northern dry mixed deciduous and Tropical hill valley swampy forest. The growth and quality of the crop have been considerably reduced depending up on the adjoining environmental condition. All classes of trees exist in this zone. The composition of the vegetation is suitable for the wildlife.

8.2.2. Distribution : - The area allotted to this overlapping Working Circle is distributed in all Ranges, which comprises 100 % of the total managed area of the Working Plan. Sal distributed in pure form in plain and valley area, where as it is sporadically distributed in mixed forest in the hill portion. The undergrowth distribution of the vegetation is favorable for the free movement of the wildlife.

8.2.3. Density : - The density of the crop included in this overlapping Working Circle varies from 0.3 to 07 In plain and valley area the density varies from 0.4 to 0.7, where as in hilly area the density varies from 0.3 to 0.5. The variation of density is due to the adjoining environmental influence and the fertility of the area. The density of the vegetation creates favorable condition for the multiplication of the wildlife.

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8.2.4. Status of Regeneration : - The area included in Selection Working Circle have sufficient stock but the area included in Rehabilitation Working Circle have insufficient stock. The renewal of forest crop is purely depending on nature. The regeneration survey over an area of 2 mt x 2 mt has been done simultaneously with the inventory of each sample points. The Writer has analyzed the regeneration data and the status of regeneration is found adequate for the area included in Selection Working Circle.

8.2.5. Weed Growth : - Unwanted plants are common in the forest floor. During rainy season vast number of weeds grows in the forest floor of this tract. Weeds tend to interfere with the growth of individuals of favored species. Annual weeds died during the month of February. Dry weeds invite forest fire, which causes damage to the wildlife.

8.2.6. Grass Invasion : - Different grasses are seen in patches on the forest floor. Grasses grow faster in small gap or in open space during rainy season, which provides sufficient fodder for the Herbivores.

8.2.7. Habitat : - In the past, this area was very rich in wildlife. Consequence on large-scale deforestation for agriculture, road, power line, irrigation project etc, the continuity and compactness has been disturbed. The demand on forest produce increases with the increasing order of population and the forest became more open. Opening up of road inside forest increased speedy vehicular traffic, which disturbed the Wild animals on their free movement. Some times the Wild animals either injured or died due to accident. Animals have become easy prey to the poachers equipped with first moving vehicle, powerful searchlight and accurate weapons.

8.2.8. Biodiversity Survey : - The continuous biotic pressure over the year resulted considerable degradation of forests in this zone. The biotic pressure has adversely affected the biodiversity of flora and fauna. Systematic biodiversity survey had not been done in this division.

8.3. Wildlife Series:

8.3.1. Wildlife Series : - This overlapping Working Circle constituted with 05 number of wildlife series depending on distribution of area. The forest blocks allotted to different wildlife series will be given in the table below.

Table No. 293

Wildlife Series

Sl. No	Wildlife series	Number of block	Legal status	Notified area in ha.
1	Pallahara	16	RF/PRF/PF	18362.4914
2	Khamar	19	RF/PRF	15464.214
3	Barkote	11	RF/PRF	33567.606
4	Reamal	10	RF/PRF	21267.063
5	Deogarh	16	RF/PRF	43945.345
			Total	132606.7194

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8.3.2. Reason for Constitution of Wildlife Series - Wildlife series have been formed in the out going Plan. There are 05 number of wildlife series now formed for convenience of habitat management, availability of labour, distribution of area etc.

8.4. Blocks and Compartments:

8.4.1. The abstract of Range wise distribution of forest blocks and its compartments in to wildlife overlapping Working Circle is given in the table below.

Table No. 294

Range wise forest blocks and compartments allotted to Wildlife (OL) Working Circle

Range	Block	Status	Compartments No.	Notified area in ha
Pallahara	Malyagiri (P)	RF	2 to 15	5822.966
	Old Puri	RF	1	6783.750
	Tamkia	RF	1	513.540
	Saida	RF	1	397.710
	Mankarchua	RF	1 to 4	1314.225
	Ranja	PRF	1	221.6970
	Atalanka	PRF	1	161.8700
	Julunda - Jankpani	PRF	1	291.4380
	Sarbeda	PRF	1	277.0200
	Timi	PRF	1	422.6580
	Jharakhaman	PRF	1	65.9340
	Kakharua	PRF	1	166.5360
	Bhaluhuli	PRF	1	140.9400
	Nizgarh A	RF	1	279.1980
	Nizgarh B	RF	1	88.0000
	New pauri	RF	1	1266.0000
	Balibahal	PF	1	149.0094
			Total	18362.4914
Khamar	Malyagiri (P)	RF	1 & 16 to 30	5643.04
	Gurusulei	RF	1	388.800
	Birpal	RF	1	437.400
	Charigochia	RF	1	529.199
	Kuladera	RF	1 to 6	2236.815
	Kardapal	PRF	1	527.391
	Bankhol	PRF	1	1222.452
	Sanda	PRF	1	446.0670
	Danda	RF	1 to 4	1423.0000
	Rengalmunda	RF	1	86.6700
	Kunjam	RF	1	1017.5530
	Jambua	RF	1	246.6000
	Chungamatia	RF	1	15.5780
	Kalamjuangsahi	PRF	1	150.6600
	Bhulaka	PRF	1	233.1180
	Badasada	PRF	1	196.9920
	Nuagaon	PRF	1	128.6840

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	Injidi	PRF	1	73.7100
	Priyambadapur	PRF	1	50.1390
	Rangiapal	PRF	1	410.3460
			Total	15464.214
Barkote	Pradhanpat (P)	RF	16 to 29	4064.337
	Panguli	RF	1 to 8.	3212.661
	Mandasila	RF	1 to 11.	2856.465
	Pauri	RF	1	8215.425
	Badataila	RF	1 to 48.	10154.803
	Kulundikudar	PRF	1	472.068
	Tusula	PRF	1	1675.45
	Kansar A	RF	1	152.0000
	Kansar B	RF	1	97.3250
	Thianal	RF	1	816.8700
	Banbira	PRF	1	1192.3200
	Kaunsibahal	PRF	1	593.8920
	Talabahali	PRF	1	63.9900
			Total	33567.606
Deogarh	Pradhanpat	RF	1 to 15	6321.726
	Kansar	RF	1	9758.88
	Pravasuni	RF	3, 4, 7, 8, 9, 10(P),11(P), 12 to 25, 30, 37(P), 38 to 53	11080.449
	Rambhadevi	RF	16 to 26	2316.979
	Khajuria	RF	1, 5 to 14 & 15 (P).	5008.092
	Jhadeswar	PRF	1	2768.499
	Hadamunda	PRF	1	169.857
	Chilantikhol	PRF	1	2316.61
	Kandarpa-lamdura	PRF	1	1666.4
	Ludhar Deopani	PRF	1	854.54
	Slohi Loimura	PRF	1	295.65
	Sargidihi	PRF	1	93.15
	Rajamunda	PRF	1	249.6420
	Kalkath	PRF	1	251.3430
	Tirib	PRF	1	85.6980
	Bangalimunda	PRF	1	298.7800
	Telikusum	PRF	1	409.0500
			Total	43945.345
Reamal	Kansar	RF	1	2439.72
	Rambhadevi	RF	1 to 15	1938.177
	Gogua	RF	1 to 13.	3595.525
	Hadamunda	PRF	1	396.333
	Kankar khol	PRF	1	5770.44
	Kundheigola	PRF	1	3534.491
	Naikul	PRF	1	1945.39
	Tarang	PRF	1	981.4770
	Ghodapaka	PRF	1	162.6800
	Tamkia PRF	PRF	1	502.8300
			Total	21267.063
			Grand Total	132606.7194

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8.5. Special Objectives of Wildlife Management:

8.5.1. The special objectives of management of this overlapping Working Circle have been given in the table below.

Table No. 295

Objectives of Management

Sl.No.	Special objectives of Management
1	To provide improve habitat for multiplication of wildlife.
2	To conserve and protect the wildlife habitat with special emphasis on the proposed Elephant Reserve and Sanctuary area for eco-tourism.
3	To promote wildlife in general and endangered species in particular.
4	To create awareness among the people regarding the necessity to conserve and protect the wildlife and their habitat.
5	To protect the wildlife from crimes and infectious diseases.
6	To increase in biodiversity.

8.6. Analysis and Valuation of the Wildlife:

8.6.1. Stock Map : - The entire area covered by this Working Circle have been shown on the stock map. Sample points enumeration in the managed area have been done covering an area of 0.1 ha, keeping point as the center of the plot. Longitude and latitude of 1148 points have been taken by field staff. Above 30 cm girth at breast height of all trees and top height are recorded for each plot. Stock map have been prepared by field staff after analyzing the inventory data of sample points.

8.6.2. The wildlife survey is not undertaken for the purposed of this revision. But advantage is taken of the figures of wildlife census carried out by the Divisional Forest Officer, Deogarh. The data obtained in the census is used only for statistical purpose but no formal analysis and valuation of the wildlife has been done at divisional level. The present availability of wildlife has been shown in the stock map.

8.6.3. Age Classes of Wildlife : - All age classes of wildlife of different species are present in this tract. But their number in different age classes differs from each other. Wildlife census has been carried out at an interval for Elephant and Tiger but not for other animals in this division. Also census for all species of wildlife has not been done in this zone. It is my opinion that at an interval of 03 years, wildlife census should be carried out to ascertain the number of new multiplication in each species. This will help to ascertain the success story of management and also analysis and valuation of wildlife can be done.

8.6.4. Type of Census : - During the period from 2007 to 2010 census in each Beat area had been carried out to ascertain the number of wildlife available in this tract. The result of the census is given in the table below.

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Table No. 296					
Result of wildlife census					
Sl. No.	Name of W.L	Total number	Sl No.	Name of WL	Total number
1	Elephant	49	12	Spotted deer	60
2	Leopard	0	13	Sambar	56
3	Bear	2200	14	Barking deer	1356
4	Monkey	8000	15	Rabbit	1099
5	Red faced monkey	0	16	Wild boar	0
6	Fishing cat	0	17	Kuturu	3000
7	Jackal	106	18	Mayura	670
8	Wolf	700			
9	Hyena	122			
10	Jhinka	65			
11	Katasa	530			
Sources - D.F.O, Deogarh					

Table No. 297		
Bird census Report		
Sl. No.	Year	Total number
1	2005	29165
2	2006	10354
3	2007 to 09	Not done
4	2010	27391
5	2011	15298
6	2012	12949
Sources - 1st PWPR.		

8.6.5. Status of Multiplication : - The multiplication survey is not carried out in this zone of forest for the wildlife. However, standard information in respect of multiplication of different species of wildlife is given in the table number 74 of Chapter II-B of Part-I. But in the census report, the numbers of Wild animals available in this zone are very negligible. Therefore all prescriptions should be properly implemented to increase the number of each Wild animal.

8.6.6. Special Feature : - There is significant change observed in the forest area managed during the out going Plan period. The required fodder is not full filed for the wildlife. Annual Forest Fire is an important tragedy to the forest of this tract, which not only destroyed the under growth but also damages the new generation of different species of wildlife.

8.6.7. Life Period : - The planned number of years between birth and natural death of wildlife may vary depending on environmental condition. The approximate life period of the wildlife is given in the table number 91 of Chapter II-B of Part-I.

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The availability of sufficient food and water can increase the life period of wildlife. Therefore the prescription for salt licks and game tanks should be properly implemented to increase the life period of Wild animals.

8.7. Injuries to Which Fauna is Liable:

8.7.1. Clear Felling: - Clear felling is one of the general factors responsible for destruction of wildlife in this division. From the year 1961-62 to 1994-95 in large scale of dense forests had been clear felled for plantation in Kansar, Pauri and Bautala Reserve Forest. Forest area had been clear felled for construction of road, power line, rehabilitation of displaced person and agriculture. Also clear felling had been done in the forest area which was managed under Coppice Working Circle in Mathur's, Mooney's and Panigrahi's Plan. Clear felling have completely changed the environmental condition and thereby disturbed the main habitat of the wildlife.

8.7.2. Grazing: - This division has few patches of grassy area inside forest. The Wild animals cannot compete with the grazing cattle. Some time domestic animals carry infectious diseases, which caused large scale epidemic in the forest. Excessive grazing inside forest is also responsible for damage to the wildlife.

8.7.3. Fire: - Every year forest fire caused serious damage to the ground flora. The continuity of dry leaves on the ground extended forest fire inside the interior and hill terrain of the forest. Eggs and kids of Wild animals and birds are affected by forest fire. In absence of ground flora the wildlife are seen from a long distance and thereby fall easy prey to poachers. The wildlife comes to open area in search of food and particularly to cultivated land, where they got shot there or injured. In some cases Wild animals are damaging the cultivated crops and injured or killed the people.

8.8. Suggestions of Enrichment of Wildlife:

8.8.1. The food systems on the Earth are so peculiar that if one link disappears then it will cause a great damage to the environment. The distribution of wildlife is not only confined to the forest area but also it is distributed in all over the geographical area of this division. Due regards have been paid in other Working Circle for the requirement of proper habitat.

8.8.2. Food: - The herbivores animals require fresh food daily for their growth and sound health. Once the area is enriched with herbivorous animals then it is not so necessary to think about the food for the carnivorous animals. Plantation of fodder grasses, climbers, herbs, shrubs and small height trees for the Wild animals in the small pocket of open area in the forest of this division is not practically easy. To provide the requirement of food for the wildlife will create another problem for the Divisional Forest Officer. Considering the present condition and difficulties the following prescription has been prescribed. (i) The seeds of all locally available fodder species for the wildlife shall be direct shown inside forests. (ii) At least 10 number of bamboo rhizomes per hector shall be planted. (iii) Banana and sugar cane shall be planted along the peripheral area of all perennial and semi-perennial nalu flowing in

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this division. (iv) Rab nursery of size 25 mt x 25 mt in the plain open aren inside the forest shall be created, where only grass seeds will be shown.

8.8.3. Water : - The tract dealt with in the Revision of Working Plan is affected by very hot during summer. In summer season scarcity of water is felt in most of the dense forest area. The wildlife has to travel a long distance in search of water. They faced danger while searching water nearer to village area. Therefore it is necessary to dig 05 numbers of tanks in the forest area of this division for safety of wildlife during the summer season. The game tank is of sufficient deep so that there will be no scarcity of water during summer. It should be looked like a natural water hole. . Digging works of the tank shall be done between Octobers to May.

8.8.4. Salt Licks : - There are good number of natural salt licks scattered being mostly on the side of nalas and in foothills. These shall be maintained and improved upon. New salt licks to be created in area where more protection can be provided to the wildlife near anti-smuggling or poaching camps. All most in every block some patches of natural fodder grass exist. Salt and soil should be kept in the adjoining area of each fodder grass patch for better growth of the existing wildlife.

8.9. Damaged Caused by Elephant:

8.9.1. The movement of herds of biggest Wild animals in this division made several damages to the people and their properties. The year wise damage caused by the elephant and the compensation paid for the same is given in the table below.

Table No. 298

Compensation for elephant damage

Year	No. of person died	No. of person injured	Crop damaged in Acre	Compensation paid in Rs.	
				Paid	To be paid
2004-05	0	0	10.4	10040	0
2005-06	3	0	239.51	539510	0
2006-07	1	0	23.96	123960	0
2007-08	0	0	284.42	284420	0
2008-09	6	0	417.42	1017420	0
2009-10	3	0	224.09	524090	0
2010-11	2	0	502.69	1098265	0
2011-12	2	0	548.83	1222710	0
2012-13	0	0	52.18	394450	0
2013-14	1	0	316.58	1787320	0

Sources - DFO, Deogarh.

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8.10. Suggestions for Precautionary Measure:

8.10.1. It is not easy to control the movement of herds of biggest Wild animals noticed in this tract. The elephants can do any damage while they are searching for their food, protecting calves, moving alone. They are most principle and silent lover animals of the earth. The quantity of food required per day is also extremely high with comparison to other animals of this division.

8.10.2. Basing on the facts narrated above the following points have been prescribed. The prescription will help on protection, multiplication and better growth of the elephants. It also helps to create interest of the people towards protection of the Wild animals. The degree of complain made by the people against the Forest Department will also be minimized.

8.10.3. The herd of elephants will move freely inside forest. Any artificial barrier shall not be imposed, which will check the movement of elephant herd. The elephant shall not be irritated physically. Any attempt shall not be made to drive the single tuskar. Sufficient fodder plants in the blank area either by direct sowing or by artificial method will be raised in every year.

8.10.4. An amount of Rs.200000.00 will be placed to Divisional Forest Officer at the beginning of the financial year. Therefore immediate financial relief can be made to the family affected by wildlife. The amount of financial relief should not be exceeded to Rs.5000.00 per family. In case of crop damaged maximum of 30 % of the total sanctioned amount will be paid to the farmer during the crop year.

8.11. Sanctuary:

8.11.1. At present there is no any Sanctuary or National Park existing in this division.

8.12. Methods of Treatment:

8.12.1. Habitats : - Special habitats are biological in origin and provide habitat functions for small Wild animals. They include snags, snag recruits, den trees, down wood, isolated large old trees, trees with fluting boles, buttresses, lianas, some significant species of fruit bearing trees and shrubs. These special habitats have been neglected in the past. Care should be taken while implementing the prescription of the Plan to maintain these special habitats especially in the areas coming under the Selection Working Circle.

8.12.2. Snags : - As a rule of the thumb, maintain at least the 5 tallest and largest diameter snags per hectare, in a well distributed design in all silvicultural treatments. Retained snags need to appear in the compartment history. These are vital for a variety of primary hole-nesting birds like Woodpeckers and Barbets, which are

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colonized by secondary hole-nesters like Hill Mynas, Rollers, Owlets etc during subsequent years.

8.12.3. Snag Recruits : - Likewise maintain 5 snag recruits per hectare. These are dying trees, mostly affected by heart rot fungus but not quite dead. They can be recognized by their external symptoms. All such trees, which are being retained, need to be reflected in the compartment histories. These, along with snags provide a very good substrate for epiphytic orchids, especially of genus *Dendrobium*.

8.12.4. Down Wood : - In felling operations, among the rejects, apart from lops and tops, large size irregular shaped hollow logs often feature. Being uneconomical they usually remain on site, or are converted into fuel wood. Such large sized woody material provides critical ecological functions in support of maintenance of vegetation and animal diversity, besides serving the functions of cover and microhabitat for several species. The largest size hollow logs, or rejects for any reason need to be maintained at the rate of at least three logs per hectare, and as far as practicable evenly distributed. These should suitably find place in the compartment history.

8.12.5. Large Old Trees : - These would naturally occur in low densities. The Ficus species should not be counted among these, since Ficus is not felled even otherwise. Large old trees of different species as and when encountered need to be reserved in any felling or tending operation. These retained trees (2 to 4 per ha) need to be entered in the compartment histories and serve as daytime roosts or nesting sites for large owls of Bubo species.

8.12.6. Trees with Fluting Boles, Buttresses and Holes : - These are expected to occur in very low densities represented by a small number of species. They provide significant microhabitat functions for small mammals like the Mouse Deer and reptiles. One such tree at least, the largest possible, needs to be retained per hectare and entered on the marking list.

8.12.7. Lianas and Tangled Climbers : - Climber cutting operation is a standard practice, which has been prescribed in all Working Circles. However lianas provide significant habitat functions in support of mobility of arboreal animals, and depending on animal species, serve as resting and escape cover for primates. They are equally important for arboreal small carnivores, some rodents and lizards. A climber with tangles is especially important. It is recommended that at least two old spaced apart climbers per hectare be retained, and recorded in compartment histories.

8.12.8. Fruit Bearing Trees and Shrubs : - All most all Working Plans now reserve fruit bearing tree species in felling or tending operations, that are known to provide fruits to local human inhabitants and Wild Life. The information on human use is probably complete but the same cannot be said to Wild Life. The literature survey, expert consultations and personal observations undertaken earlier will have established such information. Such significant elements need to be retained. Marking rules need to be specific on this.

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8.12.9. Roosting or Nesting Trees : - All trees which are known to support nesting colonies of water birds or roosting congregations of raptors or other birds need to be retained. This is crucial especially with reference to vultures, which are critically endangered along with Pallas's Fishing Eagle and White-bellied Sea Eagle, which have become very rare in this tract.

8.13. Development of Habitat:

8.13.1. 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 reduce the man-animal conflict.

8.13.2. Improving the Cover : - Providing adequate forest cover to different Wild animals within their habitat is necessary for shelter and protection from weather, predators and enemies. Keeping in view this aspect, it has been prescribed in Selection Working Circle not to fell those mature trees, which create a lasting gap in the canopy. It is also prescribed not to fell trees near water holes, wallows, and salt licks 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 story 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.

8.13.3. 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 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 or retention operation taken in forest areas.

8.13.4. 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, Adina cordifolia, Albizzia lebbek, Aegle marmelos, Cassia fistula, Ficus bengalensis, Ougeinia ougenensis, Shorea robusta, Syzygium cumini, Terminalia alata, Terminalia belerica, Zizyphus mauritiana, Bombax ceiba etc.

8.13.5. 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.

8.13.6. Among the plant materials, grasses constitute major portion of the herbivores' food. Grasses, which are highly preferred and consumed by herbivores,

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are Axonopus compresses, Eragrostis pilosa, Saccharum bengalensis etc. These grasses shall be raised in the Wild Life concentrated areas to meet the food requirement of herbivores.

8.13.7. Corridor Development : - Due to decreasing prey base in the area and loss of connectivity and fragmentation of the habitat there is increase in man-animal conflicts. Along with strengthening of protection measures for wildlife, corridor development will be given priority. With concentrated efforts for protection and improvement of forest cover in all wildlife series, steps shall be taken through afforestation or JFM activities to provide tree cover in potential corridors.

8.13.8. There are 12 elephant corridors noticed in this zone. The connected blocks and compartments along with the adjoining forest fringe villages are given in the table below.

Table No. 299

Elephant Corridor

Sl. No.	Name of Range	Group	Rout
1	Deogarh	1st	(i) Kadamdar to Kamamunda then Rambhadevi Sahi, Basudevpur, Jhatkiposi, Balanda. (ii) Kadamdar to Hadmunda,Ijhaliamar, Sukhapadan, Deojhar, Amalpani, Kontelkoli.
		2nd	(i) Badrama Century to Patrajhari , Belmara, Sado, Dangapathar, Palkudar, Dharamchandrapur, Bangalimunda, and back in same route.
		3rd	(i) Ludhar Deopani to Dimirkuda, Pohalamota, Sahajbahal, Budhikutuni, Ranigola, Ganga Jal, Gandam, Tikilijharan, Bhaluchuan, Khuladi, Pravasuni and backin same route. (ii) Ludhar to Deopani, Purunapani, Bhalughua, Raital, Tipirisingha, Parpone Tasarda and back in same route.
2	Reamal	1st	(i) Satgali to Sulia, Rengta, Shankarpur, Andharikhol, Malarbahal, Raijharan (Rambhadevi R.F), Siarimalia, Bhaluchaba, Nuadihi, Phuljhari, Gogua RF, Bhalukhol (Kankorkhol DPF), Mahasindhu, Tinkbir, Arjunjhari, Chandposi, Kirtanpali, Chingudijharan, Lulung, Raikhol Division Thakuramal (Tarang DPF), Nursinghatalia, Sampali, Madhupali (Kankorkhol DPF), Badjharan, Bhalukhol, Chandposi, Tinkbir, Bardatalia, Amakhol, Chachupali, Banakalo, Gundapali. (ii) Satgali to gajahuli, Ratanpur, Ladamb, Sindurkhol, Jharpadaand back through Hadamunda DPF.
		2nd	(i) Hariharpur village of Angul Division, Kankadajharan, Ambachuakhol, Para, Thianal (Tamkia RF) Kundheigola DPF, Raijharan, and back through Poipani, Rairatanpur, Khandadhuan, Sadhutahal, Kapragola, Dalak Chhaluk, the to Angul Division.
3	Barkote	1st	Kulipos Range of Bonai Division, Jalisuan, Kaliapal, Sarankote.
		2nd	Bonai Division to Mandasila RF, Chaphahal, Shibapali, Ratanpur, Rangamatia, Brahmanimal, Chhuriabahal and back.
		3rd	(i) Pallahara Range area to Thianal RF, Puuri RF, Sarankote, Rugudakudar, Adayapurand back. (ii) Pallahara Range to Dehury Munda, Rajamunda, Gobabandh, Sushab and back.
4	Khamar	1st	(i) Malyagiri Rf to Chargochhail RF, Khanutposi, Baliposi, Bhalabhadrapur,Sukdevpur, Danda, RF via Kardapal, Rengalmunda, Ditikrushnapur, Birpal RF via Pitta, Jharkilinda, (ii) Chargochhail RF to Badsada, Tambur, Kadaposi, Odash, Kuchiabeda, Kunjam, Sandharunghot, Kaunsia, Rajdanga, Badarunda, then Mahavir Road

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			Range of Dhenkanal Division (iii) Kunjam RF to Jambua RF via Satyabandh, Kalanda, Bhaluki, Kantiaposi, Purunapani, Paruhara and Biripal RF.
		2nd	(i) Kaladera RF to Malyagiri RF via Hanania, Buruburia, Sapjhara or Mahavir Road Range of Dhenkanal Division.
		3rd	(i) Chargochhail RF to Ghenakani, Badaeada, Odasha Padaposi, Nuagaon, Malyagiri RF. (ii) Chargochhail to Ghenakani, Barkotia, Ramahudi KF, Hatibindha, Dandia RF, Gurundia RF via Banara, Kardapal.
5	Pallahara	1st	(i) From Keonjhar Division area to Malyagiri RF. Since their old corridor is blocked by construction of Rengali Dam the herd move around the area of Pallahara Range without any particular direction.
Sources - 1st PWPR.			

8.13.9. Critical Habitat of Herbivores and Co-predators : - Several Wildlife tracks are seen in this division, which leads to perennial nala. The wildlife like Deer, Sloth Bear, Barking Deer, Wild Boar, Rabbit, Jackal etc are drinking water. Several Wildlife tracks are also seen in all wildlife series, which leads to natural water body in Chakhundadhar of Barkote Range. The wildlife like elephant, Hyena, Jackal, Wild Boar etc are drinking water in Chakubahal in Mandasila RF. Wildlife tracks are seen in Pradhanpat RF and the wildlife are using water in Kurudukot natural water sources, which is above 02 Km from Pradhanpat water fall. The wildlife like elephant, Leopard, Hyena, Jackal, Wild Boar, Barking deer etc are drinking water in Reangali Dam. Also Reangali Dam serves as main source of water for the wild lives remaining inside Khamar & Barkote wildlife series. All water bodies should be properly improved at the interval of every two years during the Plan period.

8.13.10. Protection of littering and nesting areas of birds: - Strict security should be provided to both the aquatic birds and arial birds available inside the division jurisdiction near dam, water bodies and perennial nala. Restriction should be maintained against poaching of such birds and damage of their habitats. Steps will be taken as per the description of Plan to retain old trees for their nesting, parching and littering of the birds.

8.14. Species Structure:

8.14.1. Autotrophs : - The forests of this division are mostly uneven-aged and have good natural regenerations and provide varied habitats. Most of these forest blocks support almost sal and miscellaneous species. Trees of all age gradation are available. Salia bamboo is present in Kansar, Gagua, Malyagii and Khajuria forest blocks. The top canopy includes species like Shorea robusta; Pterocarpus marsupium; Terminalia tomentosa; Bombax ceiba; Mitragyna parvifolia; Anogeissus latifolia and Gmelina arborea etc. The middle storey consists of Bridellia retusa; Dalbergia sissoo; Aegle marmelos; Terminalia bellirica; Terminalia chebula; Semecarpus anacardium; Sygygium cumini; Madhuca indica etc. Undergrowth likes Woodfordia fructicosa; Holarrhena antidysenterica; Indigofera pulchela; Andrographis paniculata; Phoenix acaulis; Tridax procumbens; etc are also noticed in this forest type. Interspersed amongst the wooded land are grasslands, which may be in very small patches, and

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these are very important for the herbivores in the forests. In the case of the degraded forests, the areas are generally having patches of scrubby growth.

8.14.2. Heterotrophs : - The primary heterotrophs are Sambar (Cervus unicolor), Cheetal (Axis axis), Barking deer (Muntiacus muntjak), Mouse deer(Tragullus memina), Bison (Bibos gaurus), Elephant (Maximus indicus) etc. The secondary heterotrophs are Leopard (Panthera pardus), Jungle cat (Felis chaus), Civet cat (Vivericula indica), Pangolin (Manis crassicaudata), Wild boar (Sus scrofa) etc. Scavengers and other animals are Hyaena (Hyaena hyaena); Jackal (Canis aureus); Wild dog (Cuon alpinus); Sloth bear (Melursus ursinus); Mongoose (Herpestes edwardsii); large Indian squirrel (Ratufa indica) and Otters (Lutrogale perspiciclata) etc. The common Langur (Presbytis entellus) and the common Pati (Macaca mullata) are represented as the primates. Amongst the snakes, Ahiraj (Naja Hannah), Dhamana (Zamaris mucosus), Cobra (Naja tripudians), Viper (Vipera russelii), the Krait (Bungarus candidus) and common green whip snake (Dryophis nasutrus) with Python (Python molurus) and branded krait (Bungarus candidus - sp) are found all over the division.

8.14.3. Avifauna : - 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. they are found all over the division.

8.15. Maintaining Unique Habitats:

8.15.1. Unique habitats provide special functions, which are not provided by succession stages and special habitats. They are geomorphic in origin. These include the habitats like caves, overhangs, dens etc.

8.15.2. Caves : - Caves are used by a variety of large mammals like the leopard, bear and hyena as shelter and for rearing cubs. Apart from this, in limestone formations caves may have stalactites and stalagmites, some of which can be of significant visitor value. Caves can have in them springs and small streams. They can thus be important for amphibians, reptiles, fishes and species of birds like the Edible Nest Swiftlets. Several species of bats live in colonies inside caves. Caves need complete protection, even while being inside a worked area. S.R Choudhury in one of his writings on Similipal mentions that a Tigress used a cave regularly, even while the coupe was being worked hardly a kilometer away. Hence, it is crucial that any live cave be given stringent protection. Inventory of available caves in various forest blocks and mention of them in compartment histories shall be taken up during the Plan period.

8.15.3. Overhangs : - When soft rock underlying hard rock weathers away, an arch is formed which serves as a shelter, as a substrate for bee hives (pollinators), nesting colonies for swallows etc. Such sites need to be protected. Survey of

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available overhangs in various forest blocks and entering them in compartment histories shall be taken up during the Plan period.

8.15.4. Dens : - These are much smaller and distinct from caves, usually dug in soft rock or earth cuttings by animals such as wild dogs, hyena, wolves, foxes, porcupines, for the purpose of shelter and breeding. When not occupied, they can be used by a variety of taxa such as small mammals and reptiles. Porcupines and pythons are known to share the same underground chambers. Dens are subjected to human disturbance. Local inhabitants are known to smoke out porcupines for pot, smoke out and kill wolf cubs or otherwise look for animals in dens. Dens need to be protected. Inventory of available dens in various forest blocks and mentioning them in compartment histories shall be taken up during this Plan period.

8.15.5. Cliffs, Talus and Ledges : - Sheer cliffs often have crevices and ledges, some in shade, some exposed to the sun thus providing a variety of microclimate. Ledges located high up serve as nesting platform for eagles and vulture (now critically endangered) colonies. Cliff tops are equally important for this purpose. Crevices are colonized by several species of bats. Beehives hang along overhangs. Several cliff dwelling birds like swallows, martins establish their nesting colonies along cliff faces. Plants, specific to rocky substrates grow along cliffs. The base may provide caves. Talus is an aggregate of loose rocks dislodged from time to time from cliff faces. They secrete space in between which provides thermally secure microhabitats to several species of small mammals and reptiles. The threats to cliff based microhabitats may come from honey collectors, from activities such as rock climbing. Talus often may be used as source for stone, road metal etc. These features need to be strongly protected. The availability of such unique habitats should be inventoried and mention of them in compartment histories shall be taken up during this Plan period.

8.15.6. Large Boulder Aggregates : - These are normally found in drainages, especially in sections in proximity of headwaters. These are excellent habitat elements for bears, honey badger and some species of reptiles. On rocky banks wild bananas grow which is an important food item for the bear besides species value. These are areas where disturbance needs to be completely controlled.

8.15.7. Sheet Rocks : - These often have crevices, which provide shelter to several species of small vertebrates. Lithophytic plants peculiar to rocky substrates grow along sheet rocks. This habitat is vulnerable to road construction, development of hiking trails, and tourism infrastructure, as a source of stone and therefore needs protection.

8.15.8. Earth Cuttings : - These are important for species, which dig dens. Near streams, kingfishers bore burrows into the banks for nesting. Significant banks and earth-cuttings need to be protected from activities such as road alignment.

8.15.9. Sandy Banks and Sand Spits : - Depending on the character and extent these are important as nesting sites for fresh water turtles, activities of otters etc. Sand mining therefore needs to be strongly controlled, especially along the critical stretches of all nalas and rivers. Dredging changes stream dynamics and may promote accelerated erosion. Likewise uncontrolled boulder collection from the riverbeds can

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have similar consequences. Such activity therefore needs to be regulated appropriately. If collection of boulders has been an important activity, then this needs to be allowed from the central portion of the bed with undisturbed stretches.

8.16. Maintaining Critical Macro Habitats:

8.16.1. Riparian Zones : - They are among the most diverse, ecologically productive and dynamic systems. Being dendritic in pattern they connect all kinds of habitats along and across the altitudinal range, and act as Wild Life corridors. They are used disproportionately more in relation to their availability by Wild animals since all animals need to come to water. Herbivores feed on a diversity of vegetation that is associated with this zone. The riparian forests provide thermal cover in winter and summer, which is important for all Wild animals. The lofty trees and unbroken canopy is of great significance to arboreal mammals and reptiles. The tall trees provide nesting cover to raptors. These systems are equally attractive to domestic cattle. Often scenic values are associated with riparian zones and hence they are attractive to people. Riparian stretches offer the cheapest road alignment opportunities to locate extraction roads and paths since minimum amount of cutting and filling is required. Riparian zones are linear and hence most vulnerable to change due to the great pressures they attract.

8.16.2. It is suggested that as far as practicable extraction path alignment needs to be avoided along the riparian forests. Roads already existing but not in particular use need to be closed for traffic. There should be no plantation activity in riparian forests. Rule of the thumb is that on either side of the stream, an area of a width equal to thrice the average top height of trees in riparian forests should be prescribed as a no felling and no activity zone to filter out effects of an edge in the interior of riparian forests and to maintain their ecological processes and functions. Labour camps likewise should be located outside such zones. New road alignment should be located outside the no felling zone. No borrow pits should be located within the riparian zone. When there is natural tree fall from the bank into the streambed, in water or not, then at least four such trees per running kilometer as far as possible, equally spaced need to be retained. Recreation sites within the riparian zones should be minimum in number and strictly controlled. They should not be located on sites that are ecologically of critical value. There should be no quarrying within the riparian zones. Neither cattle camps shall be allowed nor any infrastructure development. Specific strategies should be prescribed by the DFO relevant to the issues. Use of poison (natural or synthetic) or explosives must be strictly prohibited.

8.16.3. Gorges : - These may not be a common feature. Gorges may occur in hilly areas. They have steep sides and usually evergreen vegetation along the bottom. These are sites where primitive plants may be found; they also provide crucial microhabitat for herpetic fauna. Gorges need to be protected.

8.17. Other Prescriptions:

8.17.1. The distribution of Wild Life 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

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Chief Wild Life Warden to even assess the prey-predator base; this will even help in further improving the management prescriptions.

8.17.2. Wild Life 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 Wild Life 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.

8.17.3. 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 and the carrying capacity of the forests and fodder enhancement measures shall be taken up keeping the requirements of cattle and Wild Life in view.

8.17.4. Identified pockets of Wild Life and scenic beauty can be developed as eco-tourism centers. These centers should be developed with the active support of the local community who should be able to earn some livelihood through the influx of visitors. Submitting specific projects for the same should develop visitor amenities and recreational facilities. An interpretation or awareness centre could be built at Deogarh. This will help in building public awareness about forests, medicinal plants and Wild Life. Trekking points and routes should be identified and designated.

8.17.5. Generating awareness about the Wild Life 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-a-vis control of Wild Life crime.

8.18. Wild Life Protection Measure:

8.18.1. The immediate need is to collect and tabulate all available spatio-temporal information about incidence of Wild Life crime including identity and modus operandi of the criminals. The second step is to analyze the information and prepare a strategy and action plan while third step is to carry out enforcement.

8.18.2. 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 and ammunition and in proper identification of Wild Life species and their parts. They should be properly armed and provided with VHF sets 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 and court procedure with regard to Wild Life crime.

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8.18.3. Further, the patrolling party or anti: -poaching squads must be well acquainted with the entire terrain. Patrolling paths should be planned out in advance and such paths should not always follow the beaten tracks 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.

8.18.4. As information collection is vital for prevention and detection of Wild Life crime, both covert and 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 Wild Life products being traded.

8.18.5. An aspect of concern is the lack of proper prosecution leading to very low conviction rate in Wild Life cases. The success of protection efforts can not only be judged with regard to the number and nature of Wild Life offence cases booked but also the effectiveness with which such offence cases are investigated and contested in the appropriate courts of law. In most cases the offenders booked in Wild Life offence go out on bail and acquitted to commit the crime again. Very often, the accused escape due to technical flaws, perfunctory prosecution report and shoddy investigation. Hence, appropriate training in Wild Life crime investigation methods and 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 or maintained on daily basis. Moreover, the prosecution report shall be thoroughly scrutinized by the ACF or 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 over all forest and Wild Life protection in the entire Division as well.

8.18.6. Anti-poaching camp : - Anti-poaching camp should be set up in vulnerable pockets where there is greater concentration of Wild Life. During the fire season these forest blocks should be given priority in protection from fire. There shall be inventory prepared of all the gun licenses within 10 km radius of blocks rich in Wild Life. This will help in better control over the poaching activities otherwise also. This inventory should be regularly posted up to date.

8.19. Miscellaneous Regulations:

8.19.1. Awareness : - The awareness for Wild Life preservation may be created through celebration of Wild Life week, competitions and debate among the School and College students. Even, publicity material shall be distributed and the benefits of Wild Life conservation explained through electronic media. The legal provisions under the Wild Life (Protection) Act'1972 shall also be brought to the notice of all including the scope and extent of the compassionate amount for Wild Life depredation.

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8.19.2. Infrastructure and Training : - To ensure better protection and to enhance their effectiveness, the field staff shall be provided with modern equipments including proper arms and ammunition. As first and better communication is the key for protection of forests and Wild Life, 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 Wild Life management and in detection and investigation of Wild Life crimes.

8.19.3. 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 and goatskins as well as tanneries, list of eating houses alleged to be serving bird and deer meat and timely and proper documentation of all the incidences of man-animal conflicts including poaching. Further, the Divisional Forest Officer shall also submit half-yearly report to the authorities concerned with regard to steps taken by him to protect Wild Life and to improve their habitat. He shall also report constraints faced by him in implementing the prescriptions of this Working Circle.

8.19.4. Wild Life Depredation : - Depredation by wild animals is gradually increasing and the main reason for this conflict is shrinkage of their habitat and shortage of food. Animal depredation is a problem in this division. There are several reports of killings and injury of the human beings, damage to the crops in the division. The details of depredation by different animals are discussed earlier. The human killings, injury and crop damage are on increasing trend. Divisional Forest Officer should develop short term and long term measures to combat this problem. 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 or poisoning of animals. Guidelines issued by the PCCF (WL) to tackle various types of incidents have to be implemented properly by the field staff.

8.19.5. Control of Grazing : - The Wild Life rich areas shall be closed for grazing. However, grazing may be controlled else where as per the provisions of the Odisha Forest (Grazing of Cattle) Rules, 1980. The local people and the VSS may even be motivated to immunize their cattle, which graze inside the forests. 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 and 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.

8.19.6. 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 Wild Life 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 Wild Life Week and World Forestry Day.

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CHAPTER-IX

NON TIMBER FOREST PRODUCE (Overlapping) WORKING CIRCLE

9.1. General Constitution of Working Circle:

9.1.1. An area of 132606.7194 ha has been allotted to this overlapping Working Circle. The area extends over 72 number of forest blocks. The area, which is managed under SWC, RWC, PWC, ETWC & Plantation Working Circle, is included in this overlapping Working Circle. The forests of Deogarh Division contain a large number of species, which yield a variety of non-timber forest products (NTFP). The people living in and around the forests rely on these NTFPs as a crucial component of their livelihood security. The people usually collect these products for their own consumption as well as for sale to add to their earnings. The rural people of the division depend on these resources as one a major source of income generation.

9.1.2. In the last decade the demand for various varieties of NTFPs as a raw material for many industries like herbal cosmetics, herbal dyes, ayurvedic drugs etc has increased tremendously. This massive demand for a few varieties of NTFPs is resulting in unsustainable and destructive exploitation of these NTFPs by the primary collectors, which is abetted by traders and middlemen. Continued exploitation at this rate and manner will endanger the resource itself. Sustainable use of the NTFP resource is further set back by other adverse biotic factors like excessive grazing, illegal felling of trees, frequent forest fires, invasion of weeds which in many cases is leading to loss of natural regeneration of these species in the forest.

9.1.3. The non-availability of these NTFP in large enough quantities, exploitation of the primary collectors by agents and middle men and the adulteration of the NTFP product has resulted in the increased interest in NTFPs amongst all sections of the society. This has prompted numerous initiatives aimed at promoting NTFPs use, value addition and commercialization as a means of improving the well being of rural populations and at the same time, conserving the existing forests. Keeping in view of this consideration, the Government of Orissa formulated the Policy on procurement and trade of Non Timber Forest Produces during March 2000 and the Gram Panchayat (Minor Forest Produce) Rules'2002.

9.1.4. Under the present scenario, special efforts are required to strike a balance between the protection of the interests of the primary gatherers, thereby enhancing their subsistence and side by side the protection and conservation of the natural resources, thereby increasing the productivity and making the forests sustainable. This Working Circle attempts to address the above difficulties. 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 the entire Working Plan area of the division.

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9.2. General Character of Vegetation:

9.2.1. Composition : - In most of the hills, sal ascends to the top, either pre - dominantly or mixed with it's other associates like Bija, Ashan, Bandhan, Kurum, Kasi, Bamboo, Dhaura, Sisoo, Kendu, Haldu, Gambhari etc. The regeneration is purely natural and distributed adequately all over the area. The forest types are mainly moist and dry peninsular sal, Northern dry mixed deciduous and Tropical hill valley swampy forest.

9.2.2. Distribution : - The area allotted to this overlapping Working Circle is distributed in all Ranges, which comprises 100 % of the total managed area of the Working Plan. The NTFPs items are distributed in all Ranges. The NTFPs available in the forest of this tract are given below. The availability of the different NTFPS in the different blocks in the division is given in Figures in this chapter.

Table No. 300

List of NTFPs

Sl. No.	Name of NTFP	Sl No.	Name of NTFP	Sl. No.	Name of NTFP
1	Kendu leaf	8	Tassar cocoon	15	Honey
2	Charcoal	9	Chara seed	16	Wax
3	Genduli gum	10	Siali leaf	17	Sabai grass
4	Sal seed	11	Siali fiber	18	Tamarind
5	Sal resin	12	Myrabolam	19	Broom stick
6	Mahua flower	13	Kusum seed	20	Simuli cotton
7	Mahua seed	14	Dhatiki flower	21	Chhatu

9.2.3. Growing Stock : - The total number of established trees in each forest block included in this overlapping Working Circle have not been counted. An average of 40 number of NTFP producing established trees exist over an area of 0.1 ha as per the inventory data of sample point. The average growing stock per hector is given in the table below.

Table No. 301

Growing stock per ha

S.No	Block	Status	Seedling	Pole	30<60	60<90	90<120	120<135	135<150	150 & above
1	Pradhanpat	RF	407	257	227	128	163	188	55	21
2	Kansar	RF	557	248	187	205	156	120	35	12
3	Pravasuni(P)	RF	448	227	218	203	183	97	37	15
4	Rambhadevi(P)	RF	493	198	207	223	176	98	41	13
5	Panguli	RF	471	187	118	133	107	46	25	9
6	Mandesila	RF	512	194	120	105	100	115	52	11
7	Paburi	RF	498	243	180	132	83	65	37	14
8	Badtaila	RF	463	182	130	157	137	45	48	8
9	Gogua	RF	450	192	267	191	106	73	28	17
10	Malyagiri	RF	512	250	117	145	126	83	55	22
11	Old Puri	RF	517	205	125	142	123	77	45	17
12	Tamkia RF	RF	528	192	94	75	100	72	51	18

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13	Saida	RF	417	177	93	63	99	50	18	12
14	Chargochhia	RF	435	217	33	39	31	17	23	4
15	Mankarchua	RF	481	178	103	56	37	41	26	24
16	Kuladera	RF	405	172	108	87	107	58	39	9
17	Khajuria	RF	466	186	97	78	105	89	33	12
18	Jhadeswar	PRF	478	238	143	177	156	88	37	19
19	Hadamunda	PRF	435	227	79	109	137	67	26	18
20	Kankarkhol	PRF	422	218	235	258	103	52	17	13
21	Kundheigola	PRF	483	221	173	197	107	98	63	11
22	Naikul	PRF	401	203	135	122	147	61	32	6
23	Kulundikudar	PRF	417	187	95	12	123	100	8	3
24	Tusula	PRF	435	207	62	86	79	69	11	7
25	Kardapal	PRF	408	179	77	61	45	26	15	8
26	Bankhol	PRF	406	188	144	102	86	46	38	11
27	Chilantikhol	PRF	467	192	97	133	107	83	47	13
28	Kandarpa - Lambdura	PRF	483	209	237	168	81	65	35	18
29	Ludhar - Deopani	PRF	517	212	78	83	109	127	15	9
30	Salohi - Laimura	PRF	508	215	87	103	102	81	27	13
31	Surgidihi	PRF	405	178	119	135	97	73	31	17
32	Thiamal	RF	487	188	293	229	112	38	7	6
33	Nizgarh A	RF	398	56	96	6	3	0	3	1
34	Nizgarh B	RF	407	45	0	0	0	0	4	5
35	New pauri	RF	498	198	222	216	59	34	24	9
36	Kansar B	RF	406	184	724	124	28	4	0	0
37	Rengalmunda	RF	417	167	102	68	48	25	9	5
38	Kunjam	RF	372	205	208	173	80	5	0	0
39	Jambua	RF	388	175	45	59	48	12	2	0
40	Rajamunda	PRF	357	147	170	20	2	1	2	3
41	Kalkath	PRF	428	217	79	37	31	3	5	1
42	Tirib	PRF	408	207	87	71	43	3	0	0
43	Tarang	PRF	437	197	127	137	89	72	9	6
44	Banbira	PRF	451	182	232	213	26	4	1	0
45	Talabahali	PRF	443	205	295	65	9	1	4	3
46	Kakharua	PRF	412	198	192	194	98	68	20	8
47	Kalamjuangsahi	PRF	541	213	136	140	104	51	15	5
48	Ranjo	PRF	318	193	458	7	4	0	3	5
49	Atonaka	PRF	414	177	218	443	96	49	10	4
50	Jolonda - Jankpani	PRF	423	160	141	159	277	61	12	9
51	Sarbeda	PRF	395	210	30	34	31	22	17	8
52	Timi	PRF	257	95	10	7	4	5	1	0
53	Jharkhaman	PRF	367	175	502	156	6	42	8	6
54	Priyambadapur	PRF	424	195	568	36	6	4	0	0
55	Rangiapal	PRF	412	230	84	23	7	4	2	1

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56	Bhaluhuli	PRF	435	225	265	188	50	14	3	0
57	Bhulaka	PRF	416	190	98	97	40	43	21	13
58	Sanda	PRF	381	185	290	82	25	20	6	0
59	Badasada	PRF	315	215	17	3	1	0	0	0
60	Nuagaon	PRF	302	85	10	8	2	0	0	0
61	Injidi	PRF	408	170	508	66	9	2	2	0
62	Tamkia PRF	PRF	385	179	168	185	56	15	11	1
63	Bangalimunda	PRF	456	200	47	31	8	2	0	0
64	Telikusum	PRF	420	180	183	137	110	49	9	5
65	Ghodapaka	PRF	330	175	250	210	155	95	50	10
66	Balibahal	PF	380	190	50	30	21	17	12	0
67	Kaunshibahal	PRF	380	180	80	40	30	0	0	0
68	Chungamatia	RF	310	175	70	30	10	20	10	0
69	Biripal	RF	410	195	230	190	125	90	60	10
70	Danda	RF	415	198	150	95	79	50	34	1
71	Kansar A	RF	330	210	250	120	99	0	0	0
72	Gurusulei	RF	405	189	130	110	106	101	75	57

9.2.4. Age Class Distribution : - All age classes of trees of different species are present in this tract. But their number in different age classes differ from each other. In the inventory data it is found that as the age of trees increases the number of tree decreases. The reasons of decrease in the number of tree are illicit felling, uprooted and death.

9.2.5. Special Feature : - There is no any significant change observed in the forest area managed during the out going Plan period. All varieties of NTFP are available in the forest of this tract. The inhabitants of this locality are collecting some quantity of NTFP depending their requirement or demand in the market. Forest fire is an important tragedy to the forest of this tract.

9.3. Blocks and Compartments:

9.3.1. The NTFP series wise distribution of forest blocks and its status is given in the table below.

Table No. 302

Range wise forest blocks and compartments allotted to NTFP (OL) Working Circle

Range	Block	Status	Compartments No.	Notified area in ha
Pallahara	Malyagiri (P)	RF	2 to 15	5822.966
	Old Puri	RF	1	6783.750
	Tamkia	RF	1	513.540
	Saida	RF	1	397.710
	Mankarchua	RF	1 to 4	1314.225
	Ranja	PRF	1	221.6970
	Atalanka	PRF	1	161.8700

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	Julunda - Jankpani	PRF	1	291.4380
	Sarbeda	PRF	1	277.0200
	Timi	PRF	1	422.6580
	Jharakhaman	PRF	1	65.9340
	Kakharua	PRF	1	166.5360
	Bhaluhuli	PRF	1	140.9400
	Nizgarh A	RF	1	279.1980
	Nizgarh B	RF	1	88.0000
	New pauri	RF	1	1266.0000
	Balibahal	PF	1	149.0094
			Total	18362.4914
Khamar	Malyagiri (P)	RF	1 & 16 to 30	5643.04
	Gurusulei	RF	1	388.800
	Birpal	RF	1	437.400
	Charigochia	RF	1	529.199
	Kuladera	RF	1 to 6	2236.815
	Kardapal	PRF	1	527.391
	Bankhol	PRF	1	1222.452
	Sanda	PRF	1	446.0670
	Danda	RF	1 to 4	1423.0000
	Rengalmunda	RF	1	86.6700
	Kunjam	RF	1	1017.5530
	Jambua	RF	1	246.6000
	Chungamatia	RF	1	15.5780
	Kalamjuangsahi	PRF	1	150.6600
	Bhulaka	PRF	1	233.1180
	Badasada	PRF	1	196.9920
	Nuagaon	PRF	1	128.6840
	Injidi	PRF	1	73.7100
	Priyambadapur	PRF	1	50.1390
	Rangiapal	PRF	1	410.3460
			Total	15464.214
Barkote	Pradhanpat (P)	RF	16 to 29	4064.337
	Panguli	RF	1 to 8.	3212.661
	Mandasila	RF	1 to 11.	2856.465
	Pauri	RF	1	8215.425
	Badataila	RF	1 to 48.	10154.803
	Kulundikudar	PRF	1	472.068
	Tusula	PRF	1	1675.45
	Kansar A	RF	1	152.0000
	Kansar B	RF	1	97.3250
	Thianal	RF	1	816.8700
	Banbira	PRF	1	1192.3200
	Kaunsibahal	PRF	1	593.8920
	Talabahali	PRF	1	63.9900
			Total	33567.606
Deogarh	Pradhanpat	RF	1 to 15	6321.726

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	Kansar	RF	1	9758.88
	Pravasuni	RF	3, 4, 7, 8, 9, 10(P),11(P), 12 to 25, 30, 37(P), 38 to 53	11080.449
	Rambhadevi	RF	16 to 26	2316.979
	Khajuria	RF	1, 5 to 14 & 15 (P).	5008.092
	Jhadeswar	PRF	1	2768.499
	Hadamunda	PRF	1	169.857
	Chilantikhol	PRF	1	2316.61
	Kandarpa - lamdura	PRF	1	1666.4
	Ludhar Deopani	PRF	1	854.54
	Slohi Loimura	PRF	1	295.65
	Sargidihi	PRF	1	93.15
	Rajamunda	PRF	1	249.6420
	Kalkath	PRF	1	251.3430
	Tirib	PRF	1	85.6980
	Bangalimunda	PRF	1	298.7800
	Telikusum	PRF	1	409.0500
			Total	43945.345
Reamal	Kansar	RF	1	2439.72
	Rambhadevi	RF	1 to 15	1938.177
	Gogua	RF	1 to 13.	3595.525
	Hadamunda	PRF	1	396.333
	Kankar khol	PRF	1	5770.44
	Kundheigola	PRF	1	3534.491
	Naikul	PRF	1	1945.39
	Tarang	PRF	1	981.4770
	Ghodapaka	PRF	1	162.6800
	Tamkia PRF	PRF	1	502.8300
			Total	21267.063
			Grand Total	132606.7194

9.4. Special Objectives of Management:

9.4.1. The special objectives of management of NTFP (overlapping) Working Circle have been given in the table below.

Table No. 303

Special Objectives of Management for NTFP

Sl.No.	Special objectives of Management
1	To encourage and obtained natural regeneration of species producing NTFP items in all over the area. CED
2	To regulate and optimize extraction and utilization of various NTFPs in conformity with Government policy with a view to promote sustainable management of forest.
3	To enhance the value of forest by way of developing new NTFPs, creating additional opportunities for further value addition in the existing NTFPs and

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	strengthening the marketing.
4	To develop and extend skills to the local people including the tribals for sustainable collection, extraction and utilization of various NTFPs.
5	To meet the demand of NTFP based industries.
6	To provide employment to the local people by increasing the production capacity of NTFP.
7	To protect the forest from theft by creating awareness in the forest fringe villages.

9.5. Analysis and Valuation of the Crop:

9.5.1. Stock Map : - The entire area covered by this Working Circle have been shown on the stock map. Sample points enumeration in the managed area have been done covering an area of 0.1 ha, keeping point as the center of the plot. Above 30 cm girth at breast height of all trees along with it's clear bole and top height have been recorded for each plot.

9.5.2. No systematic study has been done in the past in this division to assess the potential production of various NTFPs and to ascertain impact of collection of such NTFPs on sustainability of the forest. However, an attempt has been made by the Forest Resources Division (FRS), Cuttack by carrying out the forest resource survey in different parts of the State, to assess and estimate the availability of some NTFPs. Though such estimation does not report about sustainability of extraction but it gives some idea about their availability in the different parts of the State. This assessment by the FRS Division was carried out with regard to tannin materials like Dhaura leaves, fruits of myrobalans and barks of Sunari and Karada. The assessment data is not related to this division, however to gather a common statistic the same is given in the table below.

Table No. 304

Estimation of tannin material of Rayagada Division

	Estimation of tannin material in quintals per hectare					
Name of Range	Dhaura leaves	Anla Fruit	Harida fruit	Bahada fruit	Sunari bark	Karada bark
Lamptaput	1.1	0.8	2.1	3.3	0.2	1.2
Balda	1.2	1.0	2.5	3.7	0.2	1.4
Koraput	0.8	0.4	0.4	1.3	0.1	0.1
Semiliguda	0.6	0.6	0.6	1.5	0.1	0.1
Npatna	3.3	0.4	1.2	1.7	0.3	1.5
Laxmipur	2.9	0.6	1.4	1.5	0.3	1.1
Total	9.9	3.8	8.2	13.0	1.2	5.4
Average	1.65	0.63	1.36	2.16	0.2	0.9

Sources - Forest Resources and Survey (Reports 2002 of Rayagada Division)

9.5.3. A yield of 12 kgs of Dhaura leaves per tree has been taken for this assessment, besides yield of 30 kgs, 66 kgs and 66 kgs per tree for Anla, Harida and Bahada respectively and 8 kgs and 16 kgs per tree for Sunari and Karada respectively

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(Reference Report dt.4/3/1966 of the Forest Utilization Division for Forest Resources Survey of Kalahandi and Bolangir). According to the assessment done by the Forest Resources Division, Cuttack in their Forest Resources Report of Rayagada during the year 2002, the estimation of the above mentioned tannin materials is summarized in table given below.

9.5.4. The yields per hectare as reflected above have been taken as the basic data for Deogarh Division. In this revision the average quantity is now multiplied with the total forest area of the Ranges of Deogarh Division to get an estimated quantity of the tannin materials. It gives an idea of the potentiality of these items in this division, which is only indicative. However, the Range wise said estimation is given below.

Table No. 305

Range wise estimation of tannin, leaves, fruits and bark in quintals

Name of NTFP	Name of Ranges and NTFP production in Qtl					Total in Qtl
	Pallahara	Barkote	Reamal	Deogarh	Khamar	
Mahua flower	2216	1350	2891	2900	1700	11057
Mahua seed	845	26	858	850	750	3329
Sal seed	988	15	995.5	999	950	3947.5
Sal leaf	248	80	288	289	270	1175
Sal Resin	09	01	9.5	10	8	37.5
Siali leaf	643	300	793	795	770	3301
Siali fibre	1.5	02	2.5	3	2	11
Anantamala Root	24.5	00	24.5	26.5	25	100.5
Sarbari root	07	00	7	8.5	7	29.5
Chura seed	9.5	00	9.5	10	8	37
Harida fruit	2.5	02	3.5	4.5	4	16.5
Bahada fruit	2.5	02	3.5	4.5	4	16.5
Amla	00	01	0.5	1	1	3.5
Kendu leaf	80	100	130	140	130	580
Total	5076.50	1879.00	6016.00	6041.00	4629.00	23641.59

Sources - DFO, Deogarh & WPO, Keonjhar.

9.5.5. However, details of a bio-diversity study for the State by Forest and Ecology Division, NRSA, Hyderabad has been undertaken for the first time to have a better understanding of the biodiversity composition. It has also been ascertained that the local people use large number of NTFPs. The estimated quantity of NTFPs in the above paragraph provides an overview of various products that are available and, are collected, regularly by the local people. This list is, however, only indicative but not exhaustive. The important trees producing NTFPs are given in the table below.

Table No. 306

List of important trees producing NTFPs

Species	Uses	Species	Uses
Bara	Rope making, fruits eaten by birds, animal	Karanja	Oil and medicine
Neem	Medicine and oil	Kendu	Edible fruit

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Sal	Edible oil, manufacture of varnish and paint	Kochila	Fruit for medicineand birds
Palasa	Rope making	Kusum	Edible oil and fruit
Amba	Fruit is edible	Mahula	Edible oil and fruit
Anla	Medicinal,leather	Gambhar	Fruits for animals
Simal	Cotton yield	Barkoli	Fruit is edible
Siali	Binding of kendu leaves and Rope making	Aswastha	Fruit for animals, rope making
Bahada	Medicinal and edible for animal, leather	Tentuli	Edible fruit for man
Dhaura	Sizing paper and in printing, leather	Chara	Edible fruit
Jamu	Edible fruit	Champa	Perfumes
Baula	Fruit is edible, leather	Eucalyptus	Medicines
Bela	Edible fruit	Sunari	Medicinal
Bhalia	Medicinal use	Arjuna	Leather
Genduli	Gum is edible and used in preparation of confectionaries	Kusum	Cooking, and soap making
Dimiri	Fruits eaten by birds and animals	Mohula	Edible
Panas	Edible fruit	Jaisanda	Medicinal value
Harida	Fruit for medicine, leather	Polanga	Soap making
Babool	Calico-printing, dyeing and as a sizing material for silk, cotton	Khaira	Pan making industry
Salai	Pleasant smell when burnt		

9.5.6. Except for assessment as shown above, no systematic study has been undertaken in this division till now to assess the potential of availability of various NTFPs and to ascertain impacts of collection, extraction and utilization practices on sustainability of these forests. Though the need for such studies has been long felt, such a study could not be undertaken during the revision of this Plan for want of desired financial and skilled human resources.

9.5.7. It is generally believed that collection of NTFP cause little or no deleterious effect on the forests. This is however not always true. The method of collection of some NTFPs very adversely affect forests and is often unsustainable. For example, theoretically if all seeds of a particular species or a group of species are collected from the forest floor and no seed is left for regeneration then the forests may not regenerate. This is evident in many sal forests where seed has been very intensively collected. Similarly, few number of young mohua trees are observed in many forest blocks as because there is no scope for regeneration due to its seed and flower collection. Forest floors are often burnt before many oil seeds, kendu leaf, and grasses, particularly fodder grasses, are collected. This practice is, very harmful to forests as it destroys the regeneration and also kills micro -flora and fauna in the top layers of the soil. It also physically compacts the soil and this situation is further aggravated when the forests floors are swept for leaf litter and humus. This practice adversely impacts nutrient re-cycling.

9.5.8. Leaves, which play an important role in maintaining transpiration processes, are over-exploited for commercial use in some cases. This removal of leaves may adversely affect some species like sal. Similarly, some species of

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medicinal plants have also been over-exploited. These are now threatened in the area they were previously found in plenty. Similarly, plants whose tubers and roots are collected and used are also under threat. These negative aspects of NTFP collection, exploitation and utilization deserve greater attention of the territorial administration and proper monitoring of collection should be ensured. Training of VSS member in collection, processing and value addition of the major NTFPs collected should be carried out.

9.5.9. There is substantial fluctuation both in quantity and royalty realized in NTFP items of this division. This is because the outturn depends on various factors like weather, the market price, collection etc. 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.

9.6. Methods of Collection:

9.6.1. The primary collectors should be properly guided and trained to collect the NTFPs in non-destructive way. Latest techniques of collection, drying and storage should be imparted to them. Value addition to collected NTFPs will increase their earning.

9.7. Method of Treatment and Improvement for NTFPs:

9.7.1. Tamarind : - Tamarindus indica is a big tree and occurs frequently in natural forests, besides being cultivated on private lands. It can attain a height of up to 24.00 mt and is even planted in avenues for its handsome foliage. It thrives well in a warm climate and can with stand drought. Its fruit is a long pod with 6 to 10 seeds and contains about 55 % of its weight as pulp. Tamarind fruits generally become available for collection during March-April. On an average, a full grown tree can yield annually around 200.00 kgs fruits.

9.7.2. Tamarind is used mainly as preservative and an important ingredient in pickles, juices and tamarind concentrates. Tribals even consume the seeds as food after boiling them. Seeds boiled with mahua flowers are considered delicacy. It is also used in powdered form commercially known as TKP, Tamarind Kernel Powder that is becoming increasingly popular in textile and paper industries as a sizing material in view of environmental cost being attached to such units. Its seed is also used as cattle feed and poultry feed. Tamarind, thus, has many uses and is in great demand in different markets.

9.7.3. It needs very simple processing. After collection, thin hard cover is decorticated manually which is sold at much higher price than the seeded one. Even the seeds are also sold at good prices. Moreover, the deseeded tamarind is less prone to insect attack and thus, can be stored for longer periods. Hence, the simple process of deseeding at the primary collector's level shall be encourged.

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9.7.4. Hill Broom : - The Hill brooms are prepared out of grass, 'Thysanolena maxima', and otherwise known as bouquet-grass or tiger grass. It's a tall reed like perennial grass, usually found on forest slopes, particularly near water streams as it thrives well in soils having high moisture content. The grass can grow as tall as four feet and may attain up to 45 cm long inflorescence, which constitutes the major portion of the hill broom.

9.7.5. The collection time is from March to June but harvesting done before complete maturity gives better quality and price for the broom as greener the inflorescence, better is the durability. Hence, harvesting shall be done before the full maturity. However, care shall be taken to ensure natural regeneration i.e. some mature grass should be left as such for seeding and natural propagation.

9.7.6. The Hill brooms need very simple processing. The broom after cutting are dried in sun for two to three days and separated into equal length. The brooms of different sizes are tied in an orderly manner with the rope or plastic at the lower end. All these operations are done manually. The rate of bound hill brooms even in the local market is much more than the loose brooms. One kilogram of hill brooms may be processed into three hill brooms.

9.7.7. With proper training, the primary collectors can be made good broom makers and taught attractive patterns of tying on the broom thus facilitating further value addition. Hence, there is considerable scope for value addition at local level and to raise the income level of poor collectors.

9.7.8. As stated above, not only proper training plays a crucial role in its value addition, but also the way grass is cut affects the price. The unwarranted long stalk increases the waste and hence reduces its price. The skill of the primary collectors may be further upgraded through training, demonstrations and extension methods.

9.7.9. Kendu Leaf : - Kendu tree yields a timber otherwise known as Coromondal Ebony. The fruit is edible and it was this NTFP for which the Kendu has been popular before its leaves assumed commercial significance in bidi making. The plant can grow up to 25.00 meters under suitable conditions. The more common occurrence in the division, particularly in open areas, is in the form of bushes or shrubs, probably because of regular bush cutting operations for production of qualitative and quantitative leaves. The leaves are collected during April to June after bush cutting. These activities provide considerable employment to the rural people.

9.7.10. The KL production in the geographical jurisdiction of this division is in the form of processed leaves. The cost of production of processed leaves is obviously higher than the Phal one. The leaves are valued for their use as wrapper for tobacco. Bidi making can do further value addition by the primary collectors. The possibility for this value addition shall be carried out on experimental basis.

9.7.11. The species is very responsive to root suckering. If root suckers are induced, coppice shoot cultured and water conservation measures carried out, the

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productivity of leaves can be sustained. However not much have been done to improve the crop condition through appropriate Silvicultural practices. There is an urgent need to undertake crop improvement measures at least on experimental basis by Deogarh and Angul (K. L) Division.

9.7.12. The Kendu Leaf Trade of whole State have been Nationalized from 1973 after which the Forest Department took up collection and processing of kendu leaf. The disposal of processed kendu leaf is entrusted to Orissa Forest Development Corporation Limited. Kendu leaves have been divided in to 5 number of quality classes depending on its size, texture, colour and thickness.

9.7.13. The different stages of work and its period for the crop year that is 1st February to 31st January for collection of kendu leaf have been given below.

Table No. 307

Stages of kendu leaf work

Sl. No.	Name of works	Scheduled time	Executing agent
1	Bush cutting	15th Feb'y to 25th March	K.L. Department / Individual
2	Phadi repair	20th March to 10th April	K.L Department
3	Plucking	5th April to 20th May	Local people
4	Purchase	5th April to 20th May	K.L Department
5	Drying	5th April to 27th May	K.L Department
6	Storage	12th April to 27th May	K.L Department
7	Binding	1st May to 31st Oct'r	K.L Department
8	Delivery to O.F.D.C ltd.	15th May to 1st November	K.L Department
9	Disposal	20th May to 30th November	O.F.D.C ltd and K.L Department

9.7.14. The technical knowledge for execution of different works in kendu leaf trade have been prescribed in the table below.

Table No. 308

Technical knowledge for execution of kendu leaf

Sl. No.	Name of works	Guide line for execution of works
1	Allotment of fund	The requirement of fund has to be placed by the D.F.O (K.L) before the beginning of the crop year.
2	Bush cutting	Bush cutting to be done by a sharp spade, so that one bush shall be cut ½ to 1 inch flush to the ground by one thrust. Phase wise cutting has to be followed.
3	Plucking	After 45 days of bush cutting full developed quality leaves shall be plucked from the lower part of the kendu leaf shoot. The upper leaves can be plucked in the second time if necessary. In one Kerry 20 leaves of same quality shall be kept.
4	Draying	Just after collection, Kerry shall be kept on the drying yard direct to sun shines in rows and column wise leaving 15 cm

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		spaces in-between. Kerry shall be turned once at the end of each day by changing the direction of its tip to 90 degree. The drying of Kerry needs 7 days in good weather condition. After drying Kerry shall be kept in Phadi with systematic manner and quality wise.
5	Binding	It shall be started as quick as possible after drying. Each Kerry shall be opened to remove the rejected leaves at the time of binding. The direction of tip of each Kerry will be changed, while it will be kept on the binding frame.

9.7.15. The relationship of leaves, Kerry, Bundle and Bag along with their weight is given in the table below.

Table No. 309

Relationship of leaves, Kerry, Bundle and Bag

Sl. No.	Name of items	App't No. of leaves	Weight in kg.	Remark
1	Kerry	20	0.017	x
2	Bundle	6000	5.00	300 Kerry on average
3	Bag	72000	60	12 bundle

Sources - D.F.O (K.L), Angul & Deogarh

9.7.16. The K.L Division requires poles, brushwood etc for repair of Phadies in every crop year. The quantity of forest materials to be supplied and the amount to be collected from Kendu Leaf Division in different items have been prescribed below.

Table No. 310

Quantity of forest materials to be supplied

Sl. No.	Name of items	Rate in Rs.	Quantity
1	Pole	10.00 / pole	10 poles per each Phadi
2	Brush wood	20.00 / cart	Two carts per each Phadi
3	Siali fiber	10.00 / kg	One kg per 10 bags
4	Kerry	0.05 / kerry	Collected outside bush cutting area

9.7.17. Siali Leaf : - This is obtained from siali which is wood climber of gigantic size and is otherwise looked upon as undesirable in view of the damage caused to the host plant. The natural climber is said to be capable of exerting so much pressure on the tree that the latter some times collapses under its weight. The climber thrives well in loose rocky soil particularly in the hilly areas and ravines. However being strong light demander, it is less available in dense forests. Large leaves of siali are shaped like Camel foot and appear as twins. They are largely used in making plates, donas and food wrapper. Siali leaves have high market potential through out India. The quality of leaves varies according to their size and harvesting methods. Leaves are better available between Oct and Feb, both in terms of quality and quantity. This is the peak period of collection. The collectors often tend to loose their patience in plucking the leaves and cut down the climbers to get the whole resource to their feet.

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9.7.18. If the leaf is plucked leaving its petiole or stalk on the climber itself, then the drying is better facilitated and wastage is also reduced since the stalk has no use in making of leaf cups and plates. To ensure proper collection in different areas of the division, the field staff should intensify their supervision during the collection season. Siali leaves are the major source of income for the tribals. Most tribal families are engaged in collection of leaves. There is a scope to raise the remuneration of the primary collectors if they could be organized into cooperatives including SHGs and provided with processing machines to get the benefit of value addition. The skills of the poor gathers may also be upgraded through regular trainings.

9.7.19. This is a very good items for the local people to develop their economy. Any restrictions have not been prescribed for collection of siali leaves. The siali leaves of entire division was sold to private contractor in auction sale. But during the year 2000 as per notification No. 5503 /FandE dt. 31.03.2000 the purchase and export have been vested to Panchayat. The maximum collection of siali leaf is made during winter season. Drying of leaves have been made for one to two days after plucking and then stitch five to six leaves into a plate with the help of thin bamboo straws and then sell them in bundles. The bundles have been made of size 75 cm radius and 150 cm height and each containing 1600 number of plates. The rate per bundle is Rs.300.00.

9.7.20. Siali Fibre : - The fibres obtained from the climbers are used for making ropes for domestic purpose. However, major use is by the KL organization for the purpose of binding. For extraction of the fibre, the climbers shall have at least two feet girth at the ground level. This is the girth when the climber moves towards its maturity and requires to be cut for silvicultural needs. Even the quality of leaves also gets reduced. Usually, it takes four to five years for the climber to attain the exploitation size. Hence, cutting cycle of five years may be adopted to work out this climber. The process of separating the fibre from the wood plant tissue is technically known as 'Retting'. This process consists of submitting the stem to the action of water and allowing fermentation to take place resulting in removal of gummy material by water and subsequent beating and scrapping of the softened tissue to get the fibre.

9.7.21. This is a main source of livelihood of poor people. There is no any restriction proposed for collection of bark from siali climbers. The climber of girth 15 cm to 40 cm at ground level will be cut above 15 cm from ground and carefully pulled out from the host plant. It will be made in to pieces of length 2 mt for removal of bark. The width of bark shall be 1.5 cm. The bark shall be hanged on its middle with a horizontal stick for dying. The rate of one kg of siali fibre has been fixed to Rs.30.00.

9.7.22. Sal Seed : - Sal is the main species of the division and its multiple uses justify a description on collection of its seeds and leaves. The tree can grow up to the height of 45 meters. It sheds leaves in late winter and foliage is renewed by March when it flowers. The fruit matures by May-June. The tree is a light demander. Though commercial use of sal seed has picked up during the last two to three decades, the extraction of oil from it for domestic consumption has been in practice since long.

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Now, it has found many alternative uses in soap making, manufacture of vanaspati, sweets, and chocolates etc.

9.7.23. Sal seeds are raked from the forest floor along with litter and humus. During the process of raking, all previous year seedlings are either killed or their root systems damaged. The removal of litter and humus exposes the soil and dries up the moisture, which in turn kills the micro flora and fauna. Sal growth, which is dependent on mycorrhiza, is adversely affected. It is therefore necessary that limited area of sal forest should be worked out at a time. Further, some quantity of the seeds should be left on the forest floor to facilitate natural regeneration. Moreover, no collection shall be allowed beyond 15th June. To check this aspect, even all the purchase may be permitted till this date only so as to ensure proper implementation of the above mentioned restriction. Another point that needs consideration is the proper drying of the seeds after collection. If moisture content is not regulated, it becomes susceptible to fungal infection. Though it can be checked through application of fungicides, the care should be taken to ensure timely purchase of seeds by the trader so that primary collectors do not suffer loss due to such damage. More over, less time of storage, otherwise also ensures a quality and would fetch a better price. The staff of the division as well as purchaser should work in close cooperation with the primary collectors in the interest of forest and all stakeholders.

9.7.24. Sal is the main principal species of this division. In most of the plain area sal occurs as pure crop. It also occurs extensively in all status of forest area that is Reserve Forest, Proposed Reserve Forest, Revenue Forest and private land. The first lease of sal seed had been granted to M/s Utkal contractors and Joinery ltd in the year 1967-68. Sal seed collection is entrusted to Orissa Forest Development Corporation Limited since 1983. Sal seed is used in industries for solvent extraction. The annual production varies from year to year. This depends on good seed year and proper collection of sal seeds. Good seed year of sal occurs in this zone in all odd number of calendar year.

9.7.25. The sal seed appears during the month of February and March falls on the ground during the month of May and June. It is necessary to clean the area below the crown of the sal tree before seed shading so that proper and maximum quantity of sal seed can be collected. The agent will engage minimum one person at the purchasing center, who will look after cleaning, proper collection and timely purchased of seed. It has been prescribed to clean the area with the help of brushwood or broom but not by setting fire. No restrictions have been prescribed against the procedure adopted during the collection of sal seed. The local people will collect seed as per their own convenience. Sal seed will be sold at the rate of Rs.5.00 per kg. The purchaser shall open the following purchase center for sal seed as given below.

Table No. 311

Purchase center to be opened for sal seed

Sl. No.	Name of Range	Name of purchase center
1	Deogarh	Deogarh, Tileibani, laimura, Kansar, Tainsar, Prabhasuni, Ludhar & Dudhianali
2	Reamal	Reamal, Rengalbeda, Kundheigola,Tinkbir, Nuadihi, Khilai,

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		Tarang, Tentebahal & Chhatabar
3	Barkote	Barkote, Kola, Balam, Panchamahali, Gopapur & Kandhal
4	Pallahara	Pallahara, Jamardihi, Chheliabeda, Batichua, Siaria, Shigarh & Raipal
5	Khamar	Khamar, Injidi, Nuagaon, Shahargurujan, Bandhukani & Kantiaposi

9.7.26. Sal Leaf : - Though the use of sal leaves for making cup and plates is an age old practice in tribal areas, it has now become a commercial activity with the introduction of mechanical press and mounding machines. The leaves are even used for making pika though not for commercial purpose. Its other uses are as wrapper for food, betel etc. The fresh leaves appear in March after defoliation. The tree coppices well particularly near the ground level, the advantage of which is taken by the leaf puckers. Better quality leaves are available to them at a convenient height from these coppice shoots. However, collection of tender leaves from such coppice shoots has harmful effects on the growth of plants. Hence, collection should not be allowed during March to May and even in the rainy season.

9.7.27. The ideal time for collection is between September to January. Further, total sweeping of the plants for collection of leaves should be discouraged. The limit should be fixed for extraction of leaves and in any case it shall not be more than two quintal per hector of forest area. It is better if collection is done through VSS and the Forest Department jointly with organizations like TDCC and TRIFED. They may organize training camps to impart knowledge of sustainable collection practices to the primary collectors.

9.7.28. Myrobalans : - Myrobalans have been used in tanning industries. This includes fruits of Harida, Bahada and Ainla trees. Besides tanning those fruits have extensive used in Ayurvedic medicines. Those trees have sporadically occurred in almost all forest blocks included in this revision. Also it is quite common in other forest area with in the geographical jurisdiction of Deogarh Division. The best time for collection is March. Myrobalan tan is usually blended with other quickly penetrating tans to produce good leather colour.

9.7.29. The Orissa Forest Development Corporation Limited had been granted the lease for collection of myrobalans for 12 years with effect from 1.10.1977. But the leaseholder had neglected in this items of trade. As a result large numbers of poor people had been deprived of the benefit of earning income. There is no collection figure of myrobalan available on those periods. These items have been listed in the minor forest produce granted in favor of Panchayat. The best method of economical collection of these fruits is from the ground, which has fallen either naturally or by shacking of branches of the tree. Clearing and sweeping the ground below the fruit bearing trees ensure economical collection of these fruits. All industries that utilize myrobalans shall be highlighted about the quality and quantity of these items, so that lease can be granted in his favor on demand. The collection can be stepped up and higher revenue can also be generated.

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9.7.30. As observed, Ainla is generally harvested using un-sustainable techniques such as lopping and hacking of branches and at times even felling of trees. The competition for early fruit collection among the locals has resulted in plucking of unripe fruits and over exploitation. This has adversely affected the natural regeneration. Hence, pre mature harvesting should be discouraged. The best time for collection of ainla is the month of Chaitra (March-April) when it is ripe and mature. The fruits should be carefully plucked using long poles with a hook or by shaking the plant. Collection should be done in the morning hours because increasing heat may turn the fruits black, thus damaging the quality. After collection they should be stored under shade till the processing works begins. The main problem observed is that the collection techniques are quite harmful to the forest, the collectors are in a hurry to collect more quantity with less effort and they tend to break the bigger branches or even fell the whole tree for the few fruits. Sometimes they collect immature fruits fearing that other collectors will collect the same before them. These practices should be avoided at any cost. The processing of ainla begins within two days of its collection, the immature and blackened fruits should be separated and the selected ones are to be boiled for 8-10 minutes. The boiled fruits are deseeded in a neat and clean place, after which they are sun dried on bamboo mats. The sun drying makes ainla little reddish, and this fetches a better price in the market. The processed ainla should be stored in gunny bags in dry places with a normal room temperature.

9.7.31. The time of maturity of fruits should be notified. In the absence of standards for sustainable harvesting régime, at least one third of the fruits should be left on the trees for natural regeneration to take place. Generally, the primary collectors dry the fruits using a simple sun drying technique, which blackens the produce thus fetching lower price. However, drying and packaging the produce in small bags can do value addition. Pulverizing and selling Amla powder either individually or collectively as triphala mixture can also add value to the produce. The DFO with organization like TDCC and TRIFED shall take steps to provide preliminary training to the primary collectors to use collection processing methods which are not injurious to forest and the produce. This will help local processing and thus provide opportunity for local value addition. The skill of these poor collectors may also be up graded through training, demonstration and extension methods.

9.7.32. Mahua Flower and Seed : - The Mohua trees is very popular among the tribal for its flowers and seeds. In tribal culture, Mohua tree occupies a special position and they do not cut it unless compelled by circumstances. Mohua flowers are sugary and thus quite tasteful. The tribals have traditionally been using Mohua as major food item. It is even used as cattle food. The villagers eat dry corolla by frying and making into cakes. They also use it to distill liquor. In fact, it is very popular among tribal for use as liquor.

9.7.33. Mohua flower is available during April to May. Sugar contents maximum, when flowers are mature and ready to fall. The primary collectors should wait for the flowers to fall. However, ground below should be cleared before hand so as to get unadulterated flowers. The ideal time for collection is the early morning when maximum flower dropping occurs. Proper grading of flowers as well as drying shall have value addition for mohua. So drying should be ensured to increase its shelf

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life. Otherwise, degradation in quality causes lowering of its price. The dried flowers, reddish in colour has more market value than the blackish flower.

9.7.34. Char Seed : - Char seed, also called chiranjee dana or char dana, is a fruit of Buchanania lanzan, an ever green species of up to 15.00 meters in height and generally found in the forest of this division. It is a close associate of sal and mahul. Although various parts of this tree are differently used, it is identified by its delicious fruit, which is often regarded as poor man's grapes. However, char seeds has variety of uses. It is either eaten directly or used in flavoring sweet meat, confectionary, betel nut powder etc. Even its oil has variety of uses.

9.7.35. The tree flowers during January to February and the fruit ripens in summer. Though ripen fruits fall on the ground, the primary collectors often themselves pluck the fruits including the immature ones for further processing. However, mature fruits fetch better return (the seed is mature if it sinks in the water). The un-decorticated seeds give better price if they are washed properly before selling. The kernel is even vulnerable to insect attack, more particularly when left un-protected from moisture. Hence, in-addition to drying them under the sun, care is also to be taken for their proper storage and bagging. All the above mentioned issues shall be explained and demonstrated in detail to the primary collectors through training so as to facilitate better remuneration to them for their labour.

9.7.36. Genduli Gum and Other Gums : - Stercuia urence (girdhini tree) occurs in few numbers in all most all the hill terrain of different blocks that included in this revision. Genduli gum is tapped from girdhini tree. The people of the forest fringe villages are tapping gum. But there was no any scientific method adopted for tapping of genduli gum in the past. Genduli gum is edible and used in manufacturing of sweet, chocolate, chewing gum and in the spinning mills. Other gums are also tapped from Dhaura, Ashan, Moei and Chara trees for use in verities of industry. Genduli gum is the most important of all gums.

9.7.37. Care should be taken to ensure that hammering of the bark is not done, it will lead to closing of pores and thus, preventing the exudation of gum. The exudation of gum is highest with in 24 hours of blazing and continues for a couple of days. Exudation takes place round the year but maximum gum exudes during the hot summer from April to June though the collection time starts from September itself. However, gum harvested during rainy season is poor in quality and hence, no tapping should be done during this season. A tapping cycle of 04 years may be adopted.

9.7.38. The prescribed tapping rules for collection of gum in this zone have been given in the table below.

Table No. 312

Tapping rules for collection of gum

Sl. No	Tapping method
I	The trees attending 105 cm girth at breast height shall be selected for tapping.

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2	The blazing for tapping will commence from 1st October and complete before 15th instant.
3	Two rows of blazing at a height of 60 and 90 cm from ground level are allowed.
4	The blazing is of semi circular type and its length of outer circumference should not exceed 15 cm. Its depth shall be with in 0.6 cm. The curve end of the blazing shall be upward.
5	The minimum distance of one blazing to another in a row shall be 20 cm apart. The maximum blazes in one row shall be 4 numbers for tree of 120 cm girth at breast height.
6	The blazing in two consecutive rows shall be staged.

9.7.39. Bahada Gum : - This is another important gum, which is extracted from Terminalia bellerica. The methodology adopted for its extraction is also same as that of Genduli gum. However, the tree from where extraction is to be done should be of at least 1.20 meter girth.

9.7.40. Tassar Cocoon : - The rearing of tassar cocoon has been seen in Asan and Arjun trees. Tassar cultivation in this division is confined to a limited places such as Pallahara, Chashagurujan, Kantala, Basaloi, Chingudijharan, Pankijharan, Sunaripada, Kisanpali, and Badajharan. The local people have not adopted the recent developments on tassar rearing. This is one of the most important non timber forest produce for poor people of few pockets of this zone. They should be provided with improved varieties of tassar cultivation. It has been prescribed to motivate the traditional tassar rearers by Extensive organization of the sericulture wing of textile department. The economy of the rearers and extension of cultivation will increase by adopting modern method of tassar cultivation.

9.7.41. The Divisional Forest Officer will act as coordinator between Textile Department and rearers. All attempts shall be made so that the people will get the disease free tassar seed with 50 % subsidiary rate. Motivation on plantation of tassar rearing trees along with all improved technical method should be assigned to promote this cultivation in this division.

9.7.42. Lease for collection of tassar cocoon has been granted to the contractor since 1979. Plantation of host plant shall be intensified in both forest area as well as private land. One collection center in each production area has been opened by the leaseholder to facilitate the rearers for disposal of cocoon. The cocoon shall be sold in term of numbers and the average rate of one cocoon is Rs.0.40. The weavers at Sambalpur, Subarnapur, Bargarh and Boudh are weaving ' Sambalpuri Matha ' and earning their livelihood. The contractor shall be directed to supply the cocoon to those weavers at a reasonable profit. Financial assistant shall be made to these silk industries to maximize production of export quality tassar fabrics.

9.7.43. The other items of non timber forest produce obtained from this division could not be disposed off properly due to very poor system of communication into its enterer parts. The collection of those items fluctuates considerably for it's less market facilities. The working of non timber forest produce except kendu leaf commence from 1st October and expire on 31st December. Panchayat shall open

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purchase center in each beat area, which facilitate the interior people for disposal of collected items. No extension of time will be granted for collection of those items.

9.8. Medicinal Plants and Their Prescription:

9.8.1. The distribution patterns and habits of medicinal plants are varied and diverse. Though there is practically no specific study on the medicinal plant resources and their potential, the use in the traditional system of medicine continues to be in vogue in the division and the large population still depends on these resources for their medical needs. However, gradually, popularization of medicinal plant species and their derivatives is regaining its lost ground or value in the State being even encouraged by the State Medicinal Plant Board. Still a lot of work is required to be done to preserve this resource for posterity.

9.8.2. Since there is hardly any authenticated information and documentation of these species, the immediate steps required to be taken shall be rigid protection measures. Inventorization and characterization of all known medicinal plant species shall be done including the help from the indigenous knowledge (I.K) system of the locals. This system, popularly known as I.K system, refers to the unique, traditional, local knowledge existing with in and developed around the specific condition of the people indigenous to the particular area. The I.K is normally stored in the memories of the traditional healers and users of the medicinal plant resources; it is expressed in their activities and practices. In case, some methodologies adopted by the locals are found to be injurious to the plant, the steps shall be taken to modify such practices.

9.8.3. The Bio-Diversity Act 2002 and the corresponding Rules 2004 have already come into force. These provisions duly take care of all the issues related to even the medicinal plants, their derivatives, uses and harvesting techniques. Hence, the people's biodiversity register shall be made on priority and even up dated regularly. It is a participatory documentation duly incorporating the I.K system besides inventorization and characterization of known biological resources of the area, it is intended to even identify and protect local's rights over the intellectual property and natural resources.

9.8.4. The strategy should be to not only maintain the existing medicinal plant resources at the sustainable level but also increase the productivity through improved methodologies. The augmentation of raw material resource shall be done by domestication of wild plants and exotics having medicinal value, and their large scale cultivation. Already, cultivation of amla, black pepper and safed musli has been taken up for meeting the requirement in different parts of the State.

9.8.5. Efforts shall be taken for development of 'Identification keys' for diverse medicinal plant resources. It will not only improve the management skills but also check the illegal removal of medicinal plants and their parts because of ignorance. It will further help in regulation of trade and realization of right price for the primary collectors. More over, herbal gardens, at least one each at Range level shall be developed for propagation and awareness of the medicinal resources of the area.

9.8.6. The best option will be to form the Bio-Diversity Management Committees at the local level under the provisions of the Bio-Diversity Act and Rules

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and prepare Bio-Diversity Conservation action Plan for promoting conservation and sustainable use of the biodiversity in general and medicinal plants in particular. The conservation measures should be both 'In-situ' and 'Ex-situ' and the traditional healers and users of these resources shall be an intrinsic part of any such effort for long term gains both for the forests and all stakeholders.

9.9. Development of Special NTFPs:

9.9.1. Apart from the NTFPs naturally available in the division, it is also felt that development of certain special items should also be considered on priority. It is prescribed that large scale plantation of Jatropha and Agave along the boundary of the forest blocks should be under taken. This will not only create the additional NTFPs but also help in forest consolidation. These species being non-browsable, their protection measures are not so essential.

9.9.2. Annual Areas of Treatment : - Though most of the boundary pillars and boundary lines are in dire state, the priority should be given to consolidate the boundaries of all blocks. The total boundary length in the division is 535.95 kms of which at least 500.00 kms shall be attended for live hedge plantations during the currency of this Plan with total annual length being 50.00 km (25.00 km each for Agave and Jatropha plantation). Neither any planting series nor annual areas have been prescribed for the purpose with an intention to give more flexibility and administrative convenience to the DFO in deciding such annual areas. However, the aspects that shall be taken into account while finalizing the annual treatable area are (i) It should be preferably the blocks other than RF (ii) The block shall be adjacent to the human habitation and susceptible to encroachment (iii) As far as possible, area of treatment shall be in such a manner that entire block is attended at a time and in a systematic manner (iv) Arbitrary assignments of annual areas shall not be resorted to for equi-distribution of this work among different ranges as has been in practice otherwise.

9.9.3. The DFO shall prepare an annual action plan to develop these new NTFPs viz. Jatropha and Agave with the view to enhance the supply of the concerned raw material. This plan shall be approved by the Conservator of Forests, or any other specified authority for execution by the DFO.

9.9.4. The Orissa Plantation Manual 1977 shall be followed while carrying out this plantation including the calendar of operations. However, some specific points relevant to the species are spelt out in the following paragraphs.

9.9.5. Agave sisalana : - Sisal is a xerophytic plant and thus has a greater ability to withstand drought under most adverse conditions and wide ranging soils. The fibre extracted from its leaves is used for rope making and is in great demand. The plant even acts as a good soil binder. The agave plantation shall be taken up along the block boundaries particularly adjoining village habitations where the blocks are more susceptible to encroachment. The plantation should be done in staggered pattern in two rows at a spacing 1 meter x 1 meter.

9.9.6. Planting Technique : - Sisal seedlings weighing about one kg and having stout and well developed bole are the ideal planting material. The nursery raised with

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ground sucker is better than the one done with bulbuls. Seedlings of 9 months to 1 year old should be planted. Sisal being a surface feeder because of fibrous roots does not require very deep pits for planting. The normal size of 5 x 5 x 5 cm^3 pit is sufficient which shall be disinfected with BHC or Aldrine to prevent white ant attack to the root system. The ideal time for planting is just before onset of monsoon. The seedlings should not be planted deeper than the bole, otherwise soil will get into leaf axil above the bole damaging the terminal leaf meristem and resulting in subsequent death of the whole plant. Mulching done to the plant helps in checking weed growth. Fertilization adds to the growth. However, use of insecticides is required only in the event of an epidemic borer attack.

9.9.7. Harvesting : - It flowers during January to March. However, the sisal leaves become ready for harvesting by about 4th year. In the 1st year of harvest, only sound leaves should be cut leaving a minimum of 15-16 leaves per plant. If excessive cutting is done, the plant may not survive. The best and safest rule is to only cut those leaves which are positioned on the perimeter of the bole. The out turn per km is about 1.00 quintals of fibre (Two rows staggered pattern of planting with 1 meter x 1 meter spacing). The extraction of fibre starts from November and continues up to May. The extracted fibre shall be cleaned by washing, dried, brushed and bundled. Quick disposal is desirable as long storage affects the colour and hence the price.

9.9.8. Jatropha curcus : - Jatropha curcas belongs to the family 'Euphorbiaceae' and is thus closely related to some other important cultivated plants like Rubber plant and Castor. It is a small evergreen, nearly glabrous tree or soft wooded shrub 3 to 4 meter high. It flowers between Septembers to December. The fruits mature two to four months after flowering turning yellow when mature. It is easily propagated by seeds or cuttings and grows rapidly. A hot and humid climate helps in the early germination of seeds.

9.9.9. This plant has a production life of nearly 40 to 50 years without necessitating replanting or retending unlike other such crops. It is indigenous to America but now grows in semi wild condition in the vicinity of the villages, almost in all states. It can grow successfully on all kinds of barren and unproductive wastelands. It is more popular as a live fence for protection of agricultural fields from the attack by livestock as it is unpalatable to cattle and goats. Other uses include Jatropha oil as biofuel and in soap making, medicinal value etc. However, the main use anticipated in the coming years is its use for biofuel production.

9.9.10. Planting Technique : - The plantation along block boundary in two rows at 1m x 1m spacing shall be done in the staggered manner. However, other patterns of such live hedge plantation may also be adopted. Since large scale plantation of Jatropha has been recommended by the Planning Commission, even the block plantation @ 2500 plants per ha may also be considered. The seedlings should be raised in poly bags of half kg capacity filled with a mixture of soil and organic manure in the ratio of 4:1. Two seeds be sown in each poly bag at a depth of 6 cm and watered regularly. When the seedlings are around 4 weeks, the weaker of two seedlings be removed and used for gap fillings. The seeds or cuttings can also be directly planted in the field on the onset of monsoon season. For planting 1 ha area,

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around 5 to 6 kg of seeds is enough if the spacing is 2 mt. x 2 mt. However, on rain fed wastelands, high density planting at 2mt x 1mt or 1.5 mt x 1.5 mt shall be desirable. The two main techniques followed for this plantation are described below.

9.9.11. Direct Planting : - The land shall be ploughed once or twice depending on the nature of soil. In case of heavy soils, deep ploughing is given whereas in light soils, shallow ploughing is enough. The seed or cuttings are planted in the field on the onset of monsoon. Two seeds shall be dibbled at each pit at a spacing indicated above. When the seedlings are 4 weeks old, weaker seedlings should be removed to retain one healthy seedling per pit. The seeds with overnight pre-soaking treatment and used for direct dibbling should be large and heavy whereas for plantation with cutting, the planting material should be 45 to 100 cm long with thickness of 3 to 4 cm and obtained as far as possible from base of the stem.

9.9.12. Transplanting : - The planting site is prepared by digging small pits of 30 x 30 x 30 cm^3 at specified spacing indicated above. Pits are filled with soil and 400 gm compost or organic manure per pit. Basal dressing of fertilizers may be applied @ 20 gm urea + 120 gm single super phosphate whereas Muriate of Potash 16 gm should be mixed with soil at the time of filling pits and polypot seedlings planted on the onset of monsoon.

9.9.13. Fertilizer Application : - Apart from organic manure mixture, fertilizers containing N, P, and K should be applied. For direct planting, 20 gm urea + 120 gm single super phosphate and 16 gm Muriate of Potash should be applied near the planting hole and the fertilizers should be covered with soil. In case of transplanted crop, the above mentioned fertilizers should be applied at the time of transplanting or immediately after the plants establish in the pits. The remaining dose of urea should be applied in two splits @ 10 gm per plant. The first split should be applied one month after basal dressing and second split after two months of basal dressing. This application would supply NPK @ 46:48:24 per hectare. Jatropha oil cake can also be used for recycling of nutrients to maintain the productivity of the soil.

9.9.14. Yield : - The fruits of Jatropha are ripened in between December to April and can be easily plucked from the bushes providing casual employment for rural people. The planted crop starts seeding from the 2nd year itself if raised with cuttings whereas transplanted or seed dibbling gives seed production from 3rd year onwards. With good care, the annual average seed production is expected to be more in irrigated crop than rainfed. The out turn is shown in the table given below.

Table No. 313

Expected yield for Jatropha

Sl. No.	Plants/ ha	Year after planting	Expected yield in kg per ha	
			Rain fed	Irrigated
1	2500	1st	x	250
2	-do -	2nd	250	1000
3	-do -	3rd	1000	2500
4	-do -	4th	2000	5000
5	-do -	5th	3000	8000
6	-do -	6th and onwards	4000	12000

Sources - ICFRE series on Jatropha curcas.

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9.10. Calendar of Operations of Major NTFPs:

9.10.1. Collection cycle will be the collection period for different NTFP items from 1st October to 30th September of following year. There may be local variations in period of ripening due to terrain, aspect and weather conditions. However, the period of collection of some of the important NTFP is given in the table below.

Table No. 314

Period of collection of NTFPs

Sl No.	Name of NTFP	Collection Time	Sl. No.	Name of NTFP	Collection Time
01	Kendu Leaf	March - June	24	Semal Cotton	March -May
02	Sal Seed	May -June	25	Honey -wax	January
03	Siali leaf	October -May	26	Honey	January
04	Siali fibre	October-May	27	Khajuri leaves	October-May
05	Harida	November-January	28	Sabai grass	October-April
06	Bahada	January-April	29	Sunari	September-April
07	Cashewnut	April-May	30	Tentuli	March-April
08	Amla	March-April	31	Neem seed	June-July
09	Char seed	April-May	32	Genduli gum	October-May
10	Jatropha seed	Dec-April	33	Kurei fruit	Dec-Feb
11	Bel	May-June	34	Hill broom	March-June
12	Marking nut	December-March	35	Khair	October-May
13	Thatch grass	January	36	Sal resin	January-April
14	Kochila seed	Dec-Jan	37	Broom grass	October-May
15	Mahua flower	April- May	38	Siali fibre	October-May
16	Mahua seed	May - June	39	Lemon grass	March-April
17	Dhakti flower	January to April	40	Kamal gundi	February-March
18	Karanja seed	Dec-Jan	41	Banatulsi seeds	Nov -March
19	Kusum seed	May - June	42	Lodha bark	October-May
20	Kendu fruits	April to May	43	Dantari bark	October -May
21	Arrow root	Dec-Jan	44	Phenphena bark	October-May
22	Gum	Sept-June	45	Mango Kernel	Jun-July
23	Mango	May-June	46	Lac	Jan- Feb/ JuneJul

Sources - Field observations, surveys and available literature.

9.11. Miscellaneous Regulation:

9.11.1. In areas of the divisions where artificial regeneration through block plantation or gap plantation is to be taken preference in species selection should be given to species which yield NTFPs or medicines. Similarly in the Rehabilitation Working Circle areas, care should be taken during cleaning operations to retain the miscellaneous species, which yield important NTFPs.

9.11.2. 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, wherever, such channels exist, they are too long that the primary collector finds it difficult to fetch good returns

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for the NTFPs collected by him. Most 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.

9.11.3. 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 to ensure that collection, exploitation and utilization of desired NTFP should be regulated in such a manner that composition, regeneration and sustenance of forests are not adversely affected. Simultaneously, 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 or desirable.

9.11.4. The divisional staff must have a clear perception of threats from various faulty or 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.

9.11.5. The divisional staff should prevent the purchase of the NTFPs at lower price by middlemen and ensure collection and 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.

9.11.6. The DFO shall maintain a proper account of different NTFP items, their quantities collected, areas and 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

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the Forests and the primary collectors shall also be studied and annual reports submitted suggesting any changes if required.

9.11.7. 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.

9.11.8. Grazing : - The area shall be closed to grazing for the collection period of major NTFPs. Practically it is not easy to maintain this restriction inside the forest. The concerned Range Officer will issue the notice with a direction not to enter the herd into the forest. The remaining area is open to grazing subject to the provision of the Orissa forest (Grazing of the cattle) Rules 1980.

9.11.9. Fire protection : - All forest area shall be rigidly protected from forest fire. As per previous record all the forest area were affected by fire in every year. Protection of fire in the working area can be practically possible by watching it from the month of February to June in every year. Provision of watcher has been prescribed and the annual allotment required for fire protection is given in a separate chapter.

9.12. The NTFP inventorisation survey :

9.12.1. The NTFP inventorisation survey of Deogarh, Reamal, Barkote, Pallahara and Khamar range is given below.

Table No. 315

NTFP Inventorisation of Pallahara & Barkote Range

Name of the Range	Forest Block	Area in Ha	Sampling intensity	No of different NTFPs found (Species wise)
Pallahara Range	Malyagiri R.F	6202.26	41 nos	Sal -1392 nos Kendu -99 nos Chara -124 nos Mohula -82 nos Harida -11 nos Bahada -18 nos Anantamula -82 nos Satabari -43 nos
	Old Paudi R.F	6898	13 nos	
	Makarchua R.F	1313	07 nos	
	Suida R.F	397.71	6 nos	
	Ranja DPF	221.697	02 nos	
	Jakapani DPF	291.43	01 no	
	Sarbeda DPF	277.02	03 nos	
	Bhaluhuli DPF	139	01 no	
	Timi DPF	422.658	02 nos	
	Tamkia DPF	513.54	01 no	
	Other KF		23 nos	
	TOTAL	16676.315	100 NOS	
arkote Range	Panguli R.F	2123.15	14 nos	Sal -120 nos Char -132 nos Mahul -91 nos Satabari -70 nos Kendu -50 nos
	Thianal R.F	831.87	02 nos	
	Badataila R.F	8023.89	22 nos	
	Mandasila R.F	2856.47	05 nos	
	PaudiR.F	8215.40	17 nos	

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	Banbira DPF	610.20	01 no	Sidha -01 nos Sunari -05 nos Jamu -05 nos Kusum -01nos Palas -05 nos Kurei -06 nos Bahada -01 nos Bhalia -01 nos
	Tusula DPF	1185.55	06 nos	
	Pradhanpat R.F	10386.19	19 nos	
	Kansar R.F	162.0	01 nos	
	Khulandikudar K.F	247.47	02 nos	
	Other KF		11 nos	
	TOTAL	34642.19	100 NOS	

Table No. 316

NTFP Inventorisation - Report Generation of Pallahara & Barkote Range

Name of the Range	Name of Species	Name of product	Total production In Qtl	Total consumption by collector	Total sold in Qtl
Pallahara	Mahua	Flower	2216	200	2016
		Seed	845	445	400
	Sal	Seed	988	88	900
		Leaf	248	00	248
		Resin	09	00	09
	Siali	Leaf	643	00	643
	Anantamula	Root	24.5	00	24.05
	Sarabari	Root	07	00	07
	Chara	Seed	09.5	04	05.5
	Harida	Fruit	02.5	00	02.5
	Bahada	Fruit	02.5	00	02.5
Barkote	Mahua	Flower	1350	05	1345
		Seed	26	26	00
	Sal	Seed	15	00	15
		Leaf	80	50	30
		Resin	01	0.25	0.75
	Siali	Leaf	300	00	300
		Fibre	02	0.5	01.5
	Amla	Fruit	01	0.5	0.5
	Harida	Seed	02	01	01
	Bahada	Seed	02	01	01
	Kendu	Leaf	100	00	100

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Table No. 317

NTFP Inventorisation - market study of Pallahara & Barkote Range

Name of Range	Name of product	Price per Unit (in Kg)	Name of local market
Pallahara	Mahua Flower	Rs.14.00	Pallahar, jamardihi, Cheliabeda,Raipal
	Mahua Seed	Rs.20.00	-do -
	Sal seed	Rs.12.00	-do
	Sal leaf	Rs.10.00	-do -
	Siali Leaf	Rs.12.00	-do
	Anantamula	Rs.12.00	Jamardihi, Cheliabeda,Raipal
	Satabari	Rs.40.00	-do -
	Sal resin	Rs.80.00	-do -
	Chara	Rs.60.00	-do -
	Harida	Rs.20.00	-do -
	Bahada	Rs.20.00	-do -
Barkot	Mahua flower	Rs.12.00	Kalla, Tainsira , Autal
	Sal Leaf	Rs.10.00	Kalla
	Siali Leaf	Rs.12.00	Dantaribahal, Ballam
	Satabari	Rs.40.00	Dantaribahal
	Char Seed	Rs.60.00	Kalla , Ballam
	Harida	Rs.20.00	Ballam, Kalla, Barkot
	Bahada	Rs.20.00	Ballam, Kalla, Dantaribahal
	Amla	Rs.40.00	Dantaribahal
	Sal resin	Rs.100.00	Ballam, Kalla, Dantaribahal , Thianal, Tainsira, Autol

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Table No. 318

NTFP MARKETING INVENTORY DATA OF KHAMAR RANGE, DEOGARH FOREST DIVISION

Total No of Forest Dependant village in the range	Total No of Forest Dependant House hold in the range	Total No of Forest Dependant Sample Village in the range	Total No of Forest Dependant Sample House hold in the range	Population in Sample Village in 2011 census	NTFP Specis Utilized By forest fringed Village	Part / Item of NTFP spices Utilized by the forest fringed Villages	No of NTFP collecting House hold in the Sample Village	Total Quantity of NTFP collected in Sample Village (In Qntl)	Total Quantity NTFP used for self consumption in the Sample Villages(in Qntl)	Total Quantity of NTFP sold at Primary market	Total Quantity of NTFP sold at Secondary market	Total Quantity of NTFP sold (In Qntl)	Unit Price (Per Qntl)
90	8860	90	1903	43715									
				Tree	Anla	Fruit		2.17	2.17	0	0	0	1000
					Bahada	Fruit		2.642	2.642	0	0	0	2500
					Chara	Seed		5.68	2.7	2.98	0	2.98	5000
					Chara	Fruit		20.34	20.34	0	0	0	1500
					Harida	Fruit		2.61	2.61	0	0	0	300
					jamu	Fruit		5.91	5.91	0	0	0	800
					Kendu	Fruit		68.18	68.18	0	0	0	500
					Kendu	Leaf		1229.45	0	1229	0	1229	3000
					kusuma	Fruit		2.17	2.17	0	0	0	700
					Mahula	Seed		2517.92	2433.4	84.5	0	84.5	2000
					Mahula	Flower		4250.75	49.7	4201	0	4201	1500
					Sal	Leaf		75.79	51.54	24.3	0	24.25	700
					Sal	Seed		547.9	33	515	0	514.9	650
					Sal	jhuna		0.06	0.06	0	0	0	6000
				Tree Total			0	8731.57	2674.44	6057	0	6057	
				Shrub / Herb	Agnyala	Root		0.09	0.09	0	0	0	700

					Akasbhindu	Root		0.32	0.32	0	0	0	700
					Baeda	Leaf		0.7	0.7	0	0	0	1000
					Bhadali	Leaf		0.6	0.6	0	0	0	500
					Bhain Limba	Leaf		0.17	0.17	0	0	0	1500
					Bhain Limba	Root		0.08	0.08	0	0	0	1500
					Bhainsha kuli	Fruit		0.1	0.1	0	0	0	1200
					Gharuda	Fruit		0.7	0.7	0	0	0	300
					Goti Khadika	Leaf		0.43	0.43	0	0	0	500
					Kamsikuli	Fruit		0.39	0.39	0	0	0	500
					Khajuri	Leaf		5.95	5.95	0	0	0	1500
					Khajuri	Fruit		1.6	1.6	0	0	0	1200
					Mamuri	Root		0.22	0.22	0	0	0	700
					Mushroom	Mushroom		35.44	32.64	2.8	0	2.8	4000
					Pani alu	Pani alu		0.17	0.17	0	0	0	2000
					Pinchha	Pinchha		2.45	2.45	0	0	0	1500
					Pitalu	pitalu		11.4	11.1	0.3	0	0.3	2000
					Satabari	Root		0.54	0.54	0	0	0	1000
					Siali	Leaf		63	0	63	0	63	1000
				Shrub Total			0	124.35	58.25	66.1	0	66.1	
			Grand Total				0	8855.92	2732.69	6123	0	6123	

Table No. 319

NTFP CATEGORY WISE USE PATTERN IN KHAMAR RANGE, DEOGARH FOREST DIVISION

NTFP Category	Quantity collected in Qtl.	Quantity used for Self consumption	Quantity sold in Qtl
Tree	8731.57	2674.44	6057.13
Shrub /Herb	124.35	58.25	66.1
Total	8855.92	2732.69	6123.23

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Table No. 320

NTFP MARKETING INVENTORY DATA OF REAMAL RANGE, DEOGARH FOREST DIVISION

Total No of Forest Depandant village in the range	Total No of Forest Depandant House hold in the range	Total No of Forest Depandant Sample Village in the range	Total No of Forest Depandant Sample House hold in the range	Population in Sample Village in 2011 sensus	NTFP Specis Utilized By forest fringed Village	Part / Item of NTFP spices Utilized by the forest fringed Villages	No of NTFP collecting House hold in the Sample Village	Total Quantity of NTFP collected in Sample Village (In Qntl)	Total Quantity NTFP used for self consumption in the Sample Villages(in Qntl)	Total Quantity of NTFP sold at Primery market	Total Quantity of NTFP sold at Secondary market	Total Quantity of NTFP sold (In Qntl)	Unit Price (Per Qntl)	Value of Self Consumed NTFP (in Rs)	Value Sold NTFP (In R.s)	Total Value of NTFP (In Rs.)
98	8750	98	1723	37222	Tree											
					Kendu	Leaf		3250	3250	0	97620	97620	30	97500.00	2928600.00	3026100.00
					Mahula	Flower		3067	764	2303	1470.5	3773.5	15	11460.00	56602.50	68062.50
					Mahula	Seed		917	563	354	128	482	20	11260.00	9640.00	20900.00
					Sal	Leaf		12100	3000	9100		9100	6.5	19500.00	59150.00	78650.00
					Sal	Seed		3828	230	3598	3589	7187	60	13800.00	431220.00	445020.00
					Siali	Leaf		3140	200	2940	2940	5880	10	2000.00	58800.00	60800.00
				Tree Total			0	26302.00	8007.00	18295	105747.5	124042.5		155520.00	3544012.50	3699532.50

Table No. 321

NTFP MARKETING INVENTORY DATA OF DEOGARH RANGE, DEOGARH FOREST DIVISION

Total No of Forest Depandant village in the range	Total No of Forest Depandant House hold in the range	Total No of Forest Depandant Sample Village in the range	Total No of Forest Depandant Sample House hold in the range	Population in Sample Village in 2011 sensus	NTFP Specis Utilized By forest fringed Village	Part / Item of NTFP spices Utilized by the forest fringed Villages	No of NTFP collecting House hold in the Sample Village	Total Quantity of NTFP collected in Sample Village (In Qntl)	Total Quantity NTFP used for self consumption in the Sample Villages(In Qntl)	Total Quantity of NTFP sold at Primery market	Total Quantity of NTFP sold at Secondary market	Total Quantity of NTFP sold (In Qntl)	Unit Price (Per Qntl)	Value of Self Consumed NTFP (In Rs)	Value Sold NTFP (In R.s)	Total Value of NTFP (In Rs.)
90	8860	90	1903	43715												
					Bahada	Fruit		4.5		4.5	0	4.5	2500	0.00	11250.00	11250.00
					Chara	Seed		0.6		0.6	0	0.6	5000	0.00	3000.00	3000.00
					Harida	Fruit		41.4		41.4	0	41.4	300	0.00	12420.00	12420.00
					Mahua	Seed		3		3	0	3	2000	0.00	6000.00	6000.00
					Mahua	Flower		2296	789	1497	0	1497	1500	1183500.00	2245500.00	3429000.00
					Bhuinneem	Leaf		258.7	258.7		0	0	1500	388050.00	0.00	388050.00
					Satabari	Root		1.35		1.35	0	1.35	1000	0.00	1350.00	1350.00
				Total				260.05	258.7	1547.85	0	1.35		388050.00	1350.00	389400.00

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9.12. Value addition:

9.12.1. The primary collectors are selling the collected NTFP to the businessman at a lesser rate. The selling rate of NTFP items can be increased by putting some additional finishing to the NTFP items. The details of additional finishing of each NTFP item is described below.

9.12.2. Kenduleaf : - The Kenduleaf pluckers are selling the leafs without any processing. They can be trained to process the Kenduleaf and sell the leafs at higher rate. They can also be trained to prepare the consumable product like BIDI and sold it as per the market rate. In this process the primary collector engaged themselves for a longer period and get maximum benefit from kenduleaf.

9.12.3. Siali leaf : - The siali leaf pluckers are selling the leafs to the businessman or shopkeeper after collecting the leafs from the forest. They can be trained to prepare the PLATE and CHAUTI from the siali leafs. It can be possible to supply plate making machine VSS / EDC. This procedure will gives maximum benefit to the primary collectors also the young mass will be engaged in the plate making machine and get their wages.

9.12.4. Tamarind : - The primary collector of tamarind are selling it after removal of the outer cover. They can be trained to remove the seeds of the tamarind. The seeds can be sold for the purpose of seedling. The tamarind product separated from seeds can be put into separate packet after mixing salt and chilli powder. The rate of unfinished tamarind per Kg Rs. 15/ - where as the rate of finished tamarind per Kilo is Rs. 45/ -. Therefore the value of tamarind per kilo will increase from Rs. 15/ - to Rs. 45/- with some extra work

9.12.5. Mahua flower : - The Mahua flower pluckers are selling the mahua flowers to the businessman at lesser rate. They can be trained to store and produce the edible product and sold it to the user at a higher rate. Necessary permission should have been given to the primary collectors or VSS to produce the edible product.

9.13. Marketing :

9.13.1. The marketing of the NTFP is not available in the village situated or adjoining to forest area. The scope for marketing of the NTFP products should be made for the primary collector. The communication and transport system should be created for the primary collectors. In this process collection of all NTFP product and their disposal will increased. The villagers will get maximum benefit from the NTFP. The pressure of illiciate felling will decrease. The young mass can be trained for the NTFP business

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9.14. Training for sustainable yield:

9.14.1. For better sustainable yield training should be given to the young mass or VSS. The training program for collection of the NTFP and other foreest product shall be prepared by the DFO and program will be approved by the RCCF. The young educated mass should be involved in this training as per the approved program. All technical instruction for collection of all forest produce should be given to them, so that production of forest produce in every year will remain approximately same during the Plan period.

9.15. Livelihood option creation :

9.15.1. Most of the people living inside and adjoining to forest area are depending on forest and its products. Communication system and marketing facilities are very poor. There is no any income generating sources. The value addition procedure of the NTFP items can be introduce to those villagers, so that they will earn more money from the same quantity of NTFP items by extra works. The living style of the local people can be changed by introducing training program. They should be motivated towards education, creation of valuable products and developmental works.

9.16. Market linkage :

9.16.1. The scope for selling NTFP products by the primary collector is very less due to market linkage. They are carrying the product for a longer distance non availability of market in their villages. Effort should be made for creation of market in their villages, so that the primary collector will sold the finished NTFP items to the businessman. Communication systems between small market to bigger market should be developed for better transportation of the finished NTFP items. Some of the existing market like Jamardihi, Cheliabeda, Raipal, Kalla, Tainsira, Autal, Dantaribahal, Ballam etc of the Deogarh Division are proposed for market linkage.

9.17. Strengthening of VSS & SSGs :

9.17.1. At present 447 VSS protecting 59370.7708 ha of forest land. Out of which 237 VSS are involved in NAP and OFSDP. The extend of treatment area is 20802.00 ha. Annual program shall be prepared by the DFO for balance VSS and SSG groups to strengthen them and remain active for the protection of the forest. It is proposed to allot Rs. 10000/- per year for each VSS for strengthening of the remaining VSS and SSGs. Training, meeting and small developmental works shall be carried out in all the VSS. DFO should ensure the permanent nursery in each VSS. Local species should be raised in permanent nursery either for plantation or for selling the seedling to the industry.

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CHAPTER- X

MISCELLANEOUS REGULATIONS

10.1. General Constitution of Regulation:

10.1.1. The forest area that are in various stages of degradation are included in this regulation. An area over 91823.3899 ha, which are not included in any working circle has been included in Miscellaneous Regulation. The regulation area extends over Revenue forest = 83554.9109, Unclassed forest over 6.179 ha, balance mutated area in favor of forest department = 2149.94 ha, Plantation = 5425.87 and Village forest over 686.490 ha. The balance area over 2149.94 ha mutated in favor of forest department should be notified at the earliest. This area is under continuous pressure for removal of metals, Murums, 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.

10.1.2. Block and Compartment: - The Range wise distribution of forest blocks, compartment and its area allotted to this Regulation is given in the table below.

Table No. 322

Range wise forest blocks and compartments allotted to MR

Range	Block	Status	Compartments No.	Area in ha
Pallahara	x	Revenue forest	x	16710.00
	x	VF	x	140.00
		Plantation	x	1086.87
		Area mutated	x	429.94
Khamar	x	Revenue forest	x	16545.00
	x	VF	x	135.00
		Plantation	x	1100.00
		Area mutated	x	420.00
Barkote	x	Revenue forest	x	16780.00
	x	VF	x	132.00
		Plantation	x	1150.00
		Area mutated	x	415.00
Deogarh	x	Revenue forest	x	16645.00
	x	VF	x	145.00
	x	Unclassed forest	x	6.179
		Plantation	x	1050.00
		Area mutated	x	475.00
Reamal	x	Revenue forest	x	16874.9109
	x	VF	x	134.49
		Plantation	x	1039.00
		Area mutated	x	410.00
			Total	91823.3899

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9.14. Training for sustainable yield:

9.14.1. For better sustainable yield training should be given to the young mass or VSS. The training program for collection of the NTFP and other forest product shall be prepared by the DFO and program will be approved by the RCCF. The young educated mass should be involved in this training as per the approved program. All technical instruction for collection of all forest produce should be given to them, so that production of forest produce in every year will remain approximately same during the Plan period.

9.15. Livelihood option creation :

9.15.1. Most of the people living inside and adjoining to forest area are depending on forest and its products. Communication system and marketing facilities are very poor. There is no any income generating sources. The value addition procedure of the NTFP items can be introduce to those villagers, so that they will earn more money from the same quantity of NTFP items by extra works. The living style of the local people can be changed by introducing training program. They should be motivated towards education, creation of valuable products and developmental works.

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CHAPTER- X

MISCELLANEOUS REGULATIONS

10.1. General Constitution of Regulation:

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	x	VF	x	132.00
		Plantation	x	1150.00
		Area mutated	x	415.00
Deogarh	x	Revenue forest	x	16645.00
	x	VF	x	145.00
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	x	VF	x	134.49
		Plantation	x	1039.00
		Area mutated	x	410.00
			Total	91823.3899

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10.2.General Character of Vegetation:

10.2.1. Composition: - It consists mostly of hardy species. The soil is highly eroded and susceptible to sheet and gully erosion. In some patches the topsoil has been washed away and transformed into hard morrum soil and rocky surface. The area is dominated by miscellaneous vegetation like Rohini, Karia, Aoinla, Jamu, Kurei, Dhaura, Dhatuki, Kanteikoli, Sal etc.

10.2.2. Distribution: - The area allotted to this Regulation is distributed in all Ranges, which comprises 38.47 % of the total managed area of the Working Plan. Sal occurs in pure form in plain and valley area, where as it is sporadically distributed in mixed forest in the hill portion, dominated by other miscellaneous species.

10.2.3. Density: - The crown density of the crops standing over the area varies from 01 % to 10 %. The density varies from > 05 % to 10 % in plain and valley area, where as it varies from 01 % to 05 % in hilly area. The variation of density is due to various climatic and edaphic factors as well as the fertility of the area. The distribution of area is as under.

Table No. 323

Canopy density wise area allotted to MR

Sl. No.	Canopy density classes	Area of the division in ha.	Area of MR in ha.
1	> 40 %	x	x
2	> 25 to 40%	x	x
3	>10 to 25%	x	x
4	> 05 % to 10 %	46656.5006	46656.5006
5	05 % and below	46091.5799	45166.8893
	Total		91823.3899

10.2.4. Growing Stock: - The crop standing over the area is open and consists mostly of inferior hardy species. The actual established trees in this Regulation have not been estimated in this revision. Also inventory has not been done in this area.

10.2.5. Status of Regeneration: - The area included in Miscellaneous Regulation does not have sufficient stock. The renewal of forest crop purely depends on nature. The young shoots are affected due to frequent fires.

10.2.6. Climber Menace: - At present approximately 20 % of existing trees are affected by climber. Climber is affecting the growth of trees and quality of timber. Some time trees are either uprooted or died 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 its menace.

10.2.7. 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.

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Weeds tend to interfere with the growth of individuals of favoured species. Annual weeds die during the month of February. Dry weeds invite forest fire, which causes damage to seedling.

10.2.8. 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.

10.3. Special Objectives of Regulation:

10.3.1. The special objectives of Miscellaneous Regulation have been given in the table below.

Table No. 324

Objectives of management of MR area

Sl No.	Special objectives of management
1	To regenerate the degraded forest by appropriate silvicultural operation and protection measure for the principal species to achieve quick apical growth with active participation of the people.
2	To restock the barren area by artificial regeneration.
3	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.
4	To protect the area and minimize its further degradation.
5	To supply the firewood, poles and timber in a systematic manner to the local peoples and there by discouraging illicit felling.
6	To remove the miscellaneous thorny bushes to favour the growth of principal and secondary species.
7	To encourage natural regeneration through fire protection and closure from grazing by involving local communities.
8	To create favourable condition for the habitat and multiplication of the Wild Life.
9	To stop illegal removal to metal.

10.3.2. Choice of 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.

Table No. 325

Choice of species

Principal species	Secondary species	Guest species	Inferior species
Sal, Bija, Ashan, Sisoo, Bandhan, Haldu, Gambhari, and Kasi	Dhaura, Kendu, Jamu, Senha, Semuli, Khair, Moi, Tentera, Siris, bamboo and Mundi	Mango, Bel, Kusum, Karanja, Harida, Bahada, Tamarind, Mahula, Kochila, Sunari, Genduli and Nimba	All other species

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10.4. Artificial Regeneration:

10.4.1. The renewal of a forest crop by showing, planting or other artificial methods is important in the area included in this Regulation. There are gaps noticed in all most all forest area allotted to this Regulation. It is advised to adopt artificial regeneration in the permanent gaps.

10.4.2. Nursery: - Seedlings will be raised in temporary, permanent or central nurseries. Care shall be taken to raise quality seedlings from certified seeds, superior clonal propagules or from known seed orchards and stands. As far as possible seeds, seedling stock or propagules will be obtained from or through the Silviculturist, Rayagada or Bhubaneswar.

10.4.3. Site Map: - A site map on 1:50,000 scale toposheet or in an appropriately large scale showing the details of area, direction of slope, nature of erosion, biotic interference, site specific species, aspiration of the people and other factors shall be prepared by the DFO. Species suitable for the site shall be identified in accordance with the objectives of management.

10.4.4. Treatment Map: - 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 preceding to the year of plantation.

10.4.5. 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 during planting process.

10.4.6. Plantation Journal: - A separate plantation journal shall be maintained at Range level. No separate format is given to maintain the journal. 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.

10.5. Petty Felling:

10.5.1. Departmental Demand: - There are many buildings existing in this division. All most all buildings need minor repair works during the Plan period. Considering the condition of the existing building, it is assed that minimum of 0.5 cumt of timber will be required in repair works for each building during the Plan period. Seized timber will be used for Departmental buildings works either repair or newly constructed. Petty felling is not prescribed to meet the demand of timber for Departmental use.

10.5.2. Kendu Leaf Demand: - Kendu Leaf wing needs poles and brushwood for repair works of existing Phadies of Deogarh and Angul kendu leaf Division with in the jurisdiction of this division. An average of 08 poles per Phady will be supplied for repair works depending upon the availability of seized or cleaning materials.

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Maximum 1000 poles per year will be supplied for repair works of Phadies in both the kendu leaf division. In addition to pole, kendu leaf Department needs brushwood for Phady repair. It is prescribed to supply 02 carts load of brushwood to each Phady per year. Poles and brushwood shall be supplied on demand to the Kendu Leaf wings from the cleaning materials of any Departmental works.

10.5.3. The DFO (KL), Deogarh and Angul shall plant first growing species around each phady to meet the annual requirement of poles and brushwood for phadies repair. The DFO (KL) shall ensure direct showing of seeds of indigenous species in mounds around each Phady, so that financial allocation will not create bar for raising trees. The DFO, Deogarh is advised to intimate the Kendu Leaf Division about the plantation programme prescribed in this Revised Working Plan. Petty felling is not prescribed to meet the demand of poles and brushwood for repair works of Phadies.

10.5.4. Research Needs: - At present there is no any research plot exist in this division. The present scenarios of forest management needs research plot in this belt of natural forest, which is extended towards the high forest zone of Bonai, Bamra and Keonjhar Division. An area extended up to 100.00 ha in Malyagiri RF is suitable for research plot. The area is adjoining to NH-06 and situated towards northern side of Pallahara at a distance of 08.00 km. The research will be based on natural species. Petty felling is not prescribed for formation of research plot.

10.5.5. Forest Road Improvement: - At present 20 number of forest roads covering a distance of 151.25 km are exist in this division (15 number in Deogarh District covering distance 107.25 km and 5 number in Angul District covering a distance of 44.00 km). Improvement of the existing forest road shall be taken up depending on the found allotted. Widening and extension of the forest road is not prescribed. Petty felling for executing any works in the existing forest roads is not prescribed.

10.5.6. Special Grant: - In exceptional circumstances, this division may receive special grant for development of infrastructures, creation of new forest roads etc beyond the financial forecast during the Plan period. In any circumstances, while executing the works for utilization of special fund, petty felling in the area of forest status is not prescribed.

10.6. Deviation:

10.6.1. All prescriptions prescribed in different Working Circle shall be strictly followed with in time, so that any deviation with reference to harvesting of the forest produce will not arise. Any harvesting of the forest produce out of the prescription is not prescribed. But due to unavoidable circumstances if it is necessary to harvest the forest produces out of the prescriptions then the Head of the Forest Department shall order for such harvest based on sufficient reasons.

10.6.2. Harvesting of the forest produces in advance in any coupes of any Working Circle is not prescribed. The Divisional Forest Officer or the Assistant Conservator of Forest shall ensure the completion of all coupes work with the prescribed time. In an unavoidable circumstance if working of any coupe could not be

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started or completed with the prescribed time then it will be treated as deviation. Harvesting in all such deviated coupes is not prescribed. The check shall be through control form and deviation statement.

10.6.3. Control Form: - It has been prescribed to maintain 04 numbers of control forms during each Working Plan year, which start from 1st July to 30th June. The pattern of forms has been given in a separate Chapter.

10.6.4. Deviation: - Any works done in the managed area of the Working Plan with in the time period, which alter the basis of management laid down in this Plan is treated as deviation. All deviation, which permanently alter the basis of management will require prior sanction of the PCCF. All deviation which do not permanently alter the basis of management and with the necessity of which the Conservator of Forest, Working Plan Circle agrees, he may be approved and sanctioned on behalf of PCCF. Incase where there is difference of opinion between the Conservator of Forest, Working Plan and Territorial then the former will refer all such deviation to the PCCF for instruction. The PCCF / CFWP, as the case may be, will countersign the deviation statements.

10.6.5. The PCCF, before sanctioning the major deviation, will necessarily take prior approval of the Regional CCF of the Ministry of Environment and Forest. The natures of the major deviations are given in the table below.

Table No. 326

Deviations need prior approval of Regional CCF

Sl No.	Types of deviations need prior approval of Regional CCF
1	Change in Silvicultural Systems
2	Clear felling of natural forest
3	Formation of new Felling Series
4	Large scale felling due to natural calamities, which cannot be adjusted against future yield.

10.6.6. Deviation Statement: - The Divisional Forest Officer will prepare a yearly deviation statement in three copies and forward it to PCCF through concerned Conservator of Forest. No explanatory remark are required on this form, these should be given in the forwarding letter. One copy of the deviation statement will be returned to the Divisional Forest Officer and other copy to Conservator of Forest after the deviation has been sanctioned by the PCCF. The format of the deviation statement is given below.

Table No. 327

Format of the deviation statement

Sl. No.	Control book No.		Reference of W.P		Deviation	
	Form No.	Page No.	Paragraph No.	Nature of prescription	Nature of deviation	Order No. and date

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10.7. Right and Concessions:

10.7.1. The following rights and concession have been granted to the public in the challenge contest of wide gap between demand and supply of forest materials.

10.7.2. Fuel wood: - At present retail sale depot for fuel wood is exist at Deogarh, Pallahara, Badkudar and Tileibani. It is proposed to have sale depot in each Range to meet the demand of local people. The local people of this area may not be able to pay the rate as fixed by OFDC ltd for firewood. The OFDC ltd will supply fuel wood at a minimum rate. These rates are inclusive of royalty. The consequent loss will be recouped from out of the sales in other forest produces. One bullock cartload will be equivalent to 05 Quintals and one buffalo cart load about 7.5 Quintal of fuel wood.

10.7.3. Matured Eucalyptus, Acacia and other fuel wood plantations, which have reached harvestable age and are fit for exploitation should be worked according to coupe system as per approved Working Plan. Social forestry plantations can be put to harvest and the fuel wood there from will be available to the concerned villages participating in the scheme, thereby lessening the burden on natural forest.

10.7.4. Bamboos: - In the existing depot at Badkudar and Tileibani, the Orissa Forest Development Corporation Limited will sale salia bamboo to the local people as per the prescribed rate. This rate is inclusive of the royalty applicable to the district. Each tenant will be supplied 50 bamboos per annum 'on first come first serve' basis subject to availability.

10.7.5. Fire Accident: - In case of fire accidents forest materials namely, bamboo and timber will be supplied by the Orissa Forest Development Corporation Ltd. at the cost inclusive of transportation charge, on requisition from the Tahasildar as per prevailing rules.

10.7.6. Timber: - The house building materials will be supplied from the Orissa Forest Development Corporation depots at rates fixed from time to time. The Orissa Forest Development Corporation Ltd at their respective depots including coupe depots will supply Forest materials for agricultural implements.

10.7.7. All the above supply / sales will be on first come first serve basis subject to availability of forest materials. Whenever necessary, Corporation will keep coal, coke and briquettes in the depots as supplementary reserve for sale to local people. Orissa Forest Development Corporation Ltd will not sell all the timbers in round logs by auction. A part of it will be sold from the Corporation depots to the local people for their bonafide use.

10.7.8. The domestic requirements of fuel wood, timber and bamboos by the local people will be considered first. Supply of such forest produce to industrial units will however be considered only in case of surplus availability. The tenants may collect edible roots, fruits, leaves, and creepers for their personal consumption without permission and free of charges.

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10.7.9. The concessions granted are an obligation on the part of tenants to protect the forests and assist the forest staff in different developmental works on payment of wages to enrich the degraded forests. The Divisional Forest Officer may cancel such right and concessions for an indefinite period against an individual or group of tenants, when noticed failure to fill their obligation. They are permitted to graze their domestic animals in the unrestricted area on payment of prescribed rates.

10.8. Usufructuary Benefits to Vana Samrakshana Samiti:

10.8.1. The Vana Samrakshana Samiti will enjoy usufructuary benefits provided it discharges its duties and responsibilities as laid down in the Scheme. Further duties and responsibilities in the task of regeneration and protection of the forests may also be cast on the Samiti / Committee from time to time. The executive committee 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.

10.8.2. Usufruct like leaves, fodder, grasses, thatch grasses, broom grasses, thorny fencing materials, brush wood and fallen lops and tops and twigs used as fuel - wood shall be available to the members in free of cost. Other usufructs like leased out minor forest produce, kendu leaves etc. 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 yield in shape of small wood, poles, fire wood etc. as may be obtained in silvicultural operations will be equitable distributed among the members by the executive committee.

10.8.3. Timber and poles as may be obtained from a majot harvest or final felling shall be shared between the Forest Department and the Vana Samrakshana 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 in cash among the members.

10.9. Research Plot:

10.9.1. Experimental Plot: - There is one preservation plot extended over an area of 04.00 ha near Khuludihi in Malyagiri RF of compartment No.12 & 13 existing in this division. The name of spices is Nageswar (Messua ferrua of family Guttiferaceae). The accurate relationship between height and diameter with respect to time period of principal species cannot be prepared. Systematic study on growth in different site quality of any species has not so far been made in this area. The most predominant species sporadically distributed in this area of revision are Sal, Bija, Asan, Kurum, Dhaura and Mai. In absence of any statistical data for the area of this revision, the following Indian forest records for sal and other species can be referred to, which has been given in the table below.

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Table No. 328			
List of Indian forest records for sal			
Sl No.	Name of the book	Name of the author	Topic
1	Indian forest record. (New series) Vol. 4 (a) No.4 19.3	A.L.Griffith and Baskhi Santh Ram	Yield and stand table for sal high forest
2	Indian forest records. Vol. XII, part IV, 1926	H.S.Haward	Yield table for cleared felled sal coppice.
3	Indian forest recods,Vol-X, part-VI, 1924	Howard	General volume table for sal
4	Bija standard and commercial volume table	S.N. Debraj, P.K. Bhattacharya, Tarlok Singh and D.S. Rawat	x
5	Indian forest records (New series) Vil-4A, No.5, 1947	Griffith and Santh Ram	Asan General standard and commercial volume table for Asan
6	General standard volume table for Haldu	Chatuvedi, Bhattacharya and Rawat	x
7	I.F.R. (New series) Silviculture 12 (7), 1973	Chaturvedi	General standard Volume Tables for Semul

10.9.2. Suggestion for Research Plot: - One plot covering 10.00 ha in Malyagiri RF is suitable for research plot. The plot shall be demarcated for research purposes. One plot covering an area of 01.00 ha of land keeping the sample point as center in each forest block given below has been selected as research plot. The proposed area are excluded from all operation prescribed in this Revised Working Plan. All the plots are under the complete control of Silviculturist for research purpose. The plots selected for research need is given in the table below.

Table No. 329			
Suggestion for Research Plot			
Sl. No.	Identification of the plot	Extent of area in ha.	Name of the forest block
1	Compartment - 7	10.00	Malyagiri
2	Compartment - 26	01.00	Pradhanpat
3	Compartment - 30	01.00	Prabhasuni
4	Compartment - 8	01.00	Khajuria
5	Compartment - 3	01.00	Gogua
6	Compartment - 2	01.00	Mandasila
7	Compartment - 9	01.00	Badtaila
8	Compartment - 3	01.00	Mankarchua

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10.10. Roads, Paths, Bridges and Buildings:

10.10.1. Road: - Creation of new forest roads is not prescribed. The existing 20 number of forest Road both in Deogarh and Angul District over a lead of 151.25 km can be improved subject to allotment. All forest roads shall be closed to traffic for one day (24 hours) once a year.

10.10.2. At present 20 numbers of forest roads over a distance of 151.25 km exist in this division. The list of forest road is given in the table below.

Table No. 330

List of forest road

Sl. No.	Name of forest road	Name of range	Name of district	Length in kms
1	Pathar Garh- Kailash	Deogarh	Deogarh	4.00
2	Kansar - Hiran	Deogarh	Deogarh	9.00
3	Suguda - Gudiapali	Deogarh/ Reamal	Deogarh	13.00
4	Badbahal - Laimura	Deogarh	Deogarh	4.00
5	Jharpur - Laimura	Deogarh	Deogarh	4.00
6	Kholdihi - Goilo	Deogarh	Deogarh	4.00
7	Kailash Goilo	Deogarh	Deogarh	3.00
8	Khairpali - Palsama	Reamal	Deogarh	3.00
9	Chhuriabahal - Tusula	Barkote	Deogarh	19.00
10	Thianal - Autal	Barkote	Deogarh	17.00
11	Bamparada - Kadalidihi	Barkote	Deogarh	2.25
12	Kadalidihi - Jalisuan	Barkote	Deogarh	7.00
13	Tusula - Parposh	Barkote	Deogarh	12.00
14	Daminta - Pacheripani	Barkote	Deogarh	3.50
15	Bamparada - Netrabahal	Barkote	Deogarh	2.50
16	Jamardihi - Naigira	Pallahara	Angul	13.50
17	Charigachia - Kurmula -Turaghati	Khamar	Angul	5.00
18	Bankdhar - jamardihi	Pallahara	Angul	9.00
19	Kuchiabeda - Raipal	Khamar	Angul	15.00
20	Dimiria - Ranja	Pallahara	Angul	1.50
			Total	151.25

Sources - DFO, Deogarh.

10.10.3. Extraction Path: - Construction of new extraction path has not been prescribed during this Plan period. However the working agent will improve the existing extraction path at the time of extraction of timber and bamboo from the annual coup if necessary.

10.10.4. Bridges: - In all existing forest road bridges have not been constructed. It is proposed to construct small bridges in the forest roads where ever necessary. Communication system by forest road will be improved during rainy season. All developmental works in the forests block or in the adjoining forest area

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cannot be done before properly inspected as per prescription of this Plan. It is necessary to construct a bridge in the forest road across all nala.

10.10.5. Causeway and Culvert: - All forest roads are crossing many small nalas. It is necessary to construct causeway or culvert, which is applicable across the nala for better communication. The Divisional Forest Officer is advised to propose the construction of one causeway and one culvert along the forest road in every year during the Plan period. He will estimate the expenditure to be encored for construction of one causeway and one culvert and add the expenditure in the Annual Action Plan.

10.10.6. Building & well: - Many buildings have been constructed for Official and residential purpose since inception of this division. Some of the buildings had been collapsed, as proper maintenance could not be done in time. The present habitable buildings need maintenance but it could not be done due to sufficient allotment. The list of building & well are given in volume-II.

10.10.7. Rest House and Shed: - This division is very poor in camping facilities. There is no any rest house in this division. Some rest sheds have been constructed in the interior area of this division. The improvement of those rest sheds can attract tourist in future. The list of those camping spot will be given in the table below.

Table No. 331

List of Rest Shed

Sl. No.	Name of camping spot	Name of Range	No. of suits
1	Pallahara	Pallahara	01
2	Kansar	Deogarh	01

10.10.8. Administrative Unit: - In the reorganization of this division, 05 numbers of Ranges, 20 number of Sections and 90 number of Beats have been formed as the administrative units. Also there are 04 number of forest check gate functioning to check the forest produce on transit. Habitable Government quarters should be provided to all field staff specially the Forester and Forest Guard in their respective jurisdiction. Proposal for major repair works of existing Government quarters and construction of new quarters is given in the table below.

Table No. 332

Proposal for repair of quarters and new construction

Sl. No.	Name of Range	Name of places	Type of quarters	Work to be done
1	Deogarh	Tileibani	Forester	New Construction
2		Hadamunda	Forest Guard	New Construction
3		Kalamati	Forest Guard	New Construction
4		Tileibani	Forest Guard	New Construction
5		Tainsar	Forest Guard	New Construction
6		Pohalamora	Forest Guard	New Construction

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7		Dimiriposi	Forest Guard	New Construction
8	Reamal	Simloi	Forest Guard	New Construction
9		Reamal	Forest Guard	New Construction
10		Reamal	Forester	New Construction
11		Budido	Forest Guard	New Construction
12		Ranjana	Forest Guard	New Construction
13		Burbura	Forest Guard	New Construction
14	Barkote	Barkote	Forest Guard	New Construction
15		Saruali	Forest Guard	New Construction
16		Tusula	Forest Guard	New Construction
17		Goppur	Forest Guard	New Construction
18	Pallahara	Pallahara	Forester	New Construction
19		Jamarihi	Forester	New Construction
20		Ranja	Forest Guard	New Construction
21		Nagira	Forest Guard	New Construction
22		Raipal	Forest Guard	New Construction
23		Saida	Forest Guard	New Construction
24	Khamar	Jambua	Forest Guard	New Construction
25		Burbura	Forest Guard	New Construction
26		Tambur	Forest Guard	New Construction
27		Barkotia	Forest Guard	Major Repair

Sources: - DFO, Deogarh.

10.11. Forest Blocks:

10.11.1. Reserve Forest: - At present 30 number of Reserve Forest are within the geographical jurisdiction of Deogarh Division. But for verification of boundary line the distance between two conjugative pillars and their bearing is not available. The list of all Reserve Forest blocks is given in the table below.

Table No. 333

List of Reserve Forest

Sl. No.	Name of block	Sl. No.	Name of block	Sl. No.	Name of block
1	Pradhanpat	11	Malyagri	21	Biripal
2	Kansar (P)	12	Nizgarh (A)	22	Chargochia
3	Pravasuni (P)	13	Nizgarh (B)	23	Danda
4	Rambhadevi (P)	14	Old Pauri	24	Makarchua
5	Panguli	15	New Pauri	25	Kuladera
6	Thinnal	16	Tamkia	26	Rengalmunda
7	Mandasila	17	Saida	27	Kunjam
8	Pauri	18	Gurusulei	28	Jambua
9	Badtaila	19	Kansar (A)	29	Chungmatia RF
10	Gagua	20	Kansar (B)	30	Khajuria

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10.11.2. Proposed Reserve Forest: - There are 41 number of Proposed Reserve Forest exist in Deogarh Division. All the blocks have been notified under section - 4 of Orissa Forest Act - 1972. The Divisional Forest Officer shall pursue prompt action for its next notification during the Plan period. Field data of all blocks are available. The list of PRF is given in the table below.

Table No. 334

List of Proposed Reserve Forest

Sl. No.	Name of block	Sl. No.	Name of block	Sl. No.	Name of block
1	Jhadwswar PRF	15	Talabahali	29	Sanda
2	Hadamunda	16	Kakharua	30	Bankhol
3	Rajamunda	17	Kalamjuangsahi	31	Badasada
4	Kalkath	18	Kardapal	32	Nuagaon
5	Tirib	19	Ranja (I& II)	33	Injidi
6	Tarang	20	Atolanka	34	Tamkia
7	Kankrkhoh	21	Julunda-Jankpani	35	Bangalimunda
8	Kundheigola	22	Sarbeda	36	Chilantikhol
9	Ghodapaka	23	Timi	37	Kandarpa-lamdura
10	Naikul	24	Jharakhaman	38	Ludhar-Deopani
11	Banbira	25	Priyambadapur	39	Salohi-Loimura
12	Kulundikudar	26	Rangiapal	40	Sargidihi
13	Tusula	27	Bhaluhuli	41	Telikusum
14	Kaunsibahal	28	Bhulka (Bhulkaill)	42	Balibahal

10.11.3. Protected Forest: - There are 01 number of Protected Forest exists in Deogarh Division. The list of PF is given in the table below.

Table No. 335

List of Protected Forest

Sl. No.	Name of block
1.	Balibahal PF

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CAPTER-XI

GENERAL FINANCIAL FORECAST AND FINANCIAL PLAN OF OPERATION

11.1. Cost of the Plan:

11.1.1. The Divisional Forest Officer, Deogarh supplied the required information for preparation of First Preliminary Working Plan Report to Regional Chief Conservator of Forest, Rourkela Circle. The First Preliminary Working Plan Report has been prepared by Regional Chief Conservator of Forest, Rourkela Circle and submitted to Principal Chief Conservator of Forest, Odisha, Bhubaneswar on dated 11.01.2012. The 1st PWPR was approved and communicated to Working Plans Officer, Keonjhar vide memo No.9537 (4) dt.08.07.2013 of Principal Chief Conservator of Forest, Odisha with a direction to prepare and submit the Second Preliminary Working Plan Report on dt.31.08.2013. The 2nd PWPR has been submitted vide memo No.205 dt.24.06.2014. An amount of Rs. 4051000.00 has been spent for preparation of revised working plan.

11.1.2. The actual expenditure incurred for preparation of revised Working Plan of Deogarh Division is given in the table below.

Table No. 336

Expenditure incurred for preparation of revised Working Plan

Sl. No.	Items of work	Expenditure incurred in Rs.
1	First Preliminary Working Plan Report	1000.00
2	Second Preliminary Working Plan Report	1570000.00
3	Final Revision of the Plan	2480000.00
	Total	4051000.00

11.2. Expected Revenue:

11.2.1. There will be a step rise in the rate of forest produce within the Plan period of 20 years (1995-96 to 2014-15). The year wise expected revenue in different items of forest produce and other sources with in the Plan period for Deogarh division is calculated and displayed in the table below.

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Table No. 337							
Expected revenue during the Plan period							
Year	Expected revenue of different items in Rs Lakh						
	Timber @ Rs 1800 per unit	Bamboo @ Rs 2300	NTFP	Kendu leaf	House rent	Fine	Total
2015-16	158.62	4.42	23.42	259.73	1	10	457.19
2016-17	145.24	4.42	23.42	259.73	1	10	443.81
2017-18	162.47	4.42	23.42	259.73	1	10	461.04
2018-19	172.44	4.42	23.42	259.73	1	10	471.01
2019-20	164.65	4.42	23.42	259.73	1	10	463.22
2020-21	148.41	4.42	23.42	259.73	1	10	446.98
2021-22	146.92	4.42	23.42	259.73	1	10	445.49
2022-23	144.72	4.42	23.42	259.73	1	10	443.29
2023-24	144.59	4.42	23.42	259.73	1	10	443.16
2024-25	147.06	4.56	23.42	259.73	1	10	445.77
Total	1535.12	44.34	234.2	2597.3	10	100	4520.96
Sources - WPO, Keonjhar.							

11.3. Estimated Expenditure:

11.3.1. Infrastructure and Establishment : - Several prescriptions have been prescribed to improve the present condition of the forest crop of Deogarh Division. The revenue shall be anticipated only after implementation of proper silvicultural operation. The expenditure to be incurred during the Plan period from 2015-16 to 2024-25 for infrastructure and establishment is given in the table below.

Table No. 338							
Estimation for establishment, infrastructures etc in Rs. Lakh							
Year	Establi-shment	Building	Telephone	VHF	Central nursery	Traveling expense	Total
2015-16	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2016-17	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2017-18	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2018-19	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2019-20	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2020-21	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2021-22	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2022-23	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2023-24	288.00	4.00	1.00	1.00	5.00	2.00	301.00
2024-25	288.00	4.00	1.00	1.00	5.00	2.00	301.00
Total	2880.00	40.00	10.00	10.00	50.00	20.00	3010.00

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11.3.2. Possible Sources of Funding : - The estimated expenditure to be spent during the Plan period is depend on the budget provision. The possible sources of funding during the Plan period taking cognizance of present system of Five Year Plan is given in the table below.

Table No. 339

Possible sources of funding in Five Year Plan

Budget head	Sources of funding	Amount to be spent in Rs. Lakh		
		2012-13 to 2016-17	2017-18 to 2021-22	202-23 to 2026-27
Plan & Non Plan	PCCF(WL)	500.00	550.00	600.00
Plan & Non plan	PCCF	200.00	225.00	275.00
Total		700.00	775.00	875.00

11.4. Chapter Wise Estimation:

11.4.1. Selection Working Circle : - The total notified area under this Working Circle is 94593.895 ha. The total trees to be marked for felling are 85284 numbers during the Plan period. Therefore 8528 numbers of trees will be marked for felling per year. The cost norm per hector to be followed in Selection Working Circle is as under.

Table No. 340

Expenditure for coupe works per ha.

Sl. No.	Item of work	Mandays	Cost per Mandays	Total in Rs.
1	Demarcation of the coupe	0.1	150.00	15.00
2	Marking of coupe	0.2	150.00	30.00
3	Cleaning of the coupe	10.0	150.00	1500.00
4	Fire protection & grazing	3.3	150.00	495.00
	Total	13.6	150.00	2040.00

11.4.2. The expenditure to be incurred from 2015-16 to 2024-25 in different items of operation as per prescriptions can be increased basing on the labour rate. However the year wise estimated cost for implementation of the prescription is given as under.

Table No. 341

Year wise estimated cost for S.W.C area in Rs. lakh

Year	Boundary Maintenance @ 20 M.D. / k.m.	Soil Conservation work @ Rs. 800/- (0.008 Lakh) / ha.	Total in Rs. Lakh
2015-16	4.19	76.84	81.03
2016-17	4.19	75.11	79.3
2017-18	4.19	75.79	79.98
2018-19	4.19	78.27	82.46
2019-20	4.19	75.98	80.17

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2020-21	4.19	75.58	79.77
2021-22	4.19	75.07	79.26
2022-23	4.19	74.37	78.56
2023-24	4.19	76.62	80.81
2024-25	4.19	73.11	77.3
Total	41.90	756.74	798.64

11.4.3. Rehabilitation Working Circle: - The total Notified area under this Working Circle is 9184.645 ha. Block plantation has not been prescribed due to non-availability of blank area in patches over an extent of 10.00 hectors or more. Only gape plantation has been prescribed for rehabilitating the degraded forest. The norm for gape plantation per hector is given in the table below.

Table No. 342

Cost Norm for Assisted Natural Regeneration (ANR) (One year old Seedling)/ ha.

Sl. No.	Name of Activities	Man-days	Labour cost @ Rs. 150/-	Material cost in Rs.	Total cost in Rs.
	0 year				
1	Survey and demarcation	2	300	0	300
2	Site preparation	2	300	0	300
3	Cutting of high stumps	3	450	0	450
4	Alignment and staking	1	150	0	150
5	Pitting (30 cm. cube)	8	1200	0	1200
6	Cost of raising 300 seedling (Part)	13.86	1200	879	2079
	Total	29.86	3600	879	4479
	1st year/Planting year				
7	Cost of raising 300 seedling (Balance)	5	400	350	750
8	Carriage of seedling to site, planting including causality replacement	5	750	0	750
9	1st weeding	2	300	0	300
10	2nd weeding	2	300	0	300
11	Soil working	2	300	0	300
12	Manuring / insecticide application	1	150	0	150
13	Fire line tracing & Inspection path	2	300	0	300
14	Cost of insecticides for plantation	3	0	450	450
15	Cost of chemical fertilizer for plantation 12 kg. @ Rs.35/-	6	0	900	900
16	Silvicultural operation involving clearance of weeds & cutting of climbers, singling of shoots on each stool etc.	15	2250	0	2250
17	Soil conservation	12	1800	0	1800
18	Watch and ward	5	750	0	750
19	Contingencies	3	0	0	450

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20	Entry point activity (15% of total cost)	14	0	0	2100
	Total	77	7,300.00	1700	11,550.00
	2nd year Maintenance				
21	Casualty replacement	2	300	0	300
22	Weeding	2	300	0	300
23	Soil working & manuring	2	300	0	300
24	Fire line tracing	1	150	0	150
25	Cost of fertilizer	4	0	600	600
26	Soil conservation	6	900	0	900
27	Watch and ward (whole year)	8	1200	0	1200
28	Contingencies	2	0	0	300
29	Entry point activity (15% of total cost)	4	0	0	600
	Total	31	3150	600	4650
	3rd year Maintenance				
30	Weeding and pruning	2	300	0	300
31	Soil working	2	300	0	300
32	Fire line tracing	1	150	0	150
33	Soil conservation	6	900	0	900
34	Watch and ward	6	900	0	900
35	Contingencies	2	0	0	300
36	Entry point activity (15% of total cost)	3.14	471	0	471
	Total	22.14	3021	0	3321
	Grand total	160	17071.00	3179.00	24000.00
N:B- Prepared on the basing of man days in the approved cost norm of Govt. communicated vide F&E Department letter No.20913/F&E dated 18.12.2002 material cost has been converted into man days and enhanced as per the current wage rate.					

Table No. 343

Cost norm Abstract of Assisted Natural Regeneration per hactor.

Year	Labour cost	Material cost	EPA + Contingency	Total (Rs.)
0 th year	3600.00	879.00	0.00	4479.00
1st year	7300.00	1700.00	2550.00	11550.00
2nd year	3150.00	600.00	900.00	4650.00
3rd year	3021.00	0.00	300.00	3321.00
Total	17071.00	3179.00	3750.00	24000.00

11.4.4. The extent of annual area to be worked out is demarcated on the topo sheet. The year wise total estimated cost of treatment is given in the table below.

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Table No. 344						
Estimation for ANR plantation during the plan period in Rs Lakh						
Year	Area in ha.	Year wise expenditure				Total cost in Rs. Lakh
		0 year	1st	2nd	3rd	
2015-16	926.477	41.50	x	x	x	41.50
2016-17	947.175	42.42	107.01	x	x	149.43
2017-18	990.778	44.38	109.40	43.08	x	196.86
2018-19	927.278	41.53	114.43	44.04	30.77	230.77
2019-20	911.527	40.83	107.10	46.07	31.46	225.46
2020-21	870.547	38.99	105.28	43.12	32.90	220.29
2021-22	897.799	40.21	100.55	42.39	30.79	213.94
2022-23	930.118	41.66	103.70	40.48	30.27	216.11
2023-24	887.000	39.73	107.43	41.75	28.91	217.82
2024-25	895.946	40.13	102.45	43.25	29.82	215.65
Total	9184.645	411.38	957.35	344.18	214.92	1927.83

11.4.5. Estimation for Bamboo (Overlapping) Working Circle : - The total area under Bamboo (Over lapping) Working Circle is 108250.800 ha. Therefore clumps per hector are 188 numbers. The cost norm that will be followed in Bamboo Working Circle is as follows.

Table No. 345				
Cost norm for Bamboo Working Circle per hector				
Sl. No.	Items of works	Man days per ha	Labour cost (@ Rs. 150.00)	Total cost in Rs.
1	Demarcation of coupe	1	150.00	150.00
2	Silvicultural operation	25 (5 clumps per man-day)	3750.00	3750.00
3	Fire Protection Measures	1	150.00	150.00
			Total	4050.00

11.4.6. The year wise expenditure to be incurred for treatment of bamboo area is given in the table below.

Table No. 346						
Year wise estimation for Bamboo Working Circle except plantation						
Year	Coupe	Area in ha	Cost /ha in Rs. Lakh	Total in Rs Lakh	Plantation in Rs Lakh	Total cost in Rs. Lakh
2015-16	A	5538	0.0405	224.29	2114.56	2338.85
2016-17	B	5538	0.0405	224.29	2511.04	2735.33
2017-18	C	5538	0.0405	224.29	2762.14	2986.43
2018-19	D	5538	0.0405	224.29	2976.24	3200.53
2019-20	A	5538	0.0405	224.29	861.68	1085.97
2020-21	B	5538	0.0405	224.29	465.2	689.49
2021-22	C	5538	0.0405	224.29	214.1	438.39

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2022-23	D	5538	0.0405	224.29	x	224.29
2023-24	A	5538	0.0405	224.29	x	224.29
2024-25	B	5544.777	0.0405	224.56	x	224.56
	Total	55386.78		2243.17	11904.96	14148.13

11.4.7. The year wise expenditure to be incurred for bamboo plantation has been estimated as per the ANR plantation norm. However, the cost norm of NTFP-Bamboo plantation (up to 650 plants) is given in the table below for reference.

Table No. 347

Cost norm of NTFP-Bamboo plantation (up to 650 plants)

Sl No.	Items of work	Mandays	Labour cost @ Rs.150.00	Materials	Total cost in Rs.
	0 year				
1	Survey & Demarcation	3	450	0	450
2	Site preparation	3	450	0	450
3	Alignment Stacking	3	450	0	450
4	Digging of pits	32	4800	0	4800
5	Cost of Seedling	0	0	0	2000
6	Carriage & Planting	8	1200	600	1800
7	Insecticide & Bio-Fertilizer	0	0	0	0
8	1st Weeding	3	450	0	450
9	Manuring	3	450	0	450
10	2nd Weeding	3	450	0	450
11	Soil working	3	450	0	450
12	Fire Tracing	5	750	0	750
13	Soil Conservation	8	1200	0	1200
14	Over-head	0	0	0	800
15	Entry point	0	0	0	1500
	Total		11100	600	16000
	2nd year				
16	Casually Replacement	5	750	0	750
17	Weeding & Soil Working	6	900	0	900
18	Fertiliser	2	300	300	600
19	Fire Tracing	2	300	0	300
20	Soil Conservation	0	0	0	0
21	Over-head	0	0	0	150
22	Entry Point	0	0	0	300
	Total		2250	300	3000
	3rd year				
23	Weeding & Soil Working	7	1050	300	1350
24	Fire Tracing	2	300	0	300
25	Soil Conservation	0	0	0	0
26	Over-head	0	0	0	100
27	Entry Point	0	0	0	150
	Total		1350	300	1900
	4th year				
28	Soil Mounding	6	900	0	900
29	Fire Tracing	2	300	0	300

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30	Soil Conservation	0	0	0	120
31	Over-head	0	0	0	100
32	Entry Point	0	0	0	200
	Total		1200	0	1620
	GT	106	15,900.00	1200	22520

11.4.8. Treatment type: - C area is included in the financial forecast. The estimated cost to be incurred during the Plan period for bamboo plantation is given in the table below.

Table No. 348

Year wise estimation for bamboo plantation in C-type area (50 nos/ha)

Year	Area in ha C type	Year wise cost in Rs. Lakh				
		0	1	2	3	Total in Rs Lakh
2015-16	13216	2114.56	x	x	x	2114.56
2016-17	13216	2114.56	396.48	x	x	2511.04
2017-18	13216	2114.56	396.48	251.1	x	2762.14
2018-19	13216.023	2114.56	396.48	251.1	214.1	2976.24
2019-20	x	x	396.48	251.1	214.1	861.68
2020-21	x	x	x	251.1	214.1	465.2
2021-22	x	x	x	x	214.1	214.1
2022-23	x	x	x	x	x	x
2023-24	x	x	x	x	x	x
2024-25	x	x	x	x	x	x
Total	52864.023	8458.24	1585.92	1004.4	856.4	11904.96

11.4.9. Treatment of Wildlife (overlapping) Working Circle : - The total area under this working circle is 132606.7194, thus the average annual area in different wildlife series is 132606.7194 ha. The treatment including creation of waterholes, game tanks, protection, research, publicity and maintenances of permanent structure. The year wise annual expenditure on Wildlife Working Circle is as under.

Table No. 349

Year wise estimation for Wildlife (OL) Working Circle in Rs. Lakh

Year	Different works					Total cost
	Saltlick	Game tank, watch tower	10 water holes/ year	Fodder Plantation	Protection	
2015-16	2.45	0.05	0.50	0.03	1.00	4.03
2016-17	4.00	2.50	0.50	0.08	1.00	8.08
2017-18	4.00	2.50	0.50	0.09	1.00	8.09
2018-19	4.00	2.50	0.50	0.11	1.00	8.11
2019-20	2.45	0.05	0.50	0.11	1.00	4.11
2020-21	2.45	0.05	0.50	0.11	1.00	4.11
2021-22	2.45	0.05	0.50	0.11	1.00	4.11
2022-23	2.45	0.05	0.50	0.11	1.00	4.11
2023-24	2.45	0.05	0.50	0.11	1.00	4.11
2024-25	2.45	0.05	0.50	0.11	1.00	4.11
Total	29.15	7.85	5.00	0.97	10.00	52.97

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11.4.10. Treatment of Protection Working Circle : - The total area of the Protection Working Circle is 3396.3900 ha. Forest roads and communication systems should be improved. The annual expenditure required for Protection Working Circle is given in the table below.

Table No. 350

Year wise estimation for Protection Working Circle in Rs. Lakh

Items of work	Year from 2015-16 to 2024-25										Total
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
Boundary clearance	0.79	0.83	0.87	0.91	0.95	1	1.05	1.1	1.16	1.22	9.88
New pillars	1.41	1.48	1.56	1.63	1.72	1.8	1.89	1.98	2.09	2.19	17.75
Repair of pillars	1.15	1.21	1.27	1.33	1.4	1.47	1.54	1.62	1.7	1.78	14.47
Map preparation	0.15	0.16	0.17	0.18	0.19	0.2	0.21	0.22	0.23	0.24	1.95
Anti smuggling squad	7.87	8.26	8.67	9.11	9.56	10.04	10.54	11.07	11.67	12.2	98.99
Reward	0.5	0.53	0.54	0.58	0.61	0.64	0.68	0.71	0.74	0.78	6.31
Cell phone	1.75	1.75	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	15.1
Vehicle	2	3.16	3.31	3.48	3.65	3.83	4.03	4.23	4.44	4.66	36.79
Arms and ammunition	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5
Forest road	2	2.1	2.21	2.32	2.44	2.56	2.69	2.82	2.96	3.11	25.21
Fire protection	9.24	9.7	10.19	10.7	11.23	11.79	12.38	13	13.65	14.33	116.21
Eco Tourism	1.0	1.05	1.10	1.15	1.20	1.26	1.33	1.40	1.47	1.55	12.51
Total	27.91	30.28	31.39	32.89	34.45	36.09	37.84	39.65	41.61	43.56	355.67

11.4.11. Treatment of Plantation Working Circle : - All old planted in the managed area is included in this treatment, which is extended over an area of 25431.7894 ha. The year wise cost for cleaning and protection is estimated and given in the table below.

Table No. 351

Estimation for Plantation Working Circle in Rs. Lakh

Year	Area in ha.	Tending @1.0 mandays/ha	Protection @ 0.1 mandays / ha	Total in Rs. Lakh
2015-16	2493.5000	3.74	0.37	4.11
2016-17	2526.0000	3.79	0.38	4.17
2017-18	2460.4100	3.69	0.37	4.06
2018-19	2705.6400	4.06	0.41	4.47
2019-20	2714.0200	4.07	0.41	4.48
2020-21	2578.5900	3.87	0.39	4.26
2021-22	2362.0094	3.54	0.35	3.89
2022-23	2538.2300	3.81	0.38	4.19
2023-24	2493.0000	3.74	0.37	4.11
2024-25	2560.3900	3.84	0.38	4.22
Total	25431.7894	38.15	3.81	41.96

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11.4.12. Treatment of J. F. M. (Overlapping) Working Circle : - At present 447 numbers of VSS protecting forest in different patches. The total area under this Working Circle is 59370.7708 ha, which is protected by 447 numbers of VSS committees. Efforts should be made to strengthen the VSS protecting the area. Therefore estimation has made as per the prescription and is given in the table below.

Table No. 352

Year wise estimation for J F M (OL) Working Circle in Rs. Lakh

Year	Area in ha.	VSS Nos	Strengthening @ Rs.5000/-	Formation of new VSS @ Rs.10000/-	Total cost in Rs. Lakh
2015-16	12041.8000	81	4.05	0.60	4.65
2016-17	11979.0800	87	4.35	0.60	4.95
2017-18	12030.6500	88	4.40	0.60	5.00
2018-19	11735.2456	84	4.20	0.60	4.80
2019-20	11583.9952	107	5.35	0.60	5.95
2020-21	12041.8000	81	4.05	0.60	4.65
2021-22	11979.0800	87	4.35	0.60	4.95
2022-23	12030.6500	88	4.40	0.60	5.00
2023-24	11735.2456	84	4.20	0.60	4.80
2024-25	11583.9952	107	5.35	0.60	5.95
Total	118741.5416	894	44.70	6.00	50.70

11.4.13. Treatment of N.T.F.P. (Overlapping) Working Circle : - The total area under Non-Timber Forest Produce (Over lapping) Working Circle is 132606.7194 ha. Therefore the average annual area is 13260.67 ha. The treatment includes the preference of Non-Timber Forest Produce and Medicinal species in planting operation, research on Non-Timber Forest Produce items, publicity, and marketing. The creation of awareness on proper scientific working of various NTFP items among the villagers is essential and this can be done through the development of audio and video CDs and spreading the message. Thus annual expenditure on Non-Timber Forest Produce (overlapping) Working Circle is kept at lump sum amount of Rs.4,00,000.00 per annum with subsequent annual rise of 10 % every year.

11.5. Other activities:

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11.5.1. Library, Equipments, Maps & Tools : - An amount of Rs.200000.00 is estimated on lump sum basis with an annual raise of 10 % every year.

11.5.2. Creation of Research Plots : - This division does not have any research plot to ascertain the growth and quality of species. Therefore an amount of Rs.400000.00 is required for creation of one research plot for this division as per prescription. Further improving the research activities Rs. 100000.00 with a 10 % annual increase is required in the subsequent year.

11.5.3. Miscellaneous Contingencies : - An amount of Rs.400000.00 per annum is estimated with subsequent rise of 10 % every year to meet the miscellaneous expenditure of this division.

11.5.4. Soil Conservation Measures: - The soil and moisture conservation measures are an important component for the treatment of areas under Rehabilitation Working Circle. The type of soil conservation measures is to be decided based on the site, extent of degradation, slope, extent of gullies etc. The details of different measures are discussed in Chapter-III of Part-II. The cost norms for different structures are given below. These norms are taken from the Soil Conservation Department, approved by the Watershed Mission, Orissa. These norms would be for the guidance of the DFO. The site specific estimates need to be made at the time of execution of works. In this division there is a great need for undertaking these structures inside the forests. For this each Range should be provided with Rs.10,00000.00 per annum. The average annual expenditure to be incurred for this in the division would be approximately Rs.50,00000.00 with 10 % annual increase. These structures are not part of any plantation activity, but should be undertaken solely to protect the soil and retain the moisture in the upstream. For undertaking these works, the Department staff needs specific training and the works should be done scientifically with a minimum cost. The estimation for contour bunding and brushwood check dam is given in the tables below.

Table No. 353

Estimation for contour bunding over one ha (2-3% slope)

Sl. No.	Items of Work	Mandays	Rate	Total in Rs.
1	Survey, demarcation & alignment	4	150.00	600.00
2	Earth work in ordinary soil with in initial lead and lift500 mt & 0.34 sqm. = 170 cum, @Rs.27.00 per cum	x	x	4590.00
3	Grass turffing the side slope and top of bund within initial lead and initial lift 500mt x (0.64+0.3+0.64) = 790.0 sqm @ Rs. 260.00 per 100 sqm	x	x	2054.00
4	Planting of locally collected vetiver sleeves on the U/s slope of the bund with spacing of 0.23 mt over 2174 nos of sleeves @ Rs. 1.00/- sleeve including collection transportation, planting and application of fertilizer including cost of fertilizer	x	x	2174.00

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5	Contingencies and unforeseen charges	x	x	230.00
	Total			9648.00

Table No. 354		
Model estimation for brush wood check dam		
Sl.No.	Items of work	Amount (in Rs.)
1	Survey, demarcation & alignment	10.00
2	Nos of pole of 3" & 2" diameter and 1ft depth, For Main pole = 2 x 4= 8 nos, Intermediate pole = 2 x 3 = 6 nos, Total poles = 14 nos 100 nos. of poles per man-day for 14 nos of poles	12.00
3.1	Main poles to be planted of size 3" girth and height 1.30 mt, Total length 1.30 x 8= 10.4 mt, @Rs.4.00 per mtr for 10.4 mt	41.60
3.2	Cost of intermediate poles to be planted for vegetative. Propagation such as Jatropha, Vitex, Ipomea, Nagairi Benjati, Mai, Sajana, Mandar, Kanjor etc.Rs. 1.30 x 6 = 7.8 m. @Rs.3.00 per mt for 7.8mt	23.40
4	Weaving with split bamboo, brushwood, local shrubs like Ipomea, Vitex or any other local materials or vertically planting the shrubs and binding with split bamboo or brush wood to hold random boulders or debris up to 1m height. Area of fencing = 2 x 3m x 1m = 6 sqmt, @Rs.10 per sqmt	60.00
5	Excavation of earth in ordinary soil to level the ground and deposit the same in the upstream side- 2 x 0.5 m x 1m x 1m = 1cum, Periphery bund 2 x {(1.2m x 0.3m) /2} x 0.45m x 3m = 2.025 cumt, @Rs.2687.20 per 100 cum for 2.025 cum	54.00
6	Planting of 3 rows of vetiver grass in the U/S and d/s side at 23 cm plant spacing (collection, Transportation, Planting including Manuring), Length = 6 x 3m =18 mt, Sleeves 18/0.23 = 80 nos	40.00
7	Depositing of random rubble stones or debris inside the fenced rows there should be depression of 15cm at the center, 3m x 1m x 1m = 3 cumt, 1 man-day @ Rs. 82.50 per man-day.	82.50
8	Planting of 6 nos bushy plants, 3 nos in each side (Including manuring & intercultural operation), Rs.8 per plant for 6 nos	48
9	Grass turfing on the earth work with local grass with one extra lead and initial lift, 2 {2 x (0.45) 1/2 +0.3} x 3m = 2 x 1.57 x3 = 0.44 sqmt, Rs.300.00 per sqmt	132.00
10	Contingencies and unforeseen charges	10.00
	Total per unit	513.50

Table No. 355			
Estimation for loose boulder check dam (Gully with 1.3 mt width 0.6 mt bottom width and depth 0.6 mt			
SL. No.	Items of Work	Volume in cum	Amount in Rs

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1	Survey alignment and demarcation @ 150.00 per mandays	x	150.00
2	Earthwork excavation in ordinary soil within initial lead and lift.	x	x
2.1	Edging out of gully (2 x 0.5 x 0.85 x 2.25 x 0.6)	1.50	x
2.2	Foundation for stone packing (1 x 2.3 x 1.8 x 0.3)	1.24	x
2.3	D/S guard wall (1 x 1.3 x 0.5 x 0.6)	0.39	x
2.4	Side wall (2 x 2.13 x 0.5 x 0.5)	0.64	x
	Total	3.42	x
	@4000.00/100 cum	x	137.00
3.1	Dry stone packing in the foundation of the structure	x	x
	U/S dumping (Deflected by 45°) (1 x {1.3+2.2)/2} x 0.45 x 0.3)	0.24	x
	Head wall and D/S dumping (1 x 1.3 x 0.9 x 0.3)	0.35	x
	Approne (1 x 1.3 x 0.9 x 0.3)	0.35	x
	Sidewall (2 x 3.95 x 0.5 x 0.3)	1.19	x
	D/S guard wall (1 x 1.3 x 0.5 x 0.6)	0.64	x
3.2	Dry stone packing in the super structure	x	x
	U/S dumping (1 x {(3.2+2.3)/2} x 0.45X (0.45+0)/2)	0.27	x
	D/S dumping {1 x 2.3 x 0.45 x (0.45+0)/ 2)	0.23	x
	Head wall (1 x 2.3 x 0.45 x 0.45)	0.47	x
	Approne (1 x 0.9 x 1.3 x 0.15)	0.18	x
	Side wall (2 x 3.95 x 0.5 x 0.3)	1.19	x
	Total	5.11	x
	@ Rs. 330.00 cum	x	1686.00
4	Earthwork in ordinary soil for side bund of 10 mt length at both side of structure [2 x 10 x {(1.05+0.45)/2} x 0.3} = 4.5 cum - 3.42cum = 1.08 Cum @ Rs. 4000.00 / 100 cum i.e. excavated earth in the foundation will be adjusted for the side bund	x	43.00
5	Fine dressing and turfing with locally available grass within initial lead and lift for both side slopes (2 x 10 x 0.42) = 8.40 sqmt & Top (1 x 10 x 0.45) = 4.50 is 12.90 sqm , for 2 nos of bunds 2 x 12.90 = 25.80 sqm @Rs. 260.00 / 100 sqm	x	67.00
6	Vetiver plantation with locally collected vetiver sleeves in D/s of the structure with spacing (0.23 x 0.23) sqmt over 1.3 mt span and 1.0 mt width of 3 rows including foliar sprayin with Urea. Nos of sleeves required = (2.3/0.23) x 3 = 30 nos Rs 1.00 vertiver sleeve	x	30.00
7	Contingencies and unforeseen charges	x	27.00
	Total	x	2140.00

11.6. Projected Cost Analysis:

11.6.1. The estimated cost to be required for implementation of the Plan during the period from 2015-16 to 2024-25 is given in the table below.

Table No. 356

Estimated cost for the Plan period from 2015-16 to 2024-25 in Rs. Lakh

Items	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	Total
SWC	81.03	79.30	79.98	82.46	80.17	79.77	79.26	78.56	80.81	77.30	798.64
RWC	41.50	149.43	196.86	230.77	225.46	220.29	213.94	216.11	217.82	215.65	1927.83

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Plant'n	4.11	4.17	4.06	4.47	4.48	4.26	3.89	4.19	4.11	4.22	41.96
Protect'n	27.91	30.28	31.39	32.89	34.45	36.09	37.84	39.65	41.61	43.56	355.67
Bamboo	2338.85	2735.33	2986.43	3200.53	1085.97	689.49	438.39	224.29	224.29	224.56	14148.13
JFM	4.65	4.95	5.00	4.80	5.95	4.65	4.95	5.00	4.80	5.95	50.70
Wildlife	4.03	8.08	8.09	8.11	4.11	4.11	4.11	4.11	4.11	4.11	52.97
NTFP	4.00	4.40	4.84	5.32	5.85	6.43	7.07	7.78	8.56	9.41	63.66
Research	1.00	1.10	1.21	1.33	1.46	1.61	1.77	1.95	2.15	2.37	15.95
Book, map, etc	2.00	2.20	2.42	2.66	2.93	3.22	3.54	3.89	4.28	4.71	31.85
Salva'g	2.00	2.20	2.42	2.66	2.93	3.22	3.54	3.89	4.28	4.71	31.85
Estab't	301.00	301.00	301.00	301.00	301.00	301.00	301.00	301.00	301.00	301.00	3010.00
Misc's	4.00	4.40	4.84	5.32	5.85	6.43	7.07	7.78	8.56	9.41	63.66
Total	2816.08	3326.84	3628.54	3882.32	1760.61	1360.57	1106.37	898.20	906.38	906.96	20592.87

11.7. Cost Benefit Analysis:

11.7.1. Tangible benefits : - The tangible benefits from forest constitute the very insignificant fraction of the total benefits. Some of the tangible benefit from forests has been estimated as value of timber, bamboo and NTFPs obtained from it. The expenditure to be made during the Plan period has been estimated. Hence in the calculation of the benefits a projection is made. The estimated profit for every year is given in the table below.

Table No. 357

Cost Benefit Analysis

Year	Revenue in lakh	Expenditure in lakh	Profit in lakh
2015-16	457.19	2816.08	-2358.89
2016-17	443.81	3326.84	-2883.03
2017-18	461.04	3628.54	-3167.50
2018-19	471.01	3882.32	-3411.31
2019-20	463.22	1760.61	-1297.39
2020-21	446.98	1360.57	-913.59
2021-22	445.49	1106.37	-660.88
2022-23	443.29	898.20	-454.91
2023-24	443.16	906.38	-463.22
2024-25	445.77	906.96	-461.19
Total	4520.96	20592.87	-16071.91

11.8. Conclusion:

11.8.1. The forests of this division are in a much better condition, it can in a position to yield revenues more than projected costs of this Plan. Obviously, these forests are treasure of immense value and need to be protected and nurtured at any cost.

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11.8.2. Investments in the forestry sector have long gestation period. The investment made during this Plan period (1995-96 to 2014-15) will yield results after 30-40 years. Though long gestation period is an immediate hindrance for any such large investments in these forests, but it is not only justified but also essential in order to build capital assets for future generations and prosperity besides food security of the tribal and rural poor. If the prescriptions of this Plan are effectively implemented, these forests are expected to show improved cost-benefit ratio in the next revision of the Plan. Moreover, the financial returns are not the main objective of this Plan. This Plan also visualizes other benefits to society from these forests and hence, the prescriptions shall be implemented in its true earnest.

11.8.3. While calculating the tangible benefits, many items like NTFP, medicinal plants are not taken into account. The livelihood provided to the people by the way of collection of various NTFP items in the lean agricultural season is much more than actual counting in monetary terms. Therefore it is concluded that the forests of Deogarh Division have to be worked for getting the maximum benefit.

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CHAPTER-XII

ESTABLISHMENT AND LABOUR

12.1. Establishment:

12.1.1. Deogarh Division has been reorganized with effect from dt.01.10.2003, consequence upon reorganization of Forest Department vide order No.13228 / Fand E, dt-08.08.2003 of Government of Odisha. The carder strength and the present position of establishment are given in the table below.

Table No. 358

Carder strength of Deogarh Division

Sl. No.	Category	Cadre	Present	Vacant
1	DFO	01	01	x
2	ACF	02	1	01
3	Forest Ranger	07	04	03
4	Deputy Forest Ranger	04	0	04
5	Forester	40	34	06
6	Forest Guard	104	61	43
7	FEO	05	02	03
8	R.I.	01	01	0
9	R.I. Peon	02	01	01
10	Amin	01	0	01
11	Chainman	05	02	03
12	Driver	02	0	02
13	Head Clerk	01	01	0
14	Jr. Accountant	01	01	0
15	Junior Stenographer	01	0	01
16	Senior Clerk	06	03	03
17	Junior Clerk	09	08	01
18	Dack runner	02	01	01
19	Office Peon	02	02	0
20	Office Choukidar	01	01	0
21	Contractual F.G.	01	01	0
	Total	198	125	73

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12.1.2. Range, Section, Beat and Check gate: - The established administrative units such as Ranges, Sections and Beat after reorganization of this division are furnished in the table below.

Table No. 359

List of administrative units

SL No	DIVISION NAME	RANGE NAME	SECTION NAME	Name of Check Gate	BEAT NAME	AREA IN HECT.
1	DEOGARH	BARKOTE	BALAM		BALAM	6187.29
2	DEOGARH	BARKOTE	BALAM		DANDASINGHA	6588.48
3	DEOGARH	BARKOTE	BALAM		KAUNSIBAHAL	2911.61
4	DEOGARH	BARKOTE	BALAM		NUAGAON	3802.42
5	DEOGARH	BARKOTE	BARKOTE	AMBAGOAN	BARKOTE	3747.02
6	DEOGARH	BARKOTE	BARKOTE		CHAPBAHAL	3803.14
7	DEOGARH	BARKOTE	BARKOTE		KELDA	3033.80
8	DEOGARH	BARKOTE	BARKOTE		KHULUNNDIKUDAR	2323.56
9	DEOGARH	BARKOTE	BARKOTE		MARDANG	3824.19
10	DEOGARH	BARKOTE	DANTARI BAHAL		DANTARI BAHAL	4725.20
11	DEOGARH	BARKOTE	DANTARI BAHAL		KANTAPALI	4687.87
12	DEOGARH	BARKOTE	DANTARI BAHAL		PURKUNDA	2284.14
13	DEOGARH	BARKOTE	DANTARI BAHAL		TUSULA	3229.10
14	DEOGARH	BARKOTE	KALLA		GOPAPUR	2366.15
15	DEOGARH	BARKOTE	KALLA		KALIAPAL	3790.79
16	DEOGARH	BARKOTE	KALLA		SAIDA	6512.10
17	DEOGARH	BARKOTE	KALLA		SINGSAL	3985.25
18	DEOGARH	BARKOTE	THIANAL		CHASAGURUJANGA	2525.87
19	DEOGARH	BARKOTE	THIANAL		PETAPURA	6007.11
20	DEOGARH	BARKOTE	THIANAL		RATTABAHAL	12510.00
21	DEOGARH	BARKOTE	THIANAL		SIARIMALIA	5241.69
22	DEOGARH	BARKOTE	THIANAL		SURUALI	7486.20
23	DEOGARH	BARKOTE	THIANAL		THIANAL	5593.89
24	DEOGARH	DEOGARH	DEOGARH	PURUNGARH	DEOGARH NORTH	3628.80
25	DEOGARH	DEOGARH	DEOGARH		DEOGARH SOUTH	2691.30
26	DEOGARH	DEOGARH	DEOGARH		HADAMUNDA	3729.85
27	DEOGARH	DEOGARH	DEOGARH		KALAMATI	3087.30
28	DEOGARH	DEOGARH	DEOGARH		SUGUDA	10070.00
29	DEOGARH	DEOGARH	KANSAR		KANSAR	7110.03
30	DEOGARH	DEOGARH	KANSAR		KANTEIKOLI	4896.92
31	DEOGARH	DEOGARH	KANSAR		PALKUDAR	2789.03
32	DEOGARH	DEOGARH	KANSAR		PALUNIPADA	4464.21
33	DEOGARH	DEOGARH	KANSAR		SODO	3433.09
34	DEOGARH	DEOGARH	LAIMURA		GAMHARIPOSI	5694.62
35	DEOGARH	DEOGARH	LAIMURA		GANDAM	5678.81

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36	DEOGARH	DEOGARH	LAIMURA		LAIMURA	7335.46
37	DEOGARH	DEOGARH	LAIMURA		LUDHAR	5340.83
38	DEOGARH	DEOGARH	LAIMURA		POHALAMARA	2072.20
39	DEOGARH	DEOGARH	TILEIBANI		CHATTI BARAGHAT	4953.79
40	DEOGARH	DEOGARH	TILEIBANI		JHARA GOGUA	4170.39
41	DEOGARH	DEOGARH	TILEIBANI		PRAVASUNI	3986.58
42	DEOGARH	DEOGARH	TILEIBANI		TAINSAR	4766.68
43	DEOGARH	DEOGARH	TILEIBANI		TILEIBANI	4252.09
44	DEOGARH	KHAMAR	KHAMAR		BARKOTIA	3974.04
45	DEOGARH	KHAMAR	KHAMAR		JAMBUA	5106.09
46	DEOGARH	KHAMAR	KHAMAR	KANTIPOSI	KHAMAR	4556.29
47	DEOGARH	KHAMAR	KHAMAR		PAUNSHIA	6411.92
48	DEOGARH	KHAMAR	KHAMAR		ROHIRA	3003.82
49	DEOGARH	KHAMAR	KHAMAR		TAMBUR	3274.40
50	DEOGARH	KHAMAR	NUAGAON		BURUBURA	2722.24
51	DEOGARH	KHAMAR	NUAGAON		HANSALA	2855.57
52	DEOGARH	KHAMAR	NUAGAON		INIIDE	5730.61
53	DEOGARH	KHAMAR	NUAGAON		NUAGAN	3520.07
54	DEOGARH	KHAMAR	SAHAR GURUJANG		RANJA-PITTA	6975.61
55	DEOGARH	KHAMAR	SAHAR GURUJANG		SAHAR GURUJANG	11340.00
56	DEOGARH	PALLAHARA	JAMARDIHI		ITI	3610.92
57	DEOGARH	PALLAHARA	JAMARDIHI		JAMARDIHI	6340.53
58	DEOGARH	PALLAHARA	JAMARDIHI		RUGIDIDIHA	9453.34
59	DEOGARH	PALLAHARA	JAMARDIHI		SAIDA	1942.53
60	DEOGARH	PALLAHARA	JAMARDIHI		SIBIDA	3813.38
61	DEOGARH	PALLAHARA	KANTALA		JAMARA	3524.29
62	DEOGARH	PALLAHARA	KANTALA		KANTALA	1317.12
63	DEOGARH	PALLAHARA	KANTALA		RAIPAL	3003.74
64	DEOGARH	PALLAHARA	PALLAHARA		BATISUAN	3589.08
65	DEOGARH	PALLAHARA	PALLAHARA		ISHWARNAGAR	2656.06
66	DEOGARH	PALLAHARA	PALLAHARA		PALLAHARA	4874.20
67	DEOGARH	PALLAHARA	PALLAHARA		RANJO	1828.84
68	DEOGARH	PALLAHARA	PALLAHARA		SEEGARH	4032.14
69	DEOGARH	REAMAL	KUNDHEIGOLA		BUDHAPAL	3291.84
70	DEOGARH	REAMAL	KUNDHEIGOLA		KUNDHEIGOLA	4687.15
71	DEOGARH	REAMAL	KUNDHEIGOLA		LOHARAKOT	3981.95
72	DEOGARH	REAMAL	KUNDHEIGOLA		RENGALPALI	4726.16
73	DEOGARH	REAMAL	KUNDHEIGOLA		SANGAPOSI	7867.95
74	DEOGARH	REAMAL	NUADIHI		NUADIHI NORTH	5038.73
75	DEOGARH	REAMAL	NUADIHI		NUADIHI SOUTH	4257.09
76	DEOGARH	REAMAL	NUADIHI		RANJANA	5725.55
77	DEOGARH	REAMAL	PALASAMA		BRAMAHANIPALI	4761.50
78	DEOGARH	REAMAL	PALASAMA		KUSKULIA	4183.63

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79	DEOGARH	REAMAL	PALASAMA		LAXMIPUR	2525.89
80	DEOGARH	REAMAL	PALASAMA		PALASAMA	5023.29
81	DEOGARH	REAMAL	PALASAMA		SIMILIHATA	5472.40
82	DEOGARH	REAMAL	REAMAL		BURBUDA	3324.08
83	DEOGARH	REAMAL	REAMAL	BUDHPAL	REAMAL	2216.09
84	DEOGARH	REAMAL	REAMAL		SIARIA	4169.97
85	DEOGARH	REAMAL	REAMAL		SIMLOI	3512.97
86	DEOGARH	REAMAL	REAMAL		TARANG	6934.80
87	DEOGARH	REAMAL	RENGALBEDA		BUDIDEO	2359.33
88	DEOGARH	REAMAL	RENGALBEDA		GUNDIAPALI	2554.14
89	DEOGARH	REAMAL	RENGALBEDA		RENGALBEDA	6227.59
90	DEOGARH	REAMAL	RENGALBEDA		TINKBIR	3978.95
					TOTAL	407596.66

12.1.3. Proposal for Establishment : - The present staffing pattern is almost same as it was in 1959 and 1979. Depending on the present scenario of forest management, the workload in each unit of administration has increased considerable for which the existing staff is considered quite inadequate to cope up the situation. The present Working Plan prescribes stringent selection in bigger coupe area and intensive operation for rehabilitating the degraded forest. Organized theft of forest produce has become widespread for which the present strength of staff is quite inadequate to afford protection.

12.1.4. The forest conservation Act 1980 and the Rule framed there under have built in effecting provision to arrest further deforestation of forest land for non-forest uses. Besides this a number of new Rules have been framed under the Orissa forest Act 1972 and the wildlife protection Act 1972. Effective implementation of these Rules requires augmentation of staff at different level in this division.

12.1.5. Sri Bhagirathi Behera, WPO, Angul had suggested in the out going Plan that more number of Forest Guard will be required for this division for proper and effective implementation of the prescriptions and protection of the forest in all venerable points. I agree with the proposal and proposed 150 numbers Forest Guard will be required for this division for proper and effective implementation of the prescriptions and protection of the forest in all venerable points based on the fact that Forest Guards are the key for protection and management of the area having forest status. The grass root level post should be increase for proper implementation of the prescription.

12.1.6. In the recent reorganization, the cadre strength of Forest Guard is 104, which can solve the purposes if there will be no any vacancy. But at present only 61 numbers of Forest Guards exist against 90 numbers of Beats. The shortage of grass root level post increases pressure on protection, which indirectly affect on proper execution of the prescriptions.

12.1.7. A striking force consisting of at least 05 members and headed by one Assistant Conservator of Forest should be formed at the division level to check smuggling. The striking force should be provided with a first moving vehicle and necessary arms. The force should be empowered to use firearms like similar staff of police Department.

12.1.8. There should be one forest check gate in every road crossing on the border of this division. Adequate number of staff should be provided depending on the traffic

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to operate them both day and night, on 08 hours duty basis. It is not necessary to construct one forest gate each of the division at the border. The proposal of the forest gate and its staffing pattern will be given in the table below.

Table No. 360

Proposal of the forest gate

Sl. No.	Name of the forest gate	Name of the road	Name of bordering Division	Number of staff
1	Sarapal	SH 63	Angul	3
2	Palsama	NH 53	Angul	3
3	Belmunda	NH 53	Angul	3
4	Tarang	SH 24	Rairakhol	3
5	Pravasuni	NH 200	Bamra WL Divn.	3

Sources:- DFO, Deogarh

12.2. Labour:

12.2.1. Labourers: - The different works in forestry shall be done as per the scheduled of time. Technical knowledge is essential for execution of the forestry operation. As such this area is shortage of skilled and semi-skilled labourers.

12.2.2. Wages: - The daily wages shall be paid to labourers as per the rate fixed by the Government from time to time. The present rate is Rs.150.00 per day per one laborer. Weekly one-day rest will be given to each laborer. The labourers will receive Rs.150.00 per day from the year 2015-16 and onwards subject to change in the wage rate.

12.2.3. Improvement of Labourers: - The labourers available in the forest fringe villages should be regularly employed in every forest operations. At least 05 numbers of labourers in each Beat should be regularly employed and trained in the forestry operation so that difficulties in future for recruitment of skilled labourers are minimized.

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CHAPTER - XIII

CONTROL AND RECORDS

13.1. Control Form:

13.1.1. Coupe Control Forms: - It has been prescribed to maintain 02 numbers of coupe control forms in triplicate during each Working Plan year, which starts from 1st July to 30th June. The pattern of books or registers have to be complied by the Divisional Forest Officer with a view to checking the operations carried out against those prescribed in this Rived Working Plan.

13.1.2. Form No.1: - In this form the list of coupes will be recorded, which could not be worked out as per the prescription during the Plan period. The format is given below.

Form No - 1				
Coupes, which could not be worked out as per the prescription				
Sl. No.	Name of WC	Name of FS	Coupe No.	Reason of deviation

13.1.3. Form No.2 : - This form will be used for the control of all silvicultural operation such as felling, subsidiary cultural operations, cleanings, thinning, burning etc. which have been prescribed or suggested to be carried out in a given coupe for the duration of the Working Plan. The format of the coupe control form is as under.

Form No - 2						
Control of all silvicultural operation						
Working Circle	Felling Series	Block and comp't	Coupe No -			
			Year	Area	Volume	Silvicultural operation

13.1.4. Felling Control Form: - It has been prescribed to maintain a felling control form, which will control and maintain a record of all trees marked for felling and the trees retained as seed bearers or to safe guard future yield. The format of felling control form is as under.

Felling Control Form								
WC	FS	Block comp't	Coupe No -					
			Species	Girth	Trees marked	Unit	Trees retained	% Retained

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13.1.5. The Divisional Forest Officer will annually make entries in his copy of the control forms and send them together with the deviation statement in triplicate to the Working Plan Conservator through the Territorial Conservator. After the entry have been checked and approved, the Working Plan Conservator will first get his copy completed and then send the DFO's copy to the Territorial Conservator. The later will then complete his copy and finally return the DFO's set for record. The Working Plan Conservator will send three copies of deviation statement to the PCCF for sanction. After the sanction, one copy each will be sent to the Territorial Conservator and the DFO for their record and the Working Plan Conservator will retain the third copy for his set of control forms. The control forms should be submitted by the DFO to the Territorial Conservator during December and the latter should sent them to the Working Plan Conservator concerned on or before January each year.

13.2. General Prescription of the Working Plan:

13.2.1. This Plan will be implemented for a period of 10 years. Harvesting and improvement of the forest area included in the Plan shall be carried on in patches based on coupe area of both Selection and Rehabilitation Working Circle from 2015: -16 to 2024: -25. The different works to be executed on the field with in a time period including the advices are treated as prescriptions of the Working Plan.

13.2.2. Deviation: - Any works done in the managed area of the Working Plan with in the time period, which alter the basis of management laid down in this Plan is treated as deviation. All deviation, which permanently alters the basis of management will require prior sanction of the PCCF. All deviation which do not permanently alter the basis of management and with the necessity of which the Conservator of Forest, Working Plan Circle agrees, he may approve and sanction on behalf of PCCF. Incase where there is difference of opinion between the Conservator of Forest, Working Plan and Territorial then the former will refer all such deviation to the PCCF for instruction. The PCCF / CFWP, as the case may be, will countersign the deviation statements.

13.2.3. The PCCF, before sanctioning the major deviation, will necessarily take prior approval of the Regional CCF of the Ministry of Environment and Forest. The natures of the major deviations are given in the table below.

Table No. 361	
List of deviations	
Sl No.	Types of deviations needs prior approval of Regional CCF
1	Change in Silvicultural Systems
2	Clear felling of natural forest
3	Formation of new Felling Series
4	Large scale felling due to natural calamities, which can not be adjusted against future yield.

13.2.4. Deviation Statement: - The Divisional Forest Officer will prepare a yearly deviation statement in three copies and forward it to PCCF through concerned Conservator of Forest. No explanatory remark are required on this form, these should

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be given in the forwarding letter. One copy of the deviation statement will be returned to the Divisional Forest Officer and other copy to Conservator of Forest after the deviation has been sanctioned by the PCCF. Divisional Forest Officer shall be maintained deviation statement as per Rule 132 of the O.F.D. Code and National Working Plan Code 2004. The format of the deviation statement is given below.

Format of the deviation statement						
Sl. No.	Control book No -		Reference of W.P		Deviation	
	Form No.	Page No.	Paragraph No.	Nature of prescription	Nature of deviation	Order No. and date

13.2.5. Criteria and Indicator of Sustainable Forest Management: - The Government of India, the State Government and I I F M – Bhopal are in the process of finalizing the criteria and indicator for monitoring and evaluation of sustainable forest management. As and when the finalized criteria and indicator will receive by the Divisional Forest Officer, the monitoring and evaluation of implementation of the Working Plan will be done accordingly.

13.3. Maintenance of Record:

13.3.1. Register of Forest Blocks: - Proper maintenance of this register is vital and most important. Registers of Reserved forests, Protected forests, Village forests are to be maintained as per Orissa Forest Department code. This register should preferably contain copies of the original notification (or an attested copy there of) declaring the forest blocks under the category that they belong. 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, GPS readings of the pillars etc should also be kept as part of this register. All changes / modification in area due to diversion, de: -reservation along with copies of such notifications should also be maintained in the register.

13.3.2. Compartment Histories: - For want of updated compartment histories, which has been neglected during the preceding Plan period has made it difficult to collect reliable data for revision of the Plan. Compartment History Files for all the compartments of the forest blocks have been prepared in three sets, which will be kept in the Working Plan office, Divisional Forest Office and at the Forest Range Office for maintenance in accordance with the standard instructions contained in the O.F.D. Code and National Working Plan Code 2004. A stock map on 1:50,000 scales showing growing stock of the compartment has been attached to each such file. 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

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transmission to the Conservator of Forests for perusal within 31st July. During office inspection by the Conservator of Forests / Divisional Forest Officer, maintenance of compartment histories shall be checked.

13.3.3. Plantation Journals: - Journals for plantations will be maintained for each plantation / rehabilitation work taken up in the division showing details of operations and their cost, in the forms prescribed in Orissa Forest Plantation Manual 1977. Maps of the plantations with all details will also be kept in the plantation journal.

13.3.4. 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 involved. A unique index number will be assigned to individual plantation, and this will also be shown in the Plantation journal. 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. The plantations taken up should be reflected in the GIS database for the division in the Divisional office and the database in the GIS lab of the Principal Chief Conservator of Forests, Orissa should also be updated in October / November each year.

13.3.5. Fire Maps: - Fire maps shall be maintained as per Rule 283 (22) of the Orissa Forest Department Code and National Working Plan Code 2004. The record should be submitted annually in code Form No. 39, along with fire map to the Regional Chief Conservator of Forests, Rourkela Circle. Burnt area shall be shown on a trace copy of compartment map and details shall be given in respective compartment history. The incidents of fire and the area burnt should be reflected in the GIS database at the divisional level and in the GIS lab in the O/o the Principal Chief Conservator of Forests, Orissa.

13.4. Coupe Control Form:

13.4.1. The format of coupe control form as per as per National Working Plan Code is as under.

Coupe control form as per National Working Plan Code									
Working Circle Periodic Block		Felling Series Cutting Section	Localities prescribed Localities suggested				COUPE CONTROL FORM Coupe No.		Page
Prescription in brief	W.P. para	Year due	As carried out				Excess (+) or Deficit (: -)		Remarks & Sanction
			Year	Block/ Comptt.	Area	Volume	Area	Volume	
1	2	3	4	5	6	7	8	9	10

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13.4.2. The format of felling control form is as under.

Format of felling control form as per National Working Plan Code									
Working Circle Periodic Block		Felling Series Cutting Section		Localities prescribed Localities suggested (With areas)				COUPE CONTROL FORM	
								Coupe No.	Page
Block & Compt.	Area	Species	Diameter class	Trees marked	Unit Factor	Volume Marked	Trees retained	% Trees retained	Remark
1	2	3	4	5	6	7	8	9	10

13.4.3. Selection Working Circle:

FELLING PROVISIONS OF THE WORKING PLAN FOR VOLUME YIELD	
WORKING CIRCLE...	Selection
FELLING SERIES.....	.....Selection Felling Series
Nature of felling:	Selection Felling
Units to be marked annually:	

SUMMARY OF UNITS MARKED				
Year	Units marked	Excess or deficit	Running excess or deficit	Remarks
1	2	3	4	5
2015 - 16				
2016 - 17				
2017 - 18				
2018 - 19				
2019 - 20				
2020 - 21				
2021 - 22				
2022 - 23				
2023 - 24				
2024 - 25				

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13.4.4. Rehabilitation Working Circle:

REHABILITATION CONTROL								
WORKING CIRCLE: Rehabilitation								
..... Rehabilitation Series								
Year of Treatment	Area Prescribed					Achievement (in Ha.)		
	Coupe No.	Forest block details				Area	Running Excess/Deficit	Remarks
2015 - 16								
2016 - 17								
2017 - 18								
2018 - 19								
2019 - 20								
2020 - 21								
2021 - 22								
2022 - 23								
2023 - 24								
2024 - 25								

13.4.5. Bamboo (Overlapping) Working Circle:

FELLING PROVISIONS OF THE WORKING PLAN FOR VOLUME YIELD					
WORKING CIRCLE: Bamboo (Overlapping)					
FELLING SERIES:					
Nature of felling :Culm Selection Cum Clump Improvement for Salia Bamboo					
Units to be marked annually:					
Summary of Units Marked					
Year of Working	Annual Coupe	Units Marked (SU)	Excess or Deficit	Running Excess or Deficit	Remarks
2015 -16					
2016 -17					
2017 -18					
2018 -19					
2019 -20					
2020 -21					
2021 -22					
2022 -23					
2023 -24					
2024 -25					

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13.4.6. Protection Working Circle:

PROTECTION WORKING CIRCLE								
WORKING CIRCLE: Protection								
Protection Series								
Year of Treatment	Area Prescribed					Achievement Area (in Ha.)	Running Excess / Deficit	Remarks
	Coupe No.	Forest block	Status (RF/PRF/ DPF)	Compt.	Area in Ha.			
2015 -16								
2016 -17								
2017 -18								
2018 -19								
2019 -20								
2020 -21								
2021-22								
2022 -23								
2023 -24								
2024 -25								

13.4.7. NTFP (Overlapping) Working Circle:

NTFP CONTROL							
WORKING CIRCLE: NTFP(Overlapping)							
Year of Treatment	Boundary Line Plantation(in RKM)					Other activities done		Remarks
	Block(s)	Species	Species	Species	Total	Location	Type of work	
2015 -16								
2016 -17								
2017 -18								
2018 -19								
2019 -20								
2020 -21								
2021 -22								
2022 -23								
2023 -24								
2024 -25								

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13.4.8. Wildlife (overlapping) Working Circle:

WILDLIFE CONTROL WORKING CIRCLE: Wildlife (Overlapping)			
Year of Treatment	Activities Done		
	Location	Type of Work	Remarks
2015 -16			
2016 -17			
2017 -18			
2018 -19			
2019 -20			
2020 -21			
2021-22			
2022 -23			
2023 -24			
2024 -25			

13.4.9. J.F.M. (overlapping) Working Circle:

WORKING CIRCLE: Joint Forest Management (overlapping) Reference: Paragraph no:			
Year	Activities done		
	Nos. of VSS	Microplans done	Remarks (Activities done etc.)
2015 - 16			
2016 - 17			
2017 - 18			
2018 - 19			
2019 - 20			
2020 - 21			
2021 - 22			
2022 - 23			
2023 - 24			
2024 - 25			

WORKING CIRCLE: Joint Forest Management (overlapping)	Management of Village Forests		
Reference: Paragraph no:			
Year	Activities done		
	Nos. of VFs	Work done	Remarks
2015 - 16			
2016 - 17			
2017 - 18			
2018 - 19			
2019 - 20			

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2020 - 21			
2021 - 22			
2022 - 23			
2023 - 24			
2024 - 25			

13.4.10. Plantation Working Circle:

CONTROL OF CULTURAL OPERATIONS							
WORKING CIRCLE: Plantation							
PLANTING SERIES:							
Reference: Paragraph: -							
Prescription						Results	
Year	Coupe No.	Forest Block	Status	Compt	Area in Ha.	Years in which actually done	Remarks
1	2	3	4	5	6	7	8
2015 - 16							
2016 - 17							
2017 - 18							
2018 - 19							
2019 - 20							
2020 - 21							
2021 - 22							
2022 - 23							
2023 - 24							
2024 - 25							

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CHAPTER - XIV

SUMMARY OF PRESCRIPTION

14.1. General constitution:

14.1.1. Brief resumes of Chapters of Part: - I and part - II have been given in tabular form indicating respective page numbers. Summary of main prescriptions of the Working Plan are given under this chapter, including that of miscellaneous regulations Working Circle in a tabular form to act as a ready reckoner for quick references. The total forest area to be managed of the division is 132606.7194 ha.

14.1.2. Part I: - The chapter wise important discussion of part - I of this revised Working Plan is given in the table below.

Table No. 362		
Chapters of Part – I		
Chapter No.	Brief resume of Chapters of Part – I	Page No.
x	Foreword, Introduction,	-
x	Glossary of flora and fauna	I - X
I	The tract dealt with	1 - 35
II A	Forest Flora	36-81
II B	Forest Fauna	82-92
III	Utilization of the produce	93-120
IV	Activities of Orissa Forest Development Corporation	121-134
V	Five Year Plan	135-145
VI	Staff and labour supply	146-154
VII	Past systems of management	155-217
VIII	Statistics of growth and yield	218-251

14.1.3. Part II: - The chapter wise brief resume of part- II of revised Working Plan of Deogarh Division is as under.

Table No. 363		
Chapters of Part-II		
Chapter No.	Brief resume of Chapters	Page No
I	Basis of proposal	252-275
II	Selection Working Circle	276-297
III	Rehabilitation Working Circle	298-318
IV	Protection Working Circle	319-338
V	Plantation Working Circle	339-369
VI	Bamboo (overlapping) Working Circle	370-401
VII	Joint Forest Management (overlapping) Working Circle	402-431
VIII	Wildlife (overlapping) Working Circle	432-451
IX	NTFP (overlapping) Working Circle	452-485
X	Misc Regulations	486-498
XI	General Financial forecast and Financial Plan of Operation	499-513
XII	Establishment and Labour	514-518
XIII	Control and Records	519-527
XIV	Summary of Prescription	528-554
XV	Comparison of Growing Stock	555-573

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14.2. Chapters of Part II:

14.2.1. Chapter-I (Basis of proposal) : - The summary of the chapter 'Basis of Proposal' is furnished as under.

Table No. 364

Summary of Basis of Proposal

Headings	Particulars of prescriptions	Para
General objectives of management	(1) To conserve and improve the existing vegetative-cover 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 Wild Life resources with a view to conserve and help enrich bio-diversity. (5) To promote development of sustainable and non-destructive livelihood opportunities for local communities.(6) Promote Joint Forest management involving Vana Samrakhyana Samiti for sustainable management of forests. (7) Ensure sustainable production of Non-timber forest products 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.	1.1
Methods of treatment to be adopted	It has emphasized to implement all the prescription of different working circle after fulfilling the prime need for protection and improvement of Forests. Adoption of rehabilitation measures supplemented by gap filling plantation. Improvement of bamboo forest by adopting Silvicultural operation. Improvement of wildlife habitat.	1.2
Constitution of Working Circle	In addition to the Selection, Rehabilitation, Eco Tourism, Plantation & Protection, another four mandatory overlapping Working Circles have been constituted.	1.3
Reasons for Constitution of Working Circle	The area over 132606.7194 ha has been taken as management area of the division, which includes 30 RF (100519.478 ha), 41 PRF (31938.232) & 01 PF (149.0094 ha).	1.4
Comparison of area with past Plan	The area managed under different Working Circles from 1933-34 to 2014-15 in 04 Plan period has been compared with the present Plan period from 2015-16 to 2024-25.	1.5
Period of Plan and intermediate revision	This Working Plan has been drawn up for a period of 10 years (2015-16 to 2024-25) as per Para 05 of National Working Plan Code. An intermediate revision has not been prescribed. The observation made in the triennial inspection report of the Territorial Regional Chief Conservator of Forest with in the Working Plan period shall be implemented for the balance coupes subject to approval of the Working Plan Committee.	1.6

14.2.2. Chapter-II (Selection Working Circle) : - The summary of the prescriptions under Selection Working Circle is furnished as under.

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Table No. 365		
Summary of Selection Working Circle		
Headings	Particulars of prescriptions	Para
General Constitution	The Forest blocks and compartments comparatively with high crop density, good stocking, adequate natural regeneration with mature trees and a good number of trees in approach class and all girth classes are included in this Working circle. This Working Circle Comprises Dry Peninsular Sal forests and Dry Mixed Deciduous forest, which are un-even, aged with good tree growth. Trees of all age gradations are available in such forests and the density varies from 0.3 to 0.7. Vegetation consists of Sal & its associates.	2.1
Blocks and compartment	In this revised Plan, an area of 94593.895 ha. It constitutes 71.33 % of the total Management area of the division.	2.1.2
Growing Stock	The total numbers of established trees in each forest block included in this Working Circle have been estimated in this revision. Such estimates for each forest block had not been done in the past. Based on the sample inventory data, trees numbers in different girth classes such as 30 to < 60 cm is 15545583 numbers, 60 to < 90 cm is 14787959 numbers, 90 to < 120 cm is 12262950 numbers, 120 to < 135 cm is 8507353, 135 to < 150 cm is 3809655 and 150 cm above is 1361067 numbers. Also the writer has estimated 4499861 numbers of seedling are in the SWC area.	2.2.5
Felling Series	The total area has been divided into 09 felling series namely Khajuria, Pradhanpat, Prabhasuni, Reamal, Badtaila, Malyagiri, Pauri, Mankarchua and Banor. Further each felling series has been divided into 10 equeproductive coupes.	2.3
Special objective of Management	(1) To encourage and obtain natural regeneration all over the area. (2) To improve the growth rate and vigour of the retained crop by creating temporary gap of the top canopy. (3) To improve the condition of forest cover on the hill terrain by tending operation. (4) To maintain the forest in different age groups for the interest of soil conservation and ecological stability. (5) To increase the value of the forest by encouraging the growth of principal species by adopting suitable silvicultural system. (6) To remove the dead, dry, hollow, up rooted, seriously diseased and over matured trees without creating permanent gaps in the crown to derive maximum sustained yield. (7) To protect the forest from theft by minimizing the demand of timber and firewood.	2.4
Analysis and valuation of crop	The average density of crop varies from 0.3 to 0.7. The entire forest area of the division was stratified on the basis of the Forest type layer. Stand and stock tables prepared for all block.	2.5

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<table>
<tr><td>Silvicultural System</td><td colspan="3">The silvicultural system prescribed is called 'Selection System' with emphasis on sustainable production and stability of the ecosystem. The trees, which have attained exploitable girth, can be selected for exploitation.</td><td>2.6</td></tr>
<tr><td rowspan="3">Exploitable girth classes</td><td>Blocks</td><td>Species</td><td>g.b.h in cm</td><td rowspan="3"></td></tr>
<tr><td rowspan="2">All</td><td>1. Sal</td><td>150</td></tr>
<tr><td>2. All other species</td><td>120</td></tr>
<tr><td>Felling Cycle</td><td colspan="3">Felling Cycle has been fixed at 10 years, which synchronizes with Plan period.</td><td>2.10</td></tr>
<tr><td>Choice of species</td><td colspan="3">All species such as Principal, Secondary, Guest and Inferior will be given equal importance for conservation of species bio-diversity and development of forests. The fruit bearing and important NTFP species will be retained.</td><td>2.10.2</td></tr>
<tr><td>Calculation of Yield</td><td colspan="3">The yield will be regulated by area with a percentage check on the removal of the exploitable trees as calculated in synthesis safe guarding formula.</td><td>2.11</td></tr>
<tr><td>Sequence of Felling</td><td colspan="3">Each felling series divided into 10 annual coupes so that the entire area is covered during Plan period. The work will commence from 2015-16 from coupe No-1 and serially go on.</td><td>2.12</td></tr>
<tr><td>Demarcation</td><td colspan="3">Demarcation of annual coupes will be done during the preceding year winter season by a Forest Officer not below the Rank of a Forester and checked by A.C.F.</td><td>2.13.1</td></tr>
<tr><td>Marking Rules</td><td colspan="3">Marking will be done soon after receipt of the inspection report for completion of demarcation Assistant Conservator of Forest. All trees having exploitable girth, which are silviculturally available shall be marked. All trees marked for felling shall be given two blazes one at the breast height and the other one as closed to the ground as possible preferable on the root. The blazes shall be opposite to each other and of size 20 cm x 15 cm. Higher Forest Officers shall check the marked trees. The marking officer shall assess the illicit felling inside the annual coupe prior to marking. The quantum of marking of trees shall be left by the extent of the trees illicitly felled during the period between last felling of the coupe and the time of marking. All uprooted and dead trees shall be marked for felling. A dying tree in congested patch can be marked for felling. Trees of any girth class shall not be marked for felling in absence of one established crop with in 05 mt radius around it. All trees standing by the side of any road and bank of nala shall not be marked for felling. Marking shall also not be done within 50 meters radius around the key habitat of Wild animals such as den, saltlick, wallows, game tank and water holes. On the basis of Selection Thinning, a definite unsound tree in the approach class will be marked for felling by the Assistant Conservator of Forest. 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</td><td>2.13.2</td></tr>
</table>

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Execution of Felling	Felling should be done through OFDC, Ltd. The execution of all coupes work shall be completed in 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. At the time of felling, retaining crops and established seedlings should not be damaged. The working agent will take all precautionary measure against forest fire in and around the annual working coupes. All converted timber and firewood in the coupe shall be lifted within the time limit. Under unavoidable circumstances Conservator of Forest may extend the time to minimum days.	2.13.13
Subsidiary Silvicultural Operation	Cleaning and thinning shall be done in the year following the main felling. All left out marked trees to be felled and damaged trees during main felling to be removed. All high stumps should be cut flush to ground. Recruit, whippy and woody seedling needs special care for its establishment in the felling area. Cleaning and thinning are prescribed.	2.14
Other Regulation	The coupe shall be closed to grazing for a period of 05 years after the main felling. The remaining area is open to grazing subject to the provision of the Orissa Forest (Grazing of Cattle) Rules 1980. Lopping is discouraged. Any regulation for lopping in not prescribed. All working coupes shall be rigidly protected from forest fire for a minimum period of 5 years after the main felling. Climber cutting shall be done at the time of marking of the annual coupe. Soil and water conservation measure shall be done. 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 by the Divisional Forest Officer.	2.16

14.2.3. Chapter-III (Rehabilitation Working Circle) : - The summary of the prescriptions under Rehabilitation Working Circle is furnished as under.

Table No. 366

Summary of Rehabilitation Working Circle

Heading	Prescription	Para
General constitution	The forest blocks over an area of 9184.645 ha as per Notification, which are in various stages of degradation are allotted to this Working Circle. Silviculturally, exploitable trees are not fit for felling. Proper protection of the area could not be ensured for which the existing crops and the site condition have deteriorated further and the rate of soil erosion has accelerated.	3.1
Block and compartment	The area extends over 9184.645 ha.	3.1.2
General character of vegetation	It consists mostly of hardy species. The soil is highly eroded and susceptible to sheet and gully erosion. The area is dominated by miscellaneous vegetation like Sala, Rohini, Karla, Aoinla, Jamu,	3.2

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	Kurei, Dhaura etc. It conforms to Northern Dry Deciduous Forest and Dry Peninsular Sal Forest. The density varies from 10 % to 25 %.	
Rehabilitation series	This Working Circle constitutes 05 rehabilitation series such as Deogarh, Reamal, Barkote, Pallahara & Khamar depending on distribution of area.	3.3
Special objectives of management	(1) To regenerate the degraded forest blocks by appropriate silvicultural operation and protection measure for the principal species to achieve quick apical growth with active participation of the people. (2) To restock the barren area by artificial regeneration. (3) 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. (4) To protect the area and minimize its further degradation. (5) To supply the firewood, poles and timber in a systematic manner to the local peoples and there by discouraging illicit felling. (6) To remove the miscellaneous thorny bushes to favour the growth of principal and secondary species. (7) To encourage natural regeneration through fire protection and closure from grazing by involving local communities. (8) To create favourable condition for the habitat and multiplication of the Wild Life.	3.4
Analysis and valuation of the crop	Sample point enumeration in the managed area has been done by the field Staff covering an area of 0.1 ha & strip. Stock map have been prepared after analyzing the inventory data of sample points.	3.5
Silvicultural system:	Conventional silvicultural system is not prescribed for this Working Circle. There will be no exploitation except removal of dead and uprooted trees. The operation to be carried out involves protection, cleaning, tending, reforestation and suitable soil and moisture conservation measure.	3.6
Rehabilitation cycle	As per Para 05 of the Working Plan Code and for complete execution of work in each rehabilitation series, a rehabilitation cycle of 10 year has been fixed.	3.7
Table of rehabilitation	Each rehabilitation series has been divided into 10 numbers of coupes. All coupes in each rehabilitation series have been shown on the topo sheet 1– 50000 scale. The working year of each coupe in different rehabilitation series is given in the table.	3.9
Method of executing the rehabilitation	All annual coupes will be demarcated and inspected during winter season (October to December) previous to the year in which it falls due for working. The coupe shall be displayed prominently through a signboard at prominent place. All dead and uprooted trees shall be removed.	3.10
Subsidiary silvicultural operation:	Recruit, whippy and woody seedlings need special care for its establishment in the rehabilitation area. It has been prescribed to take up cleaning in the year of rehabilitation.	3.11
Artificial regeneration	The renewal of a forest crop by artificial methods is important in this area. There are small gaps noticed in all most all blocks allotted to this Working Circle. The extent of area of individual gaps is 02 hectors or less. It is advised to adopt artificial regeneration in the permanent gaps of each coupe during the year	3.12

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	of coupe working.	
Other regulation	The coupe shall be closed to grazing for a period of 05 years after the coupe working. The remaining area is open to grazing subject to the provision of the Orissa Forest (Grazing of Cattle) Rules 1980. Lopping is discouraged. Any regulation for lopping in not prescribed. All coupes shall be rigidly protected from forest fire for a minimum period of 05 years after the main working. Climber shall be cut.	3.13
Soil and moisture conservation measure	Appropriate soil and moisture conservation measures such as gully plugging, staggered trenching, contour bunding and check dams shall be taken up including drainage line treatments depending upon the terrain.	3.14
Work of improvement	The concept of JFM is to involve the local people in protection and regeneration for better management of forests. Constitution of Forest Development Agency (FDA) in the respective divisions is a great help in this direction. Hence, one or more such annual treatment coupe(s) shall have registered JFM committee (VSS) wherever feasible, for the purpose of implementation of the treatment plan. However, while constituting such committees, the Govt. guidelines in this regard shall also be strictly adhered to.	3.15

14.2.4. Chapter-IV (Protection Working Circle) : - The summary of the prescriptions under Protection Working Circle is furnished as under.

Table No. 367

Summary of Protection Working Circle

Heading	Prescription	Para
General constitution	An area of 2296.390 ha Notification has been allotted to this Working Circle. In most of the cases Teak and Bija are illicitly cut for sale to the outsider. Due to intense biotic pressure from human and cattle, large number of forest blocks of the division is under various stages of degradation. Unless steps are taken to prevent fires, illicit felling, encroachment, illegal mining, poaching or podu the process of degradation cannot be reversed.	4.1
Ecologically fragile areas	There is need to see that forest on steep slopes and ecologically fragile areas are not disturbed and are completely protected. To achieve successful natural regeneration of any species, it is necessary to create those conditions in the various systems in which, according to ecology, it regenerates freely in nature. Slope affects run-off and drainage and thus has a profound influence on the moisture regime of the soil. As a general rule, the steeper the slope, the greater the run-off and better the drainage. Thus, soils on the hill slope and of the moderately sloping plains at the foot of the hills are well drained. The extent of area in each blocks and compartments under > 30^0 slopes will be given.	4.1.3

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Forest Blocks and compartment	This WC extended over 05 numbers of RFs & 01 PRF (2296.390 ha)	4.1.4
General character of vegetation	Sal ascends to the top of the hills, either pre-dominantly or mixed with it's other associates like Bija, Ashan, Bandhan, Kurum, Kasi, Bamboo, Dhaura, Sisoo, Kendu, Haldu, Gambhari etc. The forest types are mainly Moist and dry peninsular sal, Northern dry mixed deciduous and Tropical hill valley swampy forest. The growth and quality of the crop have been considerably reduced depending up on the adjoining environmental condition.	4.2
Special objectives of management	(1) To manage and protect the forest with the active participation of the communities. (2) To enhance productivity by proper soil and moisture conservation measure. (3) To protect forests from fire and grazing with the active support of the villagers. (4) To recreate green cover over the barren area with people's participation. (5) To protect Wild Life from its enemies. (6) To keep delicate and eco-fragile areas ecologically intact by maintaining adequate vegetative cover. (7) To treat community as stakeholders in forest protection and management.	4.3
Silvicultural systems.	As the forests included in this Working Circle are to be mainly protected without any other consideration, no silvicultural system has been prescribed.	4.5
Protection unit and prescription	The area shall be rigidly protected from illegal biomass removal so as to keep it under nature's own care and nursing. Special anti-smuggling squads and fire fighting squads will be created for each Protection Unit. Therefore 01 protection unit has been formed namely Khamar for the purposes.	4.5.2
Protection cycle	Since special protection would extend over the entire Working Circle, it is desirable to create different protection unit for this purpose. Accordingly, after detail field verification, the Working Circle area has been divided into 01 number protection units. Entire Working Circle area is to be treated within the currency of plan, the protection cycle of 10 years is prescribed.	4.5.3
Annual protection sub-unit	In order to execute the protection measures, protection unit has been divided into 10 annual protection sub-units to facilitate systematic operations. The annual sub-unit shall be attended to as per the sequence prescribed in the Plan.	4.5.4
Method of executing the protection	Area allotted to this Working Circle has good forest growth. Illegal felling of trees for the domestic use of the local people is common. Danda, Biripal & Gurusulei blocks are under heavy pressure for illicit removal of timber. Similarly Kansar A, Kaunshibahal & Chungamatia blocks are under heavy pressure for removal of firewood.	4.6
Communication system	The communication systems into different beat head quarters have not been improved. One Forest Guard stationed at a remote area cannot stop a group of people used to enter inside forest for illegal felling. Considering the present scenario the following suggestion have been prescribed to improve the communication systems for better protection.	4.6.2

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Subsidiary silvicultural operation	The area affected by illicit felling need special care for establishment of recruit, whippy and woody seedling. Cleaning and thinning shall be done.	4.7
Artificial regeneration	It is advised to adopt artificial regeneration in the affected area in the same year if trees will not come up. All the gaps in the illicit area are to be surveyed and reflected in the map at the time of detection. Mounds of size 1 ft x 1 ft 6 inches will be formed in the gap. The seeds of the natural species existing in the area will be dibbled in the mounds during the first week of June.	4.8
Other regulation	The area under treatment shall be closed to grazing for a period of next 05. Lopping is discouraged. All treatment area shall be rigidly protected from forest fire for a minimum period of 05 years after the treatment	4.9
Soil and water conservation measure	The area allotted to this Working Circle varies from gently slope to precipitous. Construction of check dams at an interval of 02 km in the Semi-perennial nalas flowing in different forest block is prescribed.	4.9.7
Works of improvement	Plantation across the smaller Nala and along the bank of the bigger Nala by branch cutting or direct showing is prescribed. Depending on the site quality, suitable fodder species for the Wild Life shall be chosen by the Divisional Forest Officer. Forest roads should be properly maintained to make it all weather roads.	4.9.8
Communication system and mobility	The VHF system in vulnerable pockets of the division needs to be strengthened. Fixed sets, mobile sets and handset should be made available. Each Protection Unit should be provided at least one fixed set and one handset. Attempt shall be made to provide every Protection unit with a jeep or van.	4.9.12
People participation	JFM is an accepted way to involve people in protection and regeneration of forests. Hence, local people shall be increasingly involved in forest protection and management in accordance with the Government policy in vogue. Steps should be taken by the DFO to constitute VSS for forest protection in vulnerable pockets.	4.9.13

14.2.5. Chapter-V (Plantation Working Circle): - The summary of the prescriptions under Plantation Working Circle is furnished as under.

Table No. 368

Summary of Plantation Working Circle

Heading	Prescription	Para
General constitution	Plantation Working Circle covers an area of 25431.7894 ha. It includes all planting area of this division from 1961-62 to 2011-12 & area of Balibahal PF. This area is treated as degraded forest. It includes plain and gently sloppy area with favorable condition for growing teak.	5.1

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Distribution of area	It includes plantation over 2039.1 ha form 1961-62 to 1994-95 and plantation over 23392.6894 ha from 1995-96 to 2011-12. It comprises 19.17% of the managed area.	5.1.4
General character of vegetation	It consists of mostly hardy species. The soil is highly eroded and susceptible to sheet and gully erosion. In some patches the topsoil has been washed away exposing the hard morums and rocky surface. The planted species are Teak, Khair, Eucalyptus, Bija, Sisoo, Bandhana, Gambhari, Sabai-grass, Cashewnut, Siris, Chakundi, Simuli, Malguri and Patalgarud. The natural miscellaneous vegetation like Sal, Rohini, Karla, Aoinla, Jamu, Kurei, Dhaura, Dhatuki and Kanteikoli exist in this area. The crop standing over this area conforms to Northern dry mixed deciduous forest and dry peninsular sal forest. The density varies from 0.2 to 0.4.	5.2
Plantation treatment series	This Working Circle constituted with 05 numbers of planting series such as Deogarh, Reamal, Barkote, Pallahara & Khamar depending on distribution of area.	5.3
Special objectives of management	(1) To improve the condition of planted economical valuable species with active participation of the people. (2) To reduce soil erosion in the degraded portion of the forest blocks. (3) To enrich the micro-edaphic condition for making the forests more productive in the near future. (4) To protect the area and minimize its future destruction. (5) To increase socio economical condition of the labourers. (6) To increase continuous inspection and there by reduces further degradation. (7) To create favorable condition for habitat and multiplication of the wildlife.	5.4
Analysis and valuation of crop	The entire area covered by Plantation Working Circle has been shown on the stock map. Sample points enumerations in the managed area have been done covering an area of 0.1 ha. Stock map have been prepared by field Staff after analyzing the inventory data of sample points.	5.5
Silvicultural system	The old planted trees have not attended exploitable girth. So conventional silvicultural system is not prescribed for Plantation Working Circle.	5.6
Plantation treatment cycle	It has been fixed basing on the period of the Working Plan or the number of coupes in each plantation treatment series. The plantation treatment cycle of 10 year has been fixed for complete execution of work in each plantation treatment series twice during the Plan period.	5.8
Table of plantation treatment	Each plantation treatment series has been divided into 10 coupes. All coupes in each planting series have been shown on the topo sheet 1~ 50000 scale. The working year of each coupe in different planting series is given in the table.	5.9
Method of executing the plantation treatment	Prescriptions given in the Orissa Plantation Manual, 1977 and other executive instructions, in force, shall be followed meticulously in addition to the following guidelines. It is needless to emphasize that success of the plantation depends largely on good plantation treatments and timely tending operations of in the field.	5.10

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Other regulations	The coupe shall be closed to grazing for a period of 05 years after the coupe working. Lopping is discouraged. All coupes shall be rigidly protected from forest fire for a minimum period of 05 years after treatments. Climbers shall be cut. In the bushy area two healthy and good shoots of a stump will be selected to retain and others shall be cut. The local laborers will take the materials obtained by this operation as an incentive for their works; those are engaged by the Forest Department.	5.11

14.2.6. Chapter-VI (Bamboo Overlapping Working Circle) : - The summary of the prescriptions under Bamboo Overlapping Working Circle is furnished as under.

Table No. 369

Summary of Bamboo (overlapping) Working Circle

Headings	Particulars	Para
General constitution	An area of 108250.800 ha as per Notification has been allotted to this Working Circle. The area extended over 25 number of forest blocks. Remotely situated hill portion, which embraces bamboo-bearing area are included in this Working Circle. It overlaps all the main Working Circle.	6.1
Distribution of area	The area extends over 25 forest blocks, such as 18 numbers of RF & 07 number of PRF.	6.1.2
General character of vegetation	Salia bamboo (Dendrocalamus strictus) constitutes the main species, which contribute about 04 % to 10 % of the crops. Bamboo forms as the middle story in the miscellaneous forest. On most of the hills, it ascends to the top, with its other associates like Sal, Bija, Ashan, Bandhan, Kurum, Kasi, Dhaura, Sisoo, Kendu, Haldu etc. The culms are undersized. The forest type is Northern Tropical Dry Deciduous. The growth and quality of the crop have been considerably reduced depending up on the adjoining environmental condition.	6.2
Growing stock	The total numbers of clumps in each forest block included in this Working Circle have not been counted in this revision. An average of 14 clumps exists over an area of 1.00 ha, as per the inventory data of sample point. As per inventory, the details of average growing stock and number of culms to be removed is given.	6.2.5
Cutting series	This Working Circle constituted with 06 numbers of cutting series such as Pradhanpat, Pravasuni, Kansar, Badtaila, Malyagiri & Danda.	6.3
Treatment type	The Range wise distribution of forest blocks and its compartments into different cutting series along with quality of bamboo and treatment type have been given in the table.	6.4.1
Special objectives of management	(1)To encourage and obtained maximum natural regeneration in all clumps. (2) To improve the size and vigor of the retaining culms by silvicultural operation.(3) To improve the condition of forest cover on the hill terrain by subsidiary silvicultural operation.(4) Interest To reduce the extent of fire by proper scientific management and maintain the middle	6.5

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	story for the of soil conservation and ecological stability.(5) To increase revenue and provide works to the local people.(6) To remove dead, dry and top broken culms in all treatment type area to derive maximum sustained yield. (7) To increase the clumps per hector by artificial regeneration and minimizing the demand of bamboo of the local people.	
Status of regeneration	The data collected in regeneration survey have been analyzed in Chapter II-A of Part-I. The status of regeneration in the area allotted to Bamboo (overlapping) Working Circle is found moderate.	6.6.6
Silviculture system adopted	The silvicultural system prescribed is called 'Culms selection-cum-clump improvement'. In this systems two complimentary operations shall be carried out simultaneously. The first one if to select the matured culms for cutting followed by some principle and the second one is to improve each clump condition by adopting tending and other cultural operation.	6.7
Rotation	The planned number of years between regeneration and maturity of a crop will vary depending on its site quality. Rotation should be a multiplication of the cutting cycle. As per Sri Harry G. Champion and Sri S. K Seth an individual culms lives for above 07 to 14 years.	6.8
Cutting cycle	A cutting cycle of 04 years has been fixed for all cutting series in this overlapping Working Circle.	6.10
Calculation of the Yield	The yield is calculated on clump to culms analysis method. In the inventory, the number of culms to be removed in each clump has been shown. The culms to be removed in each clump are based on the cutting rules and the quality of the clumps.	6.11
Table of cutting	Basing on the period of the Plan, each cutting series has been divided into 04 number of coupes such as A, B, C and D. All coupes in each cutting series have been shown on the topo sheet 1~ 50000 scale. The working year of each coup in different cutting series has been given in the table.	6.12
Method of executing the cutting	All annual coupes will be demarcated and inspected during the end of preceding year in which the coupe is due for working. The coupe number shall be shown in the displayed signboard of the compartment.	6.13
Cutting rules	Considering the field position, the following cutting Rules are prescribed. (1) All culms of 1st year (Karadi) and 2nd year (Mahila) shall not be cut under any circumstances. Culms of 3rd and 4th year (Pakia) will be retained in a clump such that their number shall not be less than the number of Karadi in the same clump. The minimum number of culms shall be retained in a clump on the basis of culms qualities I, II and III are 20, 15 and10 respectively. (2) Clumps having the minimum or less than minimum prescribed number of culms shall not be commercially exploited. Only broken, dead, dry, badly damaged and malformed bamboo will be cut. (3) A clump will be distinguished as an independent one, where its periphery is easily discernible from others. Only where such a distinction is not possible, two clumps with in 01 meter distance will be	6.13.2

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	regarded as one clump. (4) While retaining culms against cutting in a clump they should be well spaced and preferable in the periphery and in the order of preference as (i) Karadi. (ii) Mahila. (iii) Pakia and (iv) Older live. (5) The culms shall be cut above 15 cm and below 45 cm height from the ground level. But in no case it will be cut below the first prominent node from the ground. (6) The cut shall be made with a sharp instrument to ensure that the stump remains in tact with out splitting. (7) Lops and tops of bamboo will be simultaneously cleared at least to a distance of one meter away from the periphery of the worked clump to avoid fire hazard. (8) Rhizomes shall not be dug. Climber shall be cut from all the bamboo clumps during working of the coupe. (9) Bamboo cutting shall not be done from 1st July to 30th September. Bamboo strips will not be used in tying the bamboo bundles. (10) If sporadic flowering of the bamboo is observed, such clumps in a zone or culms in a clump will be clear felled after they have shed their seeds. (11) If gregarious flowering of bamboo is observed, all clumps will be clear felled in the zone after they have shed their seeds. Clear felling and extraction will be done early so that bamboo shall not be dried or deteriorated or become prone to fire damaged. (12) Lopping of bamboo either for feeding of livestock or otherwise is strictly prohibited if sporadic flowering is observed in the locality. (13) Bamboo cutting shall be completed by the end of May and the area shall be rigidly protected from fire and grazing in the year of working and the year following it if sporadic flowering is observed in the zone.	
Morphological characteristic	Several restrictions have been prescribed in bamboo cutting rules. In order to identify the bamboo at their different ages, the morphological characteristic is highly essential for executing agent. To determine the age of bamboo, the distinguishing characteristics of bamboo have been prescribed.	6.13.16
Subsidiary silvicultural operation	Retaining bamboos need special care for its establishment in the cutting area. It has been prescribed to take up cleaning in the year following the main cutting to help Karadi for its establishment.	6.14
Items of operation in cleaning	(i) Cutting and extraction of bamboo in the un worked clumps. (ii) Extraction of balance felled materials if any. (iii) All cutting debris shall be removed and the clump shall be left cleaned. (iv) Cutting of climbers to be anticipated to climb in the clump. (v) Stone and boulder packing around the clump so that no damaged shall be caused to the rhizomes and the rootstock. (vi) Soil filling in the clump so that the exposed rhizomes shall be	6.14.2

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	covered with soil scarped from the uphill side on a hilly or undulating terrain.	
Artificial regeneration	The renewal of a bamboo clumps by planting in B and C treatment type area has been prescribed, where less than 100 numbers of clumps per ha are exist. Bamboo should be planted in the permanent gaps of each coupe, just after annual cutting. An average of 50 number of bamboo seedling will be planted per hector.	6.15
Other regulation	The coupe shall be closed to grazing for a period of 01 years after the working year. The remaining area is open to grazing subject to the provision of the Orissa forest (Grazing of the cattle) Rules 1980. Lopping is discouraged. All working coupes shall be rigidly protected from forest fire for a minimum period of 01 years after the coupe working. Plantation across the smaller Nala and along the bank of the bigger Nala is prescribed. Depending on the site quality, suitable fodder species for the Wild animals shall be chosen for plantation by the Divisional Forest Officer.	6.16

14.2.7. Chapter-VII (JFM Overlapping Working Circle) : - The summary of the prescriptions under JFM Overlapping Working Circle is furnished as under.

Table No. 370

Sununary of JFM (overlapping) Working Circle

Heading	Prescription	Para
General constitution	There are 447 JFM committees in the division and they are protecting 59370.7708 ha of forest. Therefore 59370.7708 ha have been allotted to this overlapping Working Circle. The area allotted to this Working Circle will remain dynamic and is likely to increase as more and more degraded forest is allotted to the VSS. It is overlapping Selection, Protection, Plantation and Rehabilitation Working Circle. One of the remarkable features of the National Forest Policy, 1988 was that it prescribed for active involvement of the people in protection, conservation and management of the forests.	7.1
General character of vegetation.	The crown density of the crops standing over the area varies from 0.2 to 0.4. It consists of mostly hardy species. Sal is the principal species. The area is dominated by miscellaneous vegetation like Rohini, Karla, Anla, Jamu, Kurei, Dhaura, Dhatuki, Kanteikoli etc. The crop standing over this area conforms to Northern dry deciduous forest and dry peninsular sal forest.	7.2
Joint Forest Management series and sections	This Working Circle constituted with 05 number of joint forest management series such as Deogarh, Reamal, Barkote, Pallahara & Khamar depending on distribution of area, convenience of working and availability of VSS.	7.3

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Special objectives of management	(1) To manage and protect the forest with the active participation of the communities. (2) To enhance productivity by proper soil and moisture conservation. (3) To protect forest from fire and grazing with the active support of the villagers. (4) To treat communities as stakeholder in forest protection and management. (5) To recreate green cover over the barren area with people participation. (6) To create favorable condition for habitat and multiplication of the Wild Life. (7) To create income generating activities in the villages protecting the forests. (8) To study the scope of enhancing the network of VSS protection areas.	7.4
Silvicultural system	No conventional silvicultural system is prescribed for Joint Forest Management (overlupping) Working Circle. Moreover, the system of working in these particular areas would be guided by the Micro Plans prepared in conformity with the prescriptions of the main Working Circle, jointly by the DFO and VSS for the individual VSS allotted areas.	7.6
JFM cycle	As per Para 5 of the Working Plan Code and for complete execution of work in each joint forest management series, the joint forest management cycle of 10 year has been fixed.	7.9
Table of Joint Forest Management unit	Basing on the period of the Plan, each joint forest management series has been divided into 10 numbers of units. All units in each joint forest management series have been shown on the topo sheet 1– 50000 scale. The working year of each unit in different joint forest management series is given.	7.11
Micro Plan	The Micro Plans should be prepared for each VSS irrespective of whether money for implementation is available or not. Planning should be done first and efforts should be made to obtain funds from different sources like State Budget, District Budget, DRDA, MP and MLA grants and any other sources.	7.12.2
P.R.A	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.	7.12.4
Motivation	It is important that the motivation level of the people to protect the forests should be sustained for a long period for the forest to respond to the protection provided. The gestation period for the forest to provide returns is quite long. During which period there may be conflicts amongst groups of people or stakeholders. Hence it is advisable to identify genuine NGOs or eminent local persons (like teachers, doctors, village level workers etc.) who are closely associated with the people, who can convince the people and keep up their motivation level and enthusiasm.	7.12.6
Subsidiary silvicultural operation	Recruit, whippy and woody seedling needs special care for its establishment in the rehabilitation area. It has been prescribed to take up cleaning in the protected area, which will be done by VSS members.	7.13

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Artificial regeneration	There are small gaps noticed in all most all blocks allotted to this Working Circle. All the gaps in the unit of each JFM series are to be surveyed and reflected in the map at the time of inspection. Mounds of size 1 ft x 1 ft 6 inches will be formed in the gap. The seeds of the natural species existing in the area will be dibbled in the mounds during the first week of June. The VSS member will do the work only. No special allotment for plantation has been estimated in the Financial Forecast Chapter.	7.14
Other regulation	The unit shall be closed to grazing for a period of 05 years after the working. Lopping is discouraged. Any regulation for lopping in not prescribed. All units shall be rigidly protected from forest fire for a minimum period of 05 years after the working. Climber cutting will be done. Construction of check dams at an interval of 0.5 km in the nalas flowing in almost all block is prescribed for water conservation.	7.15

14.2.8. Chapter-VIII (Wildlife Overlapping Working Circle): - The summary of the prescriptions under Wildlife Overlapping Working Circle is furnished as under.

Table No. 371

Summary of Wildlife (overlapping) Working Circle

Heading	Prescription	Para
General constitution	An area of 132606.7194 ha as per Notification has been allotted to Wildlife (overlapping) Working Circle. The distribution, continuity and density of forest of this division are very significant. This Working Circle has been constituted for protection and multiplication of the existing wildlife, improvement of their habitat and conserves biodiversity. This managed area forms an important habitat zone adjoining to the buffer zone to Khalasuni & Badrama Sanctuary of Banra (WL) Division. It also forms a habitat and migratory corridor for the elephants.	8.1
General character of vegetation	Sal constitutes the main species. The forest types are mainly Moist and dry peninsular sal, Northern dry mixed deciduous and Tropical hill valley swampy forest. All classes of trees exist in this zone. The composition of the vegetation is suitable for the wildlife. The undergrowth distribution of the vegetation is favorable for the free movement of the wildlife. The density varies from 0.2 to 0.7.	8.2
Wildlife series	This overlapping Working Circle constituted with 05 number of wildlife series such as Deogarh, Reamal, Barkote, Pallahara and Khamar. Wildlife series formed for convenience of habitat management and distribution of area.	8.3
Blocks and compartments	This WC extended over 30 numbers of RFs (100519.478 ha), 41 numbers of PRFs (31938.232 ha) & 01 PF (149.0094 ha).	8.4
Special objectives of wildlife	(1) To provide improve habitat for multiplication of Wild Life. (2) To conserve and protect the Wild Life habitat with special emphasis on the proposed Elephant Reserve and	8.5

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management	Sanctuary area for eco-tourism. (3) To promote Wild Life in general and endangered species in particular. (4) To create awareness among the people regarding the necessity to conserve and protect the Wild Life and their habitat. (5) To protect the Wild Life from crimes and infectious diseases. (6) To increase in biodiversity.	
Status of multiplication	Standard information in respect of multiplication of different species of wildlife is given in the table number 74 of Chapter II-B of Part-I. But in the census report, the numbers of Wild animals available in this zone are very negligible. Therefore all prescriptions should be properly implemented to increase the number of each Wild animal.	8.6.5
Injuries to which fauna is liable	Clear felling for plantation, construction, diversion and Coppice Working Circle is one of the general factors responsible for destruction of wildlife in this division. This division has few patches of grassy area inside forest. Excessive grazing inside forest is also responsible for damage to the wildlife. Every year forest fire caused serious damage to the ground flora. Eggs and kids of Wild animals and birds are affected by forest fire.	8.8
Suggestions of enrichment of wildlife	Once the area is enriched with herbivorous animals then it is not so necessary to think about the food for the carnivorous animals. (i) The seeds of all locally available fodder species for the wildlife shall be direct shown inside forests. (ii) At least 10 number of bamboo rhizomes per hector shall be planted. (iii) Banana and sugar cane shall be planted along the peripheral area of all perennial and semi-perennial nala flowing in this division. (iv) Rab nursery of size 25 mt x 25 mt in the plain open area inside the forest shall be created, where only grass seeds will be shown. It is necessary to dig 05 numbers of tanks in the forest area of this division for safety of wildlife during the summer season. New salt licks to be created in area where more protection can be provided to the wildlife near anti-smuggling or poaching camps.	8.9
Damaged caused by elephant	The movement of herds of biggest Wild animals in this division made several damages to the people and their properties. The year wise damage caused by the elephant and the compensation paid for the same is given.	8.10
Suggestions for precautionary measure	The herd of elephants will move freely inside forest. Any artificial barrier shall not be imposed, which will check the movement of elephant herd. The elephant shall not be irritated physically. Any attempt shall not be made to drive the single tuskar. Sufficient fodder plants in the blank area either by direct sowing or by artificial method will be raised in every year. An amount of Rs.200000.00 will be placed to Divisional Forest Officer at the beginning of the financial year. So that immediate financial relief can be made to the family affected by wildlife.	8.11
Sanctuary	At present there is no any Sanctuary or National Park existing in this division. It has been proposed to create one Sanctuary for protection and multiplication of verities of	8.12

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	Wild animals and birds existing in this division. The proposed area is supported by hill terrine, plain valley, perennial nala and dense miscellaneous forest, which will attract tourist. This proposal is based on ground realities of the wildlife, their habitat, movement and food chain.	
Methods of treatment	Special habitats include snags, snag recruits, den trees, down wood, isolated large old trees, trees with fluting boles, buttresses, lianas, some significant species of fruit bearing trees and shrubs. These special habitats have been neglected in the past. Care should be taken while implementing the prescription of the Plan to maintain these special habitats especially in the areas coming under the Selection Working Circle.	8.13
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 wildlife so as to reduce the man-animal conflict. Tree cover around the stream, water holes and salt licks shall be maintained and improved. Grasses, which are highly preferred and consumed by herbivores, are Axonopus compresses, Eragrostis pilosa, Saccharum bengalensis etc. These grasses shall be raised in the wildlife concentrated areas.	8.14
Corridor development	Along with strengthening of protection measures for wildlife, corridor development will be given priority. With concentrated efforts for protection and improvement of forest cover in all wildlife series, steps shall be taken through afforestation or JFM activities to provide tree cover in potential corridors.	8.14.7
Species structure	The forests of this division are mostly uneven-aged and have good natural regenerations and provide varied habitats. The primary heterotrophs are Sambar , Cheetal, Barking deer, Mouse deer, Elephant etc. The secondary heterotrophs are Leopard, Jungle cat, Civet cat, Pangolin , Wild boar etc. Scavengers and other animals are Hyaena (Hyaena hyaena); Jackal (Canis aureus. The avifauna includes peafowl, red jungle fowl, common quail, green pigeon, the imperial pigeon, doves, the hill mynas etc are found all over the division.	8.14.11
Maintaining unique habitats	Unique habitats provide special functions, which are not provided by succession stages and special habitats. They are geomorphic in origin. These include the habitats like caves, overhangs, dens, cliffs, talus, ledges, Large boulder aggregates, Sheet rocks etc.	8.15
Maintaining critical macro habitats	Riparian Zones connects all kinds of habitats along and across the altitudinal range, and act as wildlife corridors. The riparian forests provide thermal cover in winter and summer, which is important for all Wild animals. Riparian stretches offer the cheapest road alignment opportunities to locate extraction roads and paths since minimum amount of	8.16

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	cutting and filling is required. Gorges provide crucial microhabitat for herpetic fauna. Gorges need to be protected.	
Other prescriptions	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. Watchtowers shall be constructed near crucial waterholes and saltlicks. Identified pockets of wildlife and scenic beauty can be developed as eco-tourism centers. Generating awareness about the wildlife and its relevance to the well being of mankind needs be given priority through different campaigns.	8.17
Wildlife protection measure	The immediate need is to collect 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 and action plan while third step is to carry out enforcement. The staff deployed for anti-poaching operations shall be extremely alert in good health with high motivation and well acquainted with the entire terrain. The prosecution report shall be thoroughly scrutinized by the ACF or DFO before being filed in the court. Anti-poaching camp should be set up in vulnerable pockets where there is greater concentration of wildlife.	8.18
Miscellaneous regulations	The awareness for wildlife preservation may be created through celebration of wildlife week, competitions and debate among the School and College students. The field staff shall be provided with modern equipments including proper arms and ammunition. 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 etc. Divisional Forest Officer should develop short term and long-term measures to combat wildlife depredation problem. The wildlife rich areas shall be closed for grazing. 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.	8.19

14.2.9. Chapter-IX (NTFP Overlapping Working Circle) : - The summary of the prescriptions under Non Timber Forest Produce (overlapping) Working Circle is furnished as under.

Table No. 372

Summary of Non Timber Forest Produce (overlapping) W.C

Heading	Prescription	Para
General constitution	An area of 132606.7194 ha as per Notification has been allotted to this overlapping Working Circle. This Working Circle overlaps all the main Working Circle. The forests of Deogarh Division contain a large number of species, which yield a variety	9.1

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	of non-timber forest products (NTFP). The people living in and around the forests rely on these NTFPs as a crucial component of their livelihood security. The people usually collect these products for their own consumption as well as for sale to add to their earnings. The rural people of the division depend on these resources as one a major source of income generation.	
General character of vegetation	In most of the hills, sal ascends to the top, either pre-dominantly or mixed with its other associates NTFP species. The regeneration is purely natural and distributed adequately all over the area. The forest types are mainly moist and dry peninsular sal, Northern dry mixed deciduous and Tropical hill valley swampy forest. The important NTFP items are Kendu leaf, Mahua flower, Sal seed, Myrabolam and Siali leaf.	9.2
Special objectives of managements	(1) To encourage and obtained natural regeneration of species producing NTFP items in all over the area. (2) To regulate and optimize extraction and utilization of various NTFPs in conformity with Government policy with a view to promote sustainable management of forest. (3) To enhance the value of forest by way of developing new NTFPs, creating additional opportunities for further value addition in the existing NTFPs and strengthening the marketing. (4) To develop and extend skills to the local people including the tribals for sustainable collection, extraction and utilization of various NTFPs. (5) To meet the demand of NTFP based industries. (6) To provide employment to the local people by increasing the production capacity of NTFP. (7) To protect the forest from theft by creating awareness in the forest fringe villages.	9.4
Analysis and valuation of crop	Systematic study has not been done in the past in this division to assess the potential production of various NTFPs and to ascertain impact of collection of such NTFPs on sustainability of the forest. An attempt has been made by the Forest Resources Division (FRS), Cuttack by carrying out the forest resource survey in different parts of the State, to assess and estimate the availability of some NTFPs. With help of assessment made by the FRS Division, estimation for tannin materials like Dhaura leaves, fruits of myrobalans and barks of Sunari and Karada will be done for Deogarh Division.	9.5
Method of collection	The primary collectors should be properly guided and trained to collect the NTFPs in non-destructive way. Latest techniques of collection, drying and storage should be imparted to them. Value addition to collected NTFPs will increase their earning.	9.6
Methods of treatment and improvement for NTFP	Scientific methods for treatment and improvement of some major NTFP species, such as Tamarind, Sal seeds, Sal-leaves, Myrabolans, Mahua flower and Mahua seeds, hill brooms, Kendu leaf, Gum, Siali leaves and fibers etc have been given.	9.7
Medicinal plants and their prescriptions	The distribution patterns and habits of medicinal plants are varied and diverse. Though there is practically no specific study on the medicinal plant resources and their potential, the use in the traditional system of medicine continues to be in vogue in the division and the large population still depends on these resources for their medical needs. However, gradually, popularization of	9.8

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	medicinal plant species and their derivatives is regaining its lost ground or value in the State being even encouraged by the State Medicinal Plant Board. Still a lot of work is required to be done, which has been prescribed to preserve this resource for posterity.	
Development of special NTFP	It is also felt that development of certain special items should also be considered on priority. It is prescribed that large scale plantation of Jatropha and Agave along the boundary of the forest blocks should be under taken. This will not only create the additional NTFPs but also help in forest consolidation. These species being non-browsable, their protection measures are not so essential.	9.9
Calendar of operation of major NTFPs	Collection cycle will be the collection period for different NTFP items from 1st October to 30th September of following year. There may be local variations in period of ripening due to terrain, aspect and weather conditions. However, the period of collection of some of the important NTFP is given.	9.10
Misc. regulation	Priority shall be given for plantation of NTFPs or medicines plants in ANR. Similarly in the RWC areas, care should be taken during cleaning operations to retain the miscellaneous species, which yield important NTFPs. The Divitional Forest Officer shall contact the State Cooperatives like TDCC, TRIFED and other organizations for marketing of NTFPs available in the division. The members of VSS shall be trained about the marketing prospects of various NTFPs. The Divisional staff should prevent the purchase of the NTFPs at lower price by middlemen. Forest fire should be stopped.	9.11

14.2.10. Chapter-X (Miscellaneous regulations) : - The summary of the prescriptions under miscellaneous regulation is furnished as under.

Table No. 373

Summary of Miscellaneous regulations

Heading	Prescription	Para
General constitution	The forest area that are in various stages of degradation are included in this Misc. regulations. An area over 91823.3899 ha, This area is under continuous pressure for removal of metals, Mururus, 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.	10.1
Block and compartment	The misc. regulations area extends over 91823.3899 ha.	10.1.2
General character of vegetation	It consists mostly of hardy species. The soil is highly eroded and susceptible to sheet and gully erosion. The area is dominated by miscellaneous vegetation like Sal, Rohini, Karla, Amla, Jamu, Kurei, Dhaura etc. It conforms to Northern Dry	10.2

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	Deciduous Forest and Dry Peninsular Sal Forest. The density varies from 01 % to 10 %.	
Special objectives of management	(1) To regenerate the degraded forest blocks by appropriate silvicultural operation and protection measure for the principal species to achieve quick apical growth with active participation of the people. (2) To restock the barren area by artificial regeneration. (3) 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. (4) To protect the area and minimize its further degradation. (5) To supply the firewood, poles and timber in a systematic manner to the local peoples and there by discouraging illicit felling. (6) To remove the miscellaneous thorny bushes to favour the growth of principal and secondary species. (7) To encourage natural regeneration through fire protection and closure from grazing by involving local communities. (8) To create favourable condition for the habitat and multiplication of the Wild Life. (9) To stop illegal removal to metal.	10.3
Petty felling for Departmental demand	Many buildings exist in this division. Considering the condition of the existing building, it is assed that minimum of 01 cumt of timber will be required in repair works for each building during the Plan period. Seized timber will be used for Departmental buildings works either repair or newly constructed. Petty felling is not prescribed to meet the demand of timber for Departmental use.	10.5
Kendu leaf demand	Kendu Leaf wing needs poles and brushwood for repair works of existing Phadies of Deogarh and Angul kendu leaf Division with in the jurisdiction of this division. An average of 08 poles per Phady will be supplied for repair works depending upon the availability of seized or cleaning materials. The DFO (KL), Deogarh and Angul shall plant first growing species around each phady to meet the annual requirement of poles and brushwood for phadies repair.	10.5.2
Research needs	At present there is one preservation plot exist in this division. The present scenarios of forest management needs research plot in this belt of natural forest, which is extended towards the high forest zone of Bonei, Bamra and Keonjhar division. An area extended up to 100.00 ha in Malyagiri RF is suitable for research plot.	10.5.4
Forest road improvement	At present 20 number of forest roads covering a distance of 151.25 km are exist in this division. Improvement of the existing forest road shall be taken up depending on the found allotted. Widening and extension of the forest road is not prescribed. Petty felling for executing any works in the existing forest roads is not prescribed.	10.5.5
Special grant	In exceptional circumstances, this division may receive special grant for development of infrastructures, creation of new forest roads etc beyond the financial forecast during the Plan period. In any circumstances, while executing the works for utilization of special fund, petty felling in the area of forest status is not	10.5.6

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	prescribed.	
Deviation	All prescriptions prescribed in different Working Circle shall be strictly followed with in time, so that any deviation with reference to harvesting of the forest produce will not arise. But due to unavoidable circumstances if it is necessary to harvest the forest produces out of the prescriptions then the Head of the Forest Department shall order for such harvest based on sufficient reasons. The check shall be through control form and deviation statement.	10.6
Control form	It has been prescribed to maintain 04 numbers of control forms during each Working Plan year, which start from 1st July to 30th June. The pattern of forms has been given in a separate Chapter.	10.6.3
Deviation	Any works done in the managed area of the Working Plan with in the time period, which alter the basis of management laid down in this Plan is treated as deviation. All deviation, which permanently alter the basis of management will require prior sanction of the PCCF. The PCCF, before sanctioning the major deviation, will necessarily take prior approval of the Regional CCF of the Ministry of Environment and Forest.	10.6.4
Right and concessions	The rights and concession have been granted to the public in the challenge contest of wide gap between demand and supply of forest materials.	10.7
Fuel wood	In each Range there will be one depot for fuel wood to meet the demand of local people. The OFDC ltd will supply fuel wood at a minimum rate.	10.7.2
Bamboos	In the existing depot at Deogarh, Pallahara, Badkudar and Tileibani of the Orissa Forest Development Corporation Limited will sale salia bamboo to the local people as per the prescribed rate. Each tenant will be supplied 50 bamboos per annum 'on first come first serve' basis subject to availability.	10.7.4
Fire accident	In case of fire accidents forest materials will be supplied by the Orissa Forest Development Corporation Ltd. at the cost inclusive of transportation charge, on requisition from the Tahasildar as per prevailing rules.	10.7.5
Timber	The house building materials will be supplied from the Orissa Forest Development Corporation depots at rates fixed from time to time.	10.7.6
Usufructuary Benefits to Vana Samrakshana Samiti:	The Vana Samrakshana Samiti will enjoy usufructuary benefits provided it discharges its duties and responsibilities as laid down in the Scheme. All intermediate yield in shape of small wood, poles, fire wood etc. as may be obtained in silvicultural operations will be equitable 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 Samrakshana Samiti in equal shares.	10.8
Rest house and shed	This division is very poor in camping facilities. There is one rest shed at Pallahara. The improvement of rest shed and constriction of Rest house can attract tourist in future.	10.10.7

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Administrative unit	In the reorganization of this division, 05 numbers of Ranges, 20 numbers of Sections and 90 numbers of Beats have been formed as the administrative units. Also there are 04 number of forest check gate functioning to check the forest produce on transit. Habitable Government quarters should be provided to all field staff specially the Forester and Forest Guard in their respective jurisdiction. Proposal for major repair works of existing Government quarters and construction of new quarters will be given.	10.10.8
Forest blocks	At present 30 number of RF, 41 PRF & 01 PF are within the geographical jurisdiction of Deogarh Division. Reservation proposal, boundary verification and pillars repairing have been proposed.	10.11

14.2.11. Chapter-XI (Financial forecast and cost of the Plan) : - The summary of the prescriptions under Financial forecast and cost of the Plan is furnished as under.

Table No. 374

Summary of Financial forecast and cost of the Plan

Heading	Prescription	Para
Cost of the Plan	The Divisional Forest Officer, Deogarh has submitted the required information for preparation of First Preliminary Working Plan Report to Regional Chief Conservator of Forest, Rourkela Circle. The requirement of fund for preparation of Plan will be estimated and submitted to Regional Chief Conservator of Forest, Rourkela.	11.1
Expected revenue	There will be a step rise in the rate of forest produce within the Plan period of 10 years (2015-16 to 2024-25). The year wise expected revenue in different items of forest produce and other sources with in the Plan period will be calculated and displayed.	11.2
Estimated expenditure for establishment	The expenditure to be incurred during the Plan period from 2015-16 to 2024-25 for infrastructure and establishment is given.	11.3
Possible sources of funding	Several prescriptions have been prescribed to improve the present condition of the forest crop of Deogarh Division. The revenue shall be anticipated only after implementation of proper silvicultural operation. The estimated expenditure to be spent during the Plan period is depends on the budget provision. The possible sources of funding during the Plan period taking cognizance of present system of Five Year Plan is given.	11.3.2
Estimation for Selection Working Circle	The total Notified area under this Working Circle is 94593.895 ha. The year wise cost for implementation of SWC is given.	11.4.1
Estimation for Rehabilitation Working Circle	The total Notified area under this Working Circle is 9184.645 ha. Only gape plantation has been prescribed for rehabilitating the degraded forest. The year wise cost for implementation of RWC is given.	11.4.3
Estimation for	The total area covered in this wc is 2296.3900 ha. Forest roads	11.4.10

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Protection Working Circle	and communication systems should be improved. The annual expenditure required for Protection Working Circle is given.	
Estimation for Plantation Working Circle	The total old planted in the managed area is included in this treatment, which is extended over an area of 25431.7894 ha. The year wise cost for cleaning and protection is estimated and given.	11.4.11.
Estimation for Eco tourism Working Circle	The total area under this Working Circle is 1100.00 ha. The year wise cost for implementation of ETWC is given.	11.4.14.
Estimation for Bamboo (Overlapping) Working Circle	The total area under Bamboo (Over lapping) Working Circle is 108250.800 ha. Clumps per hector is 188 numbers. The cost norm that will be followed in Bamboo Working Circle is given.	11.4.5.
Estimation for Wildlife (overlapping) Working Circle	The total area under this working circle is 132606.7194 ha as per Notification. The treatment including creation of waterholes, game tanks, protection, research, publicity and maintenances of permanent structure. The year wise annual expenditure on Wildlife Working Circle is given.	11.4.9.
Estimation for JFM (Overlapping) Working Circle	At present 447 numbers of VSS protecting forest in different patches. The total area under this Working Circle is 59370.7708 ha, which is protected by 447 numbers of VSS committees. Efforts should be made to strengthen the VSS protecting the area. Therefore estimation is made and given.	11.4.12.
Estimation for NTFP (Overlapping) Working Circle	The total area under Non-Timber Forest Produce (Over lapping) Working Circle is 132606.7194 ha. The treatment includes the preference of Non-Timber Forest Produce and Medicinal species in planting operation, research on Non-Timber Forest Produce items, publicity, and marketing. Thus annual expenditure on Non-Timber Forest Produce (overlapping) Working Circle is kept at lump sum amount of Rs.04 lakh per annum with subsequent annual rise of 10 % every year.	11.4.13.
Estimation for other activities	Library, Equipments, Maps & Tools - An amount of Rs.02 lakhs is estimated on lump sum basis with an annual raise of 10 % every year. Creation of Research Plots – An amount of Rs.04 lakhs is required for creation of one research plot for this division as per prescription. Further improving the research activities Rs.100000.00 with a 10 % annual increase is required in the subsequent year. Miscellaneous Contingencies - An amount of Rs.04 lakhs per annum is estimated with subsequent rise of 10 % every year to meet the miscellaneous expenditure of this division. Soil Conservation Measures - The average annual expenditure to be incurred for this in the division would be approximately Rs.50 Lakhs with 10 % annual increase.	11.5
Projected cost analysis	The estimated cost to be required for implementation of the Plan during the period from 2015-16 to 2024-25 is given.	11.6

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Cost benefit analysis	The tangible benefits from forest constitute the very insignificant fraction of the total benefits. The expenditure to be made during the Plan period has been estimated. Hence in the calculation of the benefits a projection is made that the benefits continue in every year.	11.7

14.2.12. Chapter-XII (Establishment and labour) : - The summary of the prescriptions under Establishment and labour is furnished as under.

Table No. 375

Summary of Establishment and labour

Heading	Prescription	Para
Establishment	Deogarh Division has been reorganized with effect from 01.10.2003, consequence upon reorganization of Forest Department vide order No.13228 / F & E, dt-08.08.2003 of Government of Orissa. The cadrer strength of establishment is 198 of different category.	12.1
Range, Section, Beat and Check gate	The established administrative units such as 05 Ranges, 20 Sections, 90 Beat and 04 Check gates are approved after reorganization of this division.	12.1.2
Proposal for establishment	The present staffing pattern is almost same as it was in 1959 and 1979. Depending on the present scenario of forest management, there should not be any vacancy of the grass root level post for proper implementation of the prescription. A striking force consisting of at least 05 members and headed by one Assistant Conservator of Forest should be formed at the division level to check smuggling. The striking force should be provided with a first moving vehicle and necessary arms. The force should be empowered to use firearms like similar staff of police Department. There should be one forest check gate in every road crossing on the border of this division.	12.1.3
Labour	The different works in forestry shall be done as per the scheduled of time. Technical knowledge is essential for execution of the forestry operation. As such this area is shortage of skilled and semi-skilled labourers.	12.2
Wages	The daily wages shall be paid to labourers as per the rate fixed by the Government from time to time. The present rate is Rs.150.00 per day per one laborer. Weekly one-day rest will be given to each laborer.	12.2.2
Improvement of labourers	The labourers available in the forest fringe villages should be regularly employed in every forest operations. At least 05 numbers of labourers in each Beat should be regularly employed and trained in the forestry operation.	12.2.3

14.2.13. Chapter-XIII (Control and record): - The summary of the prescriptions under Control and record is furnished as under.

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Table No. 376		
Summary of Control and record		
Heading	Prescription	Para
Control form	It has been prescribed to maintain 02 numbers of coupe control forms in triplicate during each Working Plan year, which starts from 1st July to 30th June.	13.1
Felling control form	It has been prescribed to maintain a felling control form, which will control and maintain a record of all trees marked for felling.	13.1.4
Deviation statement	The Divisional Forest Officer will prepare a yearly deviation statement in three copies and forward it to PCCF through concerned Conservator of Forest. No explanatory remark are required on this form, these should be given in the forwarding letter.	13.2.4
Maintenance of record	Registers of Reserved forests, Proposed Reserved forests and Village forests are to be maintained as per Orissa Forest Department code. Compartment History Files for all the compartments of the forest blocks will be prepared in three sets. Journals for plantations will be maintained for each plantation. Fire maps shall be maintained as per Rule 283 (22) of the Orissa Forest Department Code and National Working Plan Code 2004.	13.3
Coupe control form	The format of coupe control form as per as per National Working Plan Code for all Working Circles is given.	13.4

14.2.14. Chapter-XV (Comparison of Growing Stock): - The summary of the prescriptions under Comparison of Growing Stock is furnished as under

Table No. 377		
Comparison of Growing Stock		
Heading	Prescription	Para
Growing Stock of Revise Plan in SWC Area	Total area enumerated is 4729.694 ha and the total enumerated tree is 2814168 numbers. Therefore the tree per ha is 595 numbers. The total growing stock is SWC area in 31 blocks is 56274567 numbers. The total growing stock in SWC area in the revise plan is given.	15.1.2
Growing stock of Behera's Plan in SWC Area	Total area enumerated is 1802.552 ha and the total enumerated tree is 580422 numbers. Therefore the tree per ha is 322 numbers. The total growing stock in SWC area of Behera's Plan is given.	15.1.3

14.3. Volume - II: - The important discussion of Volume - II of this revised Working Plan is given in the table below.

Table No. 378		
Volume - II		
Sl. No.	Brief resume of discussion.	Page No.
1	Notification	574-664
2	Tree Enumeration	665-783
3	Regeneration	784-815
4	Bamboo enumeration	816-826
5	GPS reading of boundary pillar	827-873
6	List of Building & Wells	874

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CHAPTER - XV

COMPARISION OF GROWING STOCK

15.1. Comparison of Growing Stock in Number:

15.1.1. Working Plan Meeting for Approval of Draft Plan: - The working plan meeting is held on dt.14.09.2015 in the office of Pr.CCF for approval of draft plan of Deogarh Forest Division submitted to MOEF and CC Eastern Regional Office, Chandrasekharpur, Bhubaneswar vide letter No.14992 dt.31.08.2015 of Pr.CCF, Odisha, Bhubaneswar. It was instructed to compare the growing stock in number of Behera's plan with the present revise plan. Therefore the result of the comparison is given below.

15.1.2. Growing Stock of Revise Plan in SWC Area: - Total area enumerated is 4729.694 ha and the total enumerated tree is 2814168 numbers. Therefore the tree per ha is 595 numbers. The total growing stock is SWC area in 31 blocks is 56274567 numbers. The total growing stock in SWC area in the revise plan is given in the table below.

Table No. 379

Growing stock in SWC area

Sl. No.	Block	Seedling	Pole	Girth classes in cm					
				30<60	60<90	90<120	120<135	135<150	150 & above
1	Pradhanpat	3423498	2161767	1909420	1076678	1371082	1581370	462635	176642
2	Kansar	5255507	2339974	1764416	1934253	1471919	1132246	330238	113225
3	Pravasuni(P)	4032179	2043091	1962087	1827081	1647073	873039	333015	135006
4	Rambhadevi(P)	1560915	626899	655394	706053	557243	310283	129812	41160
5	Panguli	847405	336443	212301	239288	192510	82761	44979	16192
6	Mandasila	1277166	483926	299336	261919	249447	286863	129712	27439
7	Paburi	3654481	1783211	1320897	968658	609080	476990	271518	102736
8	Badtaila	3677328	1445516	1032511	1246956	1088108	357408	381235	63539
9	Gogua	1212986	517541	719705	514845	285726	196773	75475	45824
10	Malyagiri	4742659	2315752	1083772	1343136	1167139	768829	509465	203786
11	Old Puri	3298848	1308054	797594	906067	784832	491318	287134	108473
12	Tamkia RF	207525	75464	36946	29478	39304	28299	20045	7075
13	Saida	47417	20127	10575	7164	11257	5686	2047	1365
14	Chargochhia	9222	4680	700	827	657	360	488	85
15	Mankarchua	273557	101233	58579	31849	21043	23318	14787	13649
16	Kuladera	602768	255990	160738	129483	159250	86322	58044	13395
17	Khajuria	1985203	792377	413229	332287	447310	379148	140583	51121
18	Jhadeswar	1107287	551327	331259	410020	361374	203852	85710	44013
19	Hadamunda	103613	54069	18817	25963	32632	15959	6193	4287
20	Kankarkhol	1909314	986328	1063243	1167306	466017	235271	76915	58818
21	Kundheigola	1176825	538465	421513	479989	260705	238776	153499	26801
22	Naikul	759249	384358	255608	230994	278328	115497	60588	11360
23	Kulundibadar	196852	88277	44846	5665	58064	47207	3777	1416
24	Tusula	722296	343713	102948	142799	131176	114571	18263	11623
25	Kardapal	211096	92613	39839	31561	23283	13452	7761	4139
26	Bankhol	467896	216661	165953	117550	99111	53013	43793	12677
27	Chilanikhol	794185	326517	164959	226181	181965	141151	79929	22108
28	Kandarpa-Lambdura	804871	348278	394937	279955	134978	108316	58324	29995

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29	Ludhar-Deopani	441797	181162	66654	70927	93145	108527	12818	7691
30	Salobi-Laimura	150190	63565	25722	30452	30156	23948	7983	3843
31	Sargidihi	37726	16581	11085	12575	9036	6800	2888	1584
	Total	44991861	20803879	15545583	14787959	12262950	8507353	3809655	1361067

15.1.3. Growing stock of Behera's Plan in SWC Area: - Total area enumerated is 1802.552 ha and the total enumerated tree is 580422 numbers. Therefore the tree per ha is 322 numbers. The total growing stock in SWC area of Behera's Plan is given in the table below.

Table No. 380

Growing stock of Behera's Plan in SWC

Block	Girth classes in cm						
	30 - 60	60 - 90	90 - 120	120 - 150	150 - 180	> 180	Total
Pradhanpat	1745573	876800	750100	953100	300100	94580	4720253
Kansar	1050587	1292021	1048681	902106	204660	60353	5458408
Pravasuni	2145055	1032301	650977	276533	96277	36507	4237650
Gogua	516978	404658	196468	91243	27955	11991	1249293
Rambhadevi	469101	578206	202514	158896	11802	2380	1422899
Badtaila	1071442	634340	437748	168248	51251	14667	2377696
Pauri	1425704	473901	271195	86558	18333	6010	2281701
Mandasila	386925	159190	75249	12044	00	00	633408
Panguli	346494	102395	81606	25659	2716	302	559172
Khulundikudar	63945	26308	12436	1990	00	00	104679
Tusula	226926	93363	44152	7064	00	00	371485
Old Pauri	557127	754936	438239	324807	131827	8974	2215910
New Pauri	56128	30447	45519	23846	7081	714	163735
Snida	9823	6368	10765	4932	1626	1023	34537
Tamkia	29446	29280	18018	9439	2407	678	89268
Makarchua	39810	39386	26151	14177	6165	1738	127427
Kuladera	92184	113731	68706	33743	10163	3455	321982
Khajuria	587899	464221	210295	82772	28966	10857	1385010
Malyagiri	974112	924931	753362	473544	302269	107769	3535987
Total	11795259	8036783	5342161	3650701	1203598	361998	31290500

15.1.4. Comparison of Total Growing Stock: - The percentage of increase of total growing stock and the percentage of tree to be removed in the SWC area is given in the table below.

Table No. 381

% of tree increase & % of tree to be removed out of total growing stock

Block	G.T in Behera's plan	G.T in revise plan	No in increase	% of increase	No of tree to be removed	% of removal
Pradhanpat	4720253	6577827	1857574	39.35	10297	0.15
Kansar	5458408	6746297	1287889	23.59	9078	0.13
Pravasuni	4237650	6777301	2539651	59.93	8005	0.11

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Gogua	1249293	1838348	589055	47.15	1885	0.10
Rambhadevi	1422899	2399945	977046	68.66	3102	0.12
Badtaila	2377696	4169757	1792061	75.36	8096	0.19
Pauri	2281701	3749879	1468178	64.34	5793	0.15
Mandasila	633408	1254716	621308	98.08	2867	0.22
Panguli	559172	788031	228859	40.92	1492	0.18
Khulundikudar	104679	160975	56296	53.77	722	0.44
Tusula	371485	521382	149897	40.35	1677	0.32
Old Pauri	2215910	3375418	1159508	52.32	4971	0.14
New Pauri	163735	292024	128289	78.35	1266	0.43
Saida	34537	38094	3557	10.29	77	0.20
Tamkia	89268	161147	71879	80.52	298	0.18
Makarchua	127427	163225	35798	28.09	227	0.13
Kuladera	321982	607232	285250	88.59	1456	0.23
Khajuria	1385010	1763678	378668	27.34	4088	0.23
Malyagiri	3535987	5076127	1540140	43.55	6663	0.13
Total	31290500	46461403	15170903	x	72060	x

15.1.5. Analysis of Comparison of Growing Stock: - In the revise plan for the period 2015-16 to 2024-25, 31 forest blocks are included in selection working circle. The total growing stock of Behera's Plan is 31290500 numbers over 19 forest blocks included in selection working circle. The total growing stock in the present revised plan of the same 19 blocks is 46461403 numbers. Therefore 15170903 numbers of trees have been increased. The average percentage of increase of growing stock is 48.48. Further the total number of exploitable trees to be removed for the above blocks in selection working circle during the plan period is 72060 numbers. The percentage of tree to be removed out of total growing stock is 0.15. Also the percentage of tree to be removed out of total increase tree is 0.47. Therefore

15.1.6. Growing Stock of Revise Plan in RWC Area: - Total area enumerated is 91.846 ha and the total enumerated tree is 53271 numbers. Therefore the tree per ha is 580 numbers. The total growing stock in RWC area in the revise plan for the period 2015-16 to 2024-25 is given in the table below.

Table No. 382

Growing stock in RWC area

Sl. No.	Block	Seedling	Pole	Girth classes in cm					
				30<60	60<90	90<120	120<135	135<150	150 & above
1	Thianal	30632625	130374	100475	70251	35942	22055	11436	8169
2	Nizgarh A	6281955	40836	19544	3792	1396	0	0	0
3	Nizgarh B	3300000	10080	11160	3720	930	0	0	0
4	New pauri	52961000	272190	138416	63300	51484	27008	10972	844
5	Kansar B	4541833	17012	18245	358	0	716	0	0
6	Rengalmunda	3936262	19934	18490	9823	7800	4045	867	0
7	Kunjam	42089692	123620	858993	399975	81900	0	0	0
8	Jambua	11220300	22650	131881	88608	28849	8243	3091	0
9	Rajamunda	11441925	54594	44103	24964	19139	12482	4161	0
10	Kalkath	8587552	43791	77079	48593	43566	28486	8378	0

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11	Tirib	3106552	18546	18854	13712	7713	4713	0	0
12	Tarang	37474576	182295	328349	111531	57996	22306	10707	0
13	Banbira	41358600	204330	307022	174377	35770	31298	19375	8942
14	Talabahali	1839712	13438	15038	9279	0	320	0	0
15	Kakharua	10616670	11295	6661	3331	8327	5829	1665	4996
16	Kalamjuangsahi	6026400	33145	15819	14313	3767	2260	0	0
17	Ranjo	8867880	26820	21431	7390	0	0	739	3695
18	Atonaka	117084436	38849	5665	1619	4856	6475	0	5665
19	Jolonda-Jankpani	10928925	72860	32058	23315	23315	3643	4372	0
20	Sarbeda	12465900	35330	5540	11081	9419	8311	5540	4432
21	Timi	17328978	99325	17752	3381	3381	2536	2536	845
22	Jharkhaman	2472525	16154	23407	17473	17802	10879	4286	989
23	Priyambadapur	2005560	10028	8189	3677	2841	334	0	0
24	Rangiapal	14875042	77971	77966	55397	12310	5129	23595	7181
25	Bhaluhuli	6166125	23222	20436	10571	7047	6342	2819	7047
26	Bhulaka	6216480	50120	39630	31859	40407	10879	0	0
27	Sanda	6133421	86035	182887	64680	13382	20073	2230	0
28	Badasada	7551360	34958	15759	5910	7223	1313	0	0
29	Nuagaon	4986505	30884	23807	8364	1930	3861	1930	643
30	Injidi	1934887	18428	9951	12899	5160	0	0	0
31	Tamkia PRF	4609275	113137	121517	60340	33522	20951	12571	13409
32	Bangalimunda	13694083	3003	39837	11951	5976	996	3984	0
33	Telikusum	16873312	78167	83855	37837	23520	8181	3068	1023
	Total	529610348	2013421	2839816	1406671	596670	279664	138322	67880

15.1.7. Growing stock of Behera's Plan in RWC Area: - The growing stocks in rehabilitation working circle in Behera's plan are not given.

15.2. Comparison of Growing Stock in Volume:

15.2.1. Working Plan Meeting for Approval of Draft Plan: - The working plan meeting is held on dt.14.09.2015 in the office of Pr.CCF for approval of draft plan of Deogarh Forest Division submitted to MOEF and CC Eastern Regional Office, Chandrasekharpur, Bhubaneswar vide letter No.14992 dt.31.08.2015 of Pr.CCF, Odisha, Bhubaneswar. It was instructed to compare the growing stock in volume of Behera's plan with the present revise plan. Therefore the result of the comparison is given below.

15.2.2. Classification and unit rate of trees as per letter No.6F-(B)-12/2006-7420 dt.08.05.2006 of forest environment department, Govt. Of Odisha, Communicated by H.O. letter No.11242 dt.15.05.2006. In case of special class the unit value is to be calculated as twice that of Sal of equivalent girth. 1st class species are Sal, Bija, Sisoo, Gambhar, Bandhan, Champa & Kangada. 2nd class species are Assan, Kurum, Kasi, Mango, Kendu, Dhoura,

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Tentra, Sidha, Jamu, Mitikania & Rohini. 3rd class species are all other species except Teak, Chandan & Khaira. The unite value for different girth class is given in the table below.

Table No. 383					
Unit Rate					
Class	Under 60 cm	60 cm to U/90	90 cm to U/120	120 cm to U/150	150 & above
1st Class	0.25	0.50	1.00	2.00	4.00
2nd Class	0.12	0.25	0.50	1.00	2.00
3rd Class	0.06	0.12	0.25	0.50	1.00
Average	0.14	0.29	0.58	1.16	2.33

15.2.3. Average Volume per Unity: - The year wise volume per unity from the year 2011-12 to 2014-15 is given in the table below.

Table No. 384		
Unity & its Volume in Cft.		
Year	Volume in Cft	Average Volume in Cft
2011-12	9.64	9.075
2012-13	7.44	
2013-14	9.46	
2014-15	9.76	

15.2.4. Growing Stock of Revise Plan in SWC Area: - The growing stock in SWC area in the revise plan is given in the table below.

Table No.385				
Growing Stock in Volume of SWC Area				
Sl. No.	Block	Girth Class	No. of Tree	Volume in Cft.
1	Pradhanpat	30 < 60	1909420	2425918.110
		60 < 90	1076678	2833547.327
		90 < 120	1371082	7216690.107
		120 < 135	1581370	16647081.990
		135 < 150	462635	4870158.645
		150 & above	176642	3735050.930
		Total	6577827	37728447.108
2	Kansar	30 < 60	1764416	2241690.528
		60 < 90	1934253	5090470.333
		90 < 120	1471919	7747445.657
		120 < 135	1132246	11919153.642
		135 < 150	330238	3476415.426

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		150 & above	113225	2394114.319
		Total	6746297	32869289.904
3	Pravasuni(P)	30 < 60	1962087	2492831.534
		60 < 90	1827081	4808420.422
		90 < 120	1647073	8669368.736
		120 < 135	873039	9190481.553
		135 < 150	333015	3505648.905
		150 & above	135006	2854668.119
		Total	6777301	31521419.267
4	Rambhadevi(P)	30 < 60	655394	832678.077
		60 < 90	706053	1858154.983
		90 < 120	557243	2933048.531
		120 < 135	310283	3266349.141
		135 < 150	129812	1366530.924
		150 & above	41160	870317.910
		Total	2399945	11127079.565
5	Panguli	30 < 60	212301	269728.421
		60 < 90	239288	629746.194
		90 < 120	192510	1013276.385
		120 < 135	82761	871225.047
		135 < 150	44979	473493.933
		150 & above	16192	342375.792
		Total	788031	3599845.772
6	Mandasila	30 < 60	299336	380306.388
		60 < 90	261919	689305.328
		90 < 120	249447	1312964.285
		120 < 135	286863	3019806.801
		135 < 150	129712	1365478.224
		150 & above	27439	580190.795
		Total	1254716	7348051.821
7	Paburi	30 < 60	1320897	1678199.639
		60 < 90	968658	2549265.692
		90 < 120	609080	3205892.580
		120 < 135	476990	5021273.730
		135 < 150	271518	2858269.986
		150 & above	102736	2172327.036
		Total	3749879	17485228.662
8	Badtaila	30 < 60	1032511	1311805.226
		60 < 90	1246956	3281676.453
		90 < 120	1088108	5727256.458
		120 < 135	357408	3762434.016

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		135 < 150	381235	4013260.845
		150 & above	63539	1343516.270
		Total	4169757	19439949.268
9	Gogua	30 < 60	719705	914385.203
		60 < 90	514845	1354943.329
		90 < 120	285726	1503918.801
		120 < 135	196773	2071429.371
		135 < 150	75475	794525.325
		150 & above	45824	968937.024
		Total	1838348	7608139.052
10	Malyagiri	30 < 60	1083772	1376932.326
		60 < 90	1343136	3534798.168
		90 < 120	1167139	6143236.127
		120 < 135	768829	8093462.883
		135 < 150	509465	5363138.055
		150 & above	203786	4309004.024
		Total	5076127	28820571.582
11	Old Pauri	30 < 60	797594	1013343.177
		60 < 90	906067	2384541.827
		90 < 120	784832	4130963.232
		120 < 135	491318	5172104.586
		135 < 150	287134	3022659.618
		150 & above	108473	2293634.467
		Total	3375418	18017246.907
12	Tamkin RF	30 < 60	36946	46939.893
		60 < 90	29478	77578.727
		90 < 120	39304	206876.604
		120 < 135	28299	297903.573
		135 < 150	20045	211013.715
		150 & above	7075	149599.106
		Total	161147	989911.618
13	Saida	30 < 60	10575	13435.538
		60 < 90	7164	18853.857
		90 < 120	11257	59251.220
		120 < 135	5686	59856.522
		135 < 150	2047	21548.769
		150 & above	1365	28862.584
		Total	38094	201808.489
14	Charigochhia	30 < 60	700	889.350
		60 < 90	827	2176.457
		90 < 120	657	3458.120

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		120 < 135	360	3789.720
		135 < 150	488	5137.176
		150 & above	85	1797.304
		Total		17248.127
15	Mankarchua	30 < 60	58579	74424.620
		60 < 90	31849	83818.606
		90 < 120	21043	110759.831
		120 < 135	23318	245468.586
		135 < 150	14787	155662.749
		150 & above	13649	288604.693
		Total	163225	958739.084
16	Kuladera	30 < 60	160738	204217.629
		60 < 90	129483	340766.885
		90 < 120	159250	838212.375
		120 < 135	86322	908711.694
		135 < 150	58044	611029.188
		150 & above	13395	283233.926
		Total	607232	3186171.698
17	Khajuria	30 < 60	413229	525007.445
		60 < 90	332287	874496.312
		90 < 120	447310	2354416.185
		120 < 135	379148	3991290.996
		135 < 150	140583	1479917.241
		150 & above	51121	1080940.765
		Total	1763678	10306068.944
18	Jhadeswar	30 < 60	331259	420864.560
		60 < 90	410020	1079070.135
		90 < 120	361374	1902092.049
		120 < 135	203852	2145950.004
		135 < 150	85710	902269.170
		150 & above	44013	930643.882
		Total	1436228	7380889.799
19	Hadamunda	30 < 60	18817	23906.999
		60 < 90	25963	68328.125
		90 < 120	32632	171758.532
		120 < 135	15959	168000.393
		135 < 150	6193	65193.711
		150 & above	4287	90647.543
		Total	103851	587835.303
20	Kankarkhol	30 < 60	1063243	1350850.232
		60 < 90	1167306	3072057.566

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		90 < 120	466017	2452880.480
		120 < 135	235271	2476697.817
		135 < 150	76915	809684.205
		150 & above	58818	1243691.906
		Total	3067570	11405862.204
21	Kundheigola	30 < 60	421513	535532.267
		60 < 90	479989	1263211.051
		90 < 120	260705	1372220.768
		120 < 135	238776	2513594.952
		135 < 150	153499	1615883.973
		150 & above	26801	566700.445
		Total	1581283	7867143.455
22	Naikul	30 < 60	255608	324749.964
		60 < 90	230994	607918.460
		90 < 120	278328	1464979.428
		120 < 135	115497	1215836.919
		135 < 150	60588	637809.876
		150 & above	11360	240204.360
		Total	952375	4491499.007
23	Kulundikudar	30 < 60	44846	56976.843
		60 < 90	5665	14908.864
		90 < 120	58064	305619.864
		120 < 135	47207	496948.089
		135 < 150	3777	39760.479
		150 & above	1416	29940.966
		Total	160975	944155.105
24	Tusula	30 < 60	102948	130795.434
		60 < 90	142799	375811.268
		90 < 120	131176	690444.876
		120 < 135	114571	1206088.917
		135 < 150	18265	192275.655
		150 & above	11623	245765.429
		Total	521382	2841181.580
25	Kardapal	30 < 60	39839	50615.450
		60 < 90	31561	83060.662
		90 < 120	23283	122550.071
		120 < 135	13452	141609.204
		135 < 150	7761	81700.047
		150 & above	1439	30427.295
		Total	117335	509962.728
26	Bankhol	30 < 60	165953	210843.287

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		60 < 90	117550	309362.213
		90 < 120	99111	521670.749
		120 < 135	53013	558067.851
		135 < 150	43793	461008.911
		150 & above	12677	268051.996
		Total	492097	2329005.005
27	Chilantikhol	30 < 60	164959	209580.410
		60 < 90	226181	595251.847
		90 < 120	181965	957772.778
		120 < 135	141151	1485896.577
		135 < 150	79929	841412.583
		150 & above	22108	467468.133
		Total	816293	4557382.327
28	Kandarpa - Lambudura	30 < 60	394937	501767.459
		60 < 90	279955	736771.571
		90 < 120	134978	710456.703
		120 < 135	108316	1140242.532
		135 < 150	58324	613976.748
		150 & above	29995	634236.776
		Total	1006505	4337451.789
29	Ludhar - Deopani	30 < 60	66645	84672.473
		60 < 90	70927	186662.132
		90 < 120	93145	490268.708
		120 < 135	108527	1142463.729
		135 < 150	12818	134935.086
		150 & above	7691	162624.272
		Total	359753	2201626.400
30	Salohi Laimura	30 < 60	25722	32679.801
		60 < 90	30452	80142.051
		90 < 120	30156	158726.106
		120 < 135	23498	247363.446
		135 < 150	7983	84037.041
		150 & above	3843	81259.274
		Total	121654	684207.719
31	Sargidihi	30 < 60	11085	14083.493
		60 < 90	12575	33094.256
		90 < 120	9036	47560.986
		120 < 135	6800	71583.600
		135 < 150	2888	30401.976
		150 & above	1584	33493.284
		Total	43968	230217.595

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15.2.5. Growing Stock of Behera's Plan in SWC Area: - The growing stock in SWC area in the Behera's plan is given in the table below.

Table No.386

Behera's Plan SWC

Sl. No.	Block	Girth Class	No. of Tree	Volume in Cft.
1	Pradhanpat	30 < 60	1745573	2217750.497
		60 < 90	876800	2307518.400
		90 < 120	750100	3948151.350
		120 < 150	953100	10033283.700
		150 & above	394680	8345409.930
		Total	4720253	26852113.877
2	Kansar	30 < 60	1050587	1334770.784
		60 < 90	1292021	3400276.267
		90 < 120	1048681	5519732.444
		120 < 150	902106	9496469.862
		150 & above	265013	5603633.632
		Total	4558408	25354882.988
3	Pravasuni(P)	30 < 60	2145055	2725292.378
		60 < 90	1032301	2716758.157
		90 < 120	650977	3426417.440
		120 < 150	276533	2911062.891
		150 & above	132784	2807684.484
		Total	4237650	14587215.349
4	Rambhadevi(P)	30 < 60	469101	595992.821
		60 < 90	578206	1521693.641
		90 < 120	202514	1065932.439
		120 < 150	158896	1672698.192
		150 & above	14182	299874.845
		Total	1422899	5156191.937
5	Panguli	30 < 60	346494	440220.627
		60 < 90	102395	269478.041
		90 < 120	81606	429533.181
		120 < 150	25659	270112.293
		150 & above	3018	63814.856
		Total	559172	1473158.998
6	Mandasila	30 < 60	386925	491588.213
		60 < 90	159190	418948.283
		90 < 120	75249	396073.112
		120 < 150	12044	126787.188
		150 & above	0	0.000
		Total	633408	1433396.795

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7	Paburi	30 < 60	1425704	1811356.932
		60 < 90	473901	1247188.957
		90 < 120	271195	1427434.883
		120 < 150	86558	911196.066
		150 & above	24343	514726.649
		Total	2281701	5911903.487
8	Badtaila	30 < 60	1071442	1361267.061
		60 < 90	634340	1669424.295
		90 < 120	437748	2304086.598
		120 < 150	168248	1771146.696
		150 & above	65918	1393819.631
		Total	2377696	8499744.281
9	Gogua	30 < 60	516978	656820.549
		60 < 90	404658	1064958.692
		90 < 120	196468	1034109.318
		120 < 150	91243	960515.061
		150 & above	39946	844648.184
		Total	1249293	4561051.803
10	Malyagiri	30 < 60	974112	1237609.296
		60 < 90	924931	2434187.159
		90 < 120	753362	3965320.887
		120 < 150	473544	4984997.688
		150 & above	410038	8670151.001
		Total	3535987	21292266.031
11	Old Pauri	30 < 60	557127	707829.854
		60 < 90	754936	1986802.818
		90 < 120	438239	2306670.977
		120 < 150	324807	3419243.289
		150 & above	140801	2977201.945
		Total	2215910	11397748.882
12	Tamkia RF	30 < 60	29446	37411.143
		60 < 90	29280	77057.640
		90 < 120	18018	94837.743
		120 < 150	9439	99364.353
		150 & above	3085	65231.554
		Total	89268	373902.433
13	Saida	30 < 60	9823	12480.122
		60 < 90	6368	16758.984
		90 < 120	10765	56661.578
		120 < 150	4932	51919.164
		150 & above	2649	56012.443
		Total	34537	193832.290
14	New Pauri	30 < 60	56128	71310.624

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		60 < 90	30447	80128.892
		90 < 120	45519	239589.257
		120 < 150	23846	251026.842
		150 & above	7795	164823.326
		Total	163735	806878.941
15	Mankarchua	30 < 60	39810	50578.605
		60 < 90	39386	103654.106
		90 < 120	26151	137645.789
		120 < 150	14177	149241.279
		150 & above	7903	167106.959
		Total	127427	608226.737
16	Kuladera	30 < 60	92184	117119.772
		60 < 90	113731	299311.559
		90 < 120	68706	361634.031
		120 < 150	33743	355212.561
		150 & above	13618	287949.206
		Total	321982	1421227.129
17	Khajuria	30 < 60	587899	746925.680
		60 < 90	464221	1221713.617
		90 < 120	210295	1106887.733
		120 < 150	82772	871340.844
		150 & above	39823	842047.379
		Total	1385010	4788915.252
18	Kulundikudar	30 < 60	63945	81242.123
		60 < 90	26308	69236.079
		90 < 120	12436	65456.886
		120 < 150	1990	20948.730
		150 & above	0	0.000
		Total	104679	236883.818
19	Tusula	30 < 60	226926	288309.483
		60 < 90	93363	245708.075
		90 < 120	44132	232288.782
		120 < 150	7064	74362.728
		150 & above	0	0.000
		Total	371485	840669.068

15.2.6. Comparison of Total Growing Stock: - The percentage of increase of total growing stock and the percentage of volume to be removed in the SWC area is given in the table below.

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Table No. 387						
Comparison of volume in Cft						
Block	Total Volume in Behera's plan	Total Volume in revise plan	Volume increase	% of increase	Volume to be removed	% of removal
Pradhanpat	26852113.877	37728447.108	10876333.232	40.50	124282.216	1.14
Kansar	25354882.988	32869289.904	7514406.916	29.64	109569.191	1.46
Pravasuni	14587215.349	31521419.267	16934203.919	116.09	96618.349	0.57
Rambhadevi	5156191.937	11127079.565	5970887.629	115.80	37440.365	0.63
Panguli	1473158.998	3599845.772	2126686.774	144.36	18008.067	0.85
Mandasila	1433396.795	7348051.821	5914655.027	412.63	34603.973	0.59
Paburi	5911903.487	17485228.662	11573325.176	195.76	69920.062	0.60
Badtalla	8499744.281	19439949.268	10940204.987	128.71	97716.696	0.89
Gogua	4561051.803	7608139.052	3047087.249	66.81	22751.479	0.75
Malyagiri	21292266.031	28820571.582	7528305.551	35.36	80420.744	1.07
Old Pauri	11397748.882	18017246.907	6619498.025	58.08	59998.727	0.91
Tamkia RF	373902.433	989911.618	616009.185	164.75	3596.786	0.58
Saida	193832.290	201808.489	7976.199	4.12	929.371	11.65
New Pauri	806878.941	1031094.966	224216.025	27.79	15280.304	6.81
Mankarchua	608226.737	958739.084	350512.346	57.63	2739.833	0.78
Kuladera	1421227.129	3186171.698	1764944.569	124.18	17573.556	1.00
Khajuria	4788915.252	10306068.944	5517153.692	115.21	49341.138	0.89
Kulundikudar	236883.818	944155.105	707271.287	298.57	8714.360	1.23
Tusula	840669.068	2841181.580	2000512.511	237.97	20240.971	1.01
Total	135790210.091	236024400.389	100234190.298	73.81	869746.185	0.86

15.2.7. Critical Analysis of Comparison of Growing Stock: - The total growing stock of Behera's Plan is 135790210.091 Cft over 19 forest blocks included in selection working circle. The total growing stock in the present revised plan of the same 19 blocks is 236024400.389 Cft. Therefore 100234190.298 Cft of volume have been increased. The total percentage of increase of growing stock is 73.81 %. Further the total volume of exploitable trees to be removed for the above blocks in selection working circle during the plan period is 869746.185. Therefore the percentage of volume to be removed is 0.86.

15.2.8. Growing Stock of Revise Plan in RWC Area: - Total area enumerated is 91.846 ha and the total enumerated tree is 53271 numbers. Therefore the tree per ha is 580 numbers. The total growing stock in RWC area in the revise plan for the period 2015-16 to 2024-25 is given in the table below.

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Table No.388				
Revise plan RWC				
Sl. No.	Block	Girth Class	No. of Tree	Volume in Cft.
1	Thianal	30 < 60	100475	127653.488
		60 < 90	70251	184883.069
		90 < 120	35942	189180.717
		120 < 135	22055	232172.985
		135 < 150	11436	120386.772
		150 & above	8169	172731.463
		Total	248328	1027008.494
2	Nizgarh A	30 < 60	19544	24830.652
		60 < 90	2792	7347.846
		90 < 120	1396	7347.846
		120 < 135	0	0.000
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	23732	39526.344
3	Nizgarh B	30 < 60	11160	14178.780
		60 < 90	3720	9790.110
		90 < 120	930	4895.055
		120 < 135	0	0.000
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	15810	28863.945
4	New Pauri	30 < 60	138416	175857.528
		60 < 90	63300	166589.775
		90 < 120	51484	270986.034
		120 < 135	27008	284313.216
		135 < 150	10972	115502.244
		150 & above	844	17846.169
		Total	292024	1031094.966
5	Kansar B	30 < 60	18245	23180.273
		60 < 90	358	942.167
		90 < 120	0	0.000
		120 < 135	716	7537.332
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	19319	31659.771
6	Rengalmunda	30 < 60	18490	23491.545
		60 < 90	9823	25851.680
		90 < 120	7800	41055.300
		120 < 135	4045	42581.715
		135 < 150	867	9126.909
		150 & above	0	0.000
		Total	41025	142107.149
7	Kunjam	30 < 60	858993	1091350.607
		60 < 90	399975	1052634.206

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		90 < 120	81900	431080.650
		120 < 135	0	0.000
		135 < 150	0	0.000
		150 & above	17900	378491.025
		Total	1358768	2953556.488
8	Jambua	30 < 60	131881	167554.811
		60 < 90	88608	233194.104
		90 < 120	28849	151846.712
		120 < 135	8243	86774.061
		135 < 150	3091	32538.957
		150 & above	0	0.000
		Total	260672	671908.644
9	Rajamunda	30 < 60	44103	56032.862
		60 < 90	24964	65699.007
		90 < 120	19139	100738.127
		120 < 135	12482	131398.014
		135 < 150	4161	43802.847
		150 & above	0	0.000
		Total	104849	397670.856
10	Kalkath	30 < 60	77079	97928.870
		60 < 90	48593	127884.628
		90 < 120	43566	229309.641
		120 < 135	28486	299872.122
		135 < 150	8378	88195.206
		150 & above	0	0.000
		Total	206102	843190.466
11	Tirib	30 < 60	18854	23954.007
		60 < 90	13712	36086.556
		90 < 120	7713	40597.376
		120 < 135	4713	49613.751
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	44992	150251.690
12	Tarang	30 < 60	328349	417167.405
		60 < 90	111531	293521.709
		90 < 120	57996	305261.946
		120 < 135	22306	234815.262
		135 < 150	10707	112712.589
		150 & above	0	0.000
		Total	530889	1363478.911
13	Banbira	30 < 60	307022	390071.451
		60 < 90	174377	458916.670
		90 < 120	35770	188275.395
		120 < 135	31298	329474.046
		135 < 150	19375	203960.625
		150 & above	8942	189076.355
		Total	576784	1759774.541
14	Talabahali	30 < 60	15038	19105.779

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		60 < 90	9279	24420.008
		90 < 120	0	0.000
		120 < 135	320	3368.640
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	24637	46894.427
15	Kakharua	30 < 60	6661	8462.801
		60 < 90	3331	8766.359
		90 < 120	8327	43829.165
		120 < 135	5829	61361.883
		135 < 150	1665	17527.455
		150 & above	4996	105639.171
		Total	30809	245586.833
16	Kalam-Juangsahi	30 < 60	15819	20098.040
		60 < 90	14313	37668.238
		90 < 120	3767	19827.605
		120 < 135	2260	23791.020
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	36159	101384.902
17	Ranjo	30 < 60	21431	27228.086
		60 < 90	7390	19448.633
		90 < 120	0	0.000
		120 < 135	0	0.000
		135 < 150	739	7779.453
		150 & above	3695	78129.851
		Total	33255	132586.022
18	Atonaku	30 < 60	5665	7197.383
		60 < 90	1619	4260.803
		90 < 120	4856	25559.556
		120 < 135	6475	68162.325
		135 < 150	0	0.000
		150 & above	5665	119785.009
		Total	24280	224965.076
19	Jolonda-Jankpani	30 < 60	32058	40729.689
		60 < 90	23315	61359.251
		90 < 120	23315	122718.503
		120 < 135	3643	38349.861
		135 < 150	4372	46024.044
		150 & above	0	0.000
		Total	86703	309181.348
20	Sarbeda	30 < 60	5540	7038.570
		60 < 90	11081	29162.422
		90 < 120	9419	49576.907
		120 < 135	8311	87489.897
		135 < 150	5540	58319.580
		150 & above	4432	93713.532
		Total	44323	325300.907

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21	Timi	30 < 60	17752	22553.916
		60 < 90	3381	8897.947
		90 < 120	3381	17795.894
		120 < 135	2536	26696.472
		135 < 150	2536	26696.472
		150 & above	845	17867.314
		Total	30431	120508.014
22	Jharkhaman	30 < 60	23407	29738.594
		60 < 90	17473	45984.568
		90 < 120	17802	93700.827
		120 < 135	10879	114523.233
		135 < 150	4286	45118.722
		150 & above	989	20912.158
		Total	74836	349978.101
23	Priyambadapur	30 < 60	8189	10404.125
		60 < 90	3677	9676.945
		90 < 120	2841	14953.604
		120 < 135	334	3516.018
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	15041	38550.691
24	Rangiapal	30 < 60	77966	99055.803
		60 < 90	55397	145791.055
		90 < 120	12310	64793.685
		120 < 135	5129	53992.983
		135 < 150	23595	248384.565
		150 & above	7181	151840.450
		Total	181578	763858.541
25	Bhaluhuli	30 < 60	20436	25963.938
		60 < 90	10571	27820.229
		90 < 120	7047	37091.885
		120 < 135	6342	66762.234
		135 < 150	2819	29675.613
		150 & above	7047	149007.053
		Total	54262	336320.952
26	Bhulaka	30 < 60	39630	50349.915
		60 < 90	31859	83844.923
		90 < 120	40407	212682.245
		120 < 135	10879	114523.233
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	122775	461400.316
27	Sanda	30 < 60	182887	232357.934
		60 < 90	64680	170221.590
		90 < 120	13382	70436.157
		120 < 135	20073	211308.471
		135 < 150	2230	23475.210
		150 & above	0	0.000

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		Total	283252	707799.362
28	Nuagaon	30 < 60	23807	30246.794
		60 < 90	8364	22011.957
		90 < 120	1930	10158.555
		120 < 135	3861	40644.747
		135 < 150	1930	20317.110
		150 & above	643	13596.074
		Total	40535	136975.237
29	Badsada	30 < 60	15759	20021.810
		60 < 90	5910	15553.643
		90 < 120	7223	38018.261
		120 < 135	1313	13821.951
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	30205	87415.664
30	Injidi	30 < 60	9951	12642.746
		60 < 90	12899	33946.943
		90 < 120	5160	27159.660
		120 < 135	0	0.000
		135 < 150	0	0.000
		150 & above	0	0.000
		Total	28010	73749.349
31	Tamkia PRF	30 < 60	121517	154387.349
		60 < 90	60340	158799.795
		90 < 120	33522	176443.047
		120 < 135	20951	220551.177
		135 < 150	12571	132334.917
		150 & above	13409	283529.953
		Total	262310	1126046.237
32	Bangalimunda	30 < 60	39837	50612.909
		60 < 90	11951	31452.044
		90 < 120	5976	31454.676
		120 < 135	996	10484.892
		135 < 150	3984	41939.568
		150 & above	0	0.000
		Total	62744	165944.089
33	Telikusum	30 < 60	83855	106537.778
		60 < 90	37837	99577.525
		90 < 120	23520	123797.520
		120 < 135	8181	86121.387
		135 < 150	3068	32296.836
		150 & above	1032	21821.382
		Total	157493	470152.427

15.2.9. Growing stock of Behera's Plan in RWC Area: - The growing stocks in rehabilitation working circle in Behera's plan are not given.

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A. NOTIFICATION

Notification No.-1.

GOVERNMEMT OF ORISSA
FOREST & ENVIRONMENT DEPARTMENT

RESOLUTION
Dated, Bhubaneswar, the 8th August, 2003.

No.1F(A)-100/2003/13228/F&E.,Government, after careful consideration, have decided to reorganize the field establishments of the Forest & Environment Department under the' Forestry and Wildlife' wing by abolishing the Afforestation and Social Forestry Divisions and Circles and creating a number of Territorial and Wildlife Divisions and Circles. It has also been decided to abolish some other establishments which have outlived their utility or have ceased to be efficacious in their present form. Government have further decided to redeploy the staff of the existing establishments carried under different Schemes among the Establishments which will exist after the reorganisation in a rational manner. It is accordingly ordered as follows.

2. **Establishments:**

The Forest & Environment Department has 105 Establishments under ' Forestry and Wildlife', out of which 23 establishments are under the ' Kenduleaf Organisation'. The remaining 82 establishments are controlled by the three Controlling Officers, namely; the PCCF(54 establishments), the Addl. PCCF, Wildlife (10 establishments), and Director, Social Forestry Project (18 establishments). The detailed list of Establishments existing presently under the control of Principal Chief Conservator of Forests (PCCF), the Addl. Principal Chief Conservator of Forests, Wildlife and the Director, Social Forestry Project are as follows: -

Table No. 389	
Establishments under the Administrative control of PCCF, Orissa	
Sl.No.	Establishment
1	O/o Principal Chief Conservator of Forests, Orissa, Bhubaneswar
2	O/o Project Director, World Food Programme, Bhubaneswar
3	O/o Conservator of Forests, Angul Circle, Angul
4	O/o Conservator of Forests, Berhampur Circle, Berhampur
5	O/o Conservator of Forests, Sambalpur Circle, Sambalpur
6	O/o Conservator of Forests, Koraput Circle, Koraput

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7	O/o Conservator of Forests, Afforestation Circle, Sambalpur
8	O/o Conservator of Forests, Development Circle, Cuttack
9	O/o Conservator of Forests, Working Plan Circle, Cuttack
10	O/o Divisional Forest Officer, Angul Division, Angul
11	O/o Divisional Forest Officer, Athagarh Division, Athagarh,
12	O/o Divisional Forest Officer, Dhenkanal Division, Dhenkanal
13	O/o Divisional Forest Officer, Athamallik Division, Athamallik
14	O/o Divisional Forest Officer, Keonjhar Division, Keonjhar
15	O/o Divisional Forest Officer, Baripada Division, Baripada
16	O/o Divisional Forest Officer, Karanjia Division, Karanjia
17	O/o Divisional Forest Officer, Sambalpur Division, Sambalpur
18	O/o Divisional Forest Officer, Rairakhol Division, Rairakhol
19	O/o Divisional Forest Officer, Sundargarh Division, Sundergarh
20	O/o Divisional Forest Officer, Bamra Division, Bamra
21	O/o Divisional Forest Officer, Deogarh Division, Deogarh
22	O/o Divisional Forest Officer, Bonai Division, Bonai
23	O/o Divisional Forest Officer, Ghumsar South Division, Bhanjanagar
24	O/o Divisional Forest Officer, Ghumsar North Division, Bhanjanagar
25	O/o Divisional Forest Officer, Paralakhemundi Division, Paralakhemundi
26	O/o Divisional Forest Officer, Phulbani Division, Phulbani
27	O/o Divisional Forest Officer, Balliguda Division, Balliguda
28	O/o Divisional Forest Officer, Puri Division, Khurda
29	O/o Divisional Forest Officer, Nayagarh Division, Nayagarh
30	O/o Divisional Forest Officer, Jeypore Division, jeypore,
31	O/o Divisional Forest Officer, Boudh Division, Boudh
32	O/o Divisional Forest Officer, Rayagada Division, Rayagada
33	O/o Divisional Forest Officer, Kalahandi Division, Bhawanipatna
34	O/o Divisional Forest Officer, Bolangir Division, Bolangir
35	O/o Divisional Forest Officer, Khariar Division, Bolangir
36	O/o Divisional Forest Officer, Nowrangpur Division, Nowrangpur
37	O/o Divisional Forest Officer, Coastal Shelter Belt Afforestation Division, Puri
38	O/o Divisional Forest Officer, Coastal Shelter Belt Afforestation Division, Cuttack
39	O/o Divisional Forest Officer, Coastal Shelter Belt Afforestation Division, Balasore

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40	O/o Divisional Forest Officer, Afforestation Division, Rourkela
41	O/o Divisional Forest Officer, Afforestation Division, Bhawanipatna
42	O/o Divisional Forest Officer, Afforestation Division, Koraput
43	O/o Divisional Forest Officer, Afforestation Division, Bolangir
44	O/o Divisional Forest Officer, Afforestation Division, Rayagada
45	O/o Working Plans Officer, Sambalpur Working Plan Division, Sambalpur
46	O/o Working Plans Officer, Keonjhar Working Plan Division, Keonjhar
47	O/o Working Plans Officer, Bhanjanagar Working Plan Division, Bhanjanagar
48	O/o Working Plans Officer, Angul Working Plan Division, Angul
49	O/o Working Plans Officer, Bhawanipatna Working Plan Division, Bhawanipatna
50	O/o Working Plans Officer, Koraput Working Plan Division, Koraput
51	O/o Divisional Forest Officer, Forest Resources Survey Division, Cuttack
52	O/o Silviculturist, Bhubaneswar
53	O/o Forest Utilisation Officer, Cuttack
54	O/o Principal, Forest Rangers College, Angul

Table No. 390

Establishments under the control of Addl. PCCF, Wildlife

Sl.No.	Establishment
1	O/o Addl. Principal Chief Conservator of Forests, Wildlife, Orissa
2	O/o Director, Nandankanan Zoological Park, Bhubaneswar
3	O/o Field Director, Simlipal Tiger Reserve, Baripada
4	O/o Divisional Forest Officer, Chandaka Wildlife Division, Bhubaneswar
5	O/o Divisional Forest Officer, Mangrove Wildlife Division, Rajnagar
6	O/o Divisional Forest Officer, Satkosia Wildlife Division, Angul
7	O/o Divisional Forest Officer, Sunabeda Wildlife Division, Nuapada
8	O/o Divisional Forest Officer, Chilika Wildlife Division, Balugaon
9	O/o Divisional Forest Officer, Badarma Wildlife Division, Sambalpur
10	O/o Divisional Forest Officer, Mahanadi Wildlife Division, Phulbani

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Table No. 391	
Establishments under the control of Director, Social Forestry Project	
Sl.No.	Establishment
1	O/o Director, Social Forestry Project, Orissa, Bhubaneswar
2	O/o Regional Joint Director, Social Forestry Project, Bhubaneswar
3	O/o Regional Joint Director, Social Forestry Project, Sambalpur
4	O/o Regional Joint Director, Social Forestry Project, Berhampur
5	O/o Deputy Director, Cuttack Social Forestry Project Division, Cuttack
6	O/o Deputy Director, Puri Social Forestry Project Division, Bhubaneswar
7	O/o Deputy Director, Balasore Social Forestry Project Division, Balasore
8	O/o Deputy Director, Keonjhar Social Forestry Project Division, Keonjhar
9	O/o Deputy Director, Rairangpur Social Forestry Project Division, Rairangpur
10	O/o Deputy Director, Sundargarh Social Forestry Project Division, Sundargarh
11	O/o Deputy Director, Sambalpour Social Forestry Project Division, Sambalpur
12	O/o Deputy Director, Bargarh Social Forestry Project Division, Bargarh
13	O/o Deputy Director, Bolangir Social Forestry Project Division, Bolangir
14	O/o Deputy Director, Kalahandi Social Forestry Project Division, Bhawanipatna
15	O/o Deputy Director, Koraput Social Forestry Project Division, Koraput
16	O/o Deputy Director, Rayagada Social Forestry Project Division, Rayagada
17	Ganjam Social Forestry Project Division, Berhampur
18	Dhenkanal Social Forestry Project Division, Angul

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Government, after careful consideration have decided to abolish the 18 establishments now under the control of Director, Social Forestry Project and another 11 establishments now under the control of PCCF which are as follows:

Table No. 392	
Under the control of Director, Social Forestry Project:	
Sl.No.	Establishment
1	O/o Director, Social Forestry Project, Orissa, Bhubaneswar
2	O/o Regional Joint Director, Social Forestry Project, Bhubaneswar
3	O/o Regional Joint Director, Social Forestry Project, Sambalpur
4	O/o Regional Joint Director, Social Forestry Project, Berhampur
5	O/o Deputy Director, Cuttack Social Forestry Project Division, Cuttack
6	O/o Deputy Director, Puri Social Forestry Project Division, Bhubaneswar
7	O/o Deputy Director, Balasore Social Forestry Project Division, Balasore
8	O/o Deputy Director, Keonjhar Social Forestry Project Division, Keonjhar
9	O/o Deputy Director, Rairangpur Social Forestry Project Division, Rairangpur
10	O/o Deputy Director, Sundargarh Social Forestry Project Division, Sundergarh
11	O/o Deputy Director, Sambalpur Social Forestry Project Division, Sambalpur
12	O/o Deputy Director, Bargarh Social Forestry Project Division, Bargarh
13	O/o Deputy Director, Bolangir Social Forestry Project Division, Bolangir
14	O/o Deputy Director, Kalahandi Social Forestry Project Division, Kalahandi
15	O/o Deputy Director, Koraput Social Forestry Project Division, Koraput
16	O/o Deputy Director, Rayagada Social Forestry Project Division, Rayagada
17	O/o Deputy Director, Ganjam Social Forestry Project Division, Ganjam
18	O/o Deputy Director, Dhenkanal Social Forestry Project Division, Dhenkanal

Table No. 393	
Under the control of the PCCF, Orissa.	
Sl.No.	Establishment
1	O/o Conservator of Forests, Afforestation Circle, Sambalpur
2	O/o Conservator of Forests, Working Plans Circle, Cuttack
3	O/o Divisional Forest Officer, Coastal Shelter Belt Afforestation Division,Puri
4	O/o Divisional Forest Officer, Coastal Shelter Belt Afforestation Division, Cuttack
5	O/o Divisional Forest Officer, Coastal Shelter Belt Afforestation Division, Balasore
6	O/o Divisional Forest Officer, Afforestation Division, Rourkela
7	O/o Divisional Forest Officer, Afforestation Division, Bhawanipatna
8	O/o Divisional Forest Officer, Afforestation Division, Koraput
9	O/o Divisional Forest Officer, Afforestation Division, Bolangir
10	O/o Divisional Forest Officer, Afforestation Division, Rayagada
11	O/o Forest Utilisation Officer, Cuttack

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Government have further decided to create 21 Establishments for the new Circles and Division as named below:

Table No. 394	
Establishment for the Circle and Division	
Sl.No.	Establishment
1	O/o Conservator of Forests, Bhubaneswar Circle, Bhubaneswar
2	O/o Conservator of Forests, Bhawanipatna Circle, Bhawanipatna
3	O/o Conservator of Forests, Rourkela Circle, Rourkela
4	O/o Divisional Forest Officer, Rourkela Division, Rourkela
5	O/o Divisional Forest Officer, Sambalpur(North) Division, Sambalpur
6	O/o Divisional Forest Officer, Bolangir (East) Division, Bolangir
7	O/o Divisional Forest Officer, Kalahandi(South) Division, Bhawanipatna
8	O/o Divisional Forest Officer, Koraput Division, Koraput
9	O/o Divisional Forest Officer, Malkangiri Division, Koraput
10	O/o Divisional Forest Officer, Rairangpur Division, Rairangpur
11	O/o Divisional Forest Officer, Cuttack Division, Cuttack
12	O/o Divisional Forest Officer, Bargarh Division, Bargarh
13	O/o Divisional Forest Officer, Berhampur Division, Berhampur
14	O/o Divisional Forest Officer, City Forest Division Bhubaneswar
15	O/o Divisional Forest Officer, Keonjhar (WL) Division Anandapur
16	O/o Divisional Forest Officer, Balasore (WL) Division, Balasore
17	O/o Divisional Forest Officer, Bhadrakh (WL) Division, Bhadrakh
18	O/o Divisional Forest Officer, Puri (WL) Division, Bhubaneswar
19	O/o Silviculturist, Rayagada
20	O/o working Plan Officer, Bhubaneswar Working Plan Division, Bhubaneswar
21	O/o working Plan Officer, Balasore Working Plan Division, Balasore

2.4. Government have also decided to convert the Bamra Territorial Division to a Wildlife Division and place the same, like the other Wildlife Division, under the control of Addl. Principal CCF (WL). Besides, the Offices of the Divisional Forest Officers, Puri, Sambalpur, Kalahandi and Bolangir will now be renamed as the Offices of the Divisional Forest Officers of Khurda, Sambalpur(South), Kalahandi (North) and Bolangir (West) respectively; and the Office of the Divisional Forest Officer, Badarama (WL) Division will be renamed as the Office of the Divisional Forest Officer, Hirakud (WL) Division.

2.5. After this reorganisation, the following 74 Establishments will exist under the Forest & Environment Department on the Forestry and Wildlife side (exclusive of the Kenduleaf Organisation) and will remain under the administrative control of the PCCF(59 establishments) and the Addl. PCCF Wildlife (15 establishments) as indicated below:

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Table No. 395

Establishments under the Administrative control of PCCF, Orissa

Sl.No.	Establishment
1	O/o Principal Chief Conservator of Forests, Orissa, Bhubaneswar
2	O/o Project Director, World Food Programme, Bhubaneswar
3	O/o Conservator of Forests, Angul Circle, Angul
4	O/o Conservator of Forests, Berhampur Circle, Berhampur
5	O/o Conservator of Forests, Sambalpur Circle, Sambalpur
6	O/o Conservator of Forests, Koraput Circle, Koraput
7	O/o Conservator of Forests, Bhubaneswar Circle, Bhubaneswar
8	O/o Conservator of Forests, Bhawanipatna Circle, Bhawanipatna
9	O/o Conservator of Forests, Rourkela Circle, Rourkela
10	O/o Conservator of Forests, Development Circle, Cuttack
11	O/o Divisional Forest Officer, Baripada Division, Baripada
12	O/o Divisional Forest Officer, Karanjia Division, Karanjia
13	O/o Divisional Forest Officer, Rairangpur Division, Rairangpur
14	O/o Divisional Forest Officer, Keonjhar Division, Keonjhar
15	O/o Divisional Forest Officer, Deogarh Division, Deogarh
16	O/o Divisional Forest Officer, Rourkela Division, Rourkela
17	O/o Divisional Forest Officer, Bonai Division, Bonai
18	O/o Divisional Forest Officer, Sundergarh Division, Sundergarh
19	O/o Divisional Forest Officer, Sambalpur (North) Division, Sambalpur
20	O/o Divisional Forest Officer, Sambalpur (South) Division, Sambalpur
21	O/o Divisional Forest Officer, Rairakhol Division, Rairakhol
22	O/o Divisional Forest Officer, Bargarh Division, Bargarh
23	O/o Divisional Forest Officer, Kalahandi (North) Division, Bhawanipatna
24	O/o Divisional Forest Officer, Kalahandi (South) Division, Bhawanipatna
25	O/o Divisional Forest Officer, Khariar Division, Khariar
26	O/o Divisional Forest Officer, Bolangir (East) Division, Bolangir
27	O/o Divisional Forest Officer, Bolangir (West) Division, Bolangir
28	O/o Divisional Forest Officer, Nowrangpur Division, Nowrangpur
29	O/o Divisional Forest Officer, Jeypore Division, jeypore
30	O/o Divisional Forest Officer, Koraput Division, Koraput
31	O/o Divisional Forest Officer, Malkang iri Division, Malkangiri
32	O/o Divisional Forest Officer, Rayagada Division, Rayagada
33	O/o Divisional Forest Officer, Ghumsar South Division, Bhanjanagar
34	O/o Divisional Forest Officer, Ghumsar North Division, Bhanjanagar
35	O/o Divisional Forest Officer, Berhampur Division, Berhampur
36	O/o Divisional Forest Officer, Phulbani Division, Phulbani
37	O/o Divisional Forest Officer, Balliguda Division, Balliguda
38	O/o Divisional Forest Officer, Boudh Division, Boudh
39	O/o Divisional Forest Officer, paralakhemundi Division, Paralakhemundi
40	O/o Divisional Forest Officer, Khurda Division, Khurda
41	O/o Divisional Forest Officer, Nayagarh Division, Nayagarh
42	O/o Divisional Forest Officer, City Forest Division, Bhubaneswar
43	O/o Divisional Forest Officer, Angul Division, Angul
44	O/o Divisional Forest Officer, Athamallik Division, Athamallik
45	O/o Divisional Forest Officer, Dhenkanal Division, Dhenkanal

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42	O/o Divisional Forest Officer, City Forest Division, Bhubaneswar
43	O/o Divisional Forest Officer, Angul Division, Angul
44	O/o Divisional Forest Officer, Athamallik Division, Athamallik
45	O/o Divisional Forest Officer, Dhenkanal Division, Dhenkanal
46	O/o Divisional Forest Officer, Athagarh Division, Athagarh
47	O/o Divisional Forest Officer, Cuttack Division, Cuttack
48	O/o Silviculturist, Bhubaneswar
49	O/o Silviculturist, Rayagada.
50	O/o Divisional Forest Officer, Forest Resources and Survey Division, Cuttack
51	O/o Working Plans Officer, Sambalpur Working Plan Division, Sambalpur
52	O/o Working Plans Officer, Keonjhar Working Plan Division, Keonjhar
53	O/o Working Plans Officer, Bhanjanagar Working Plan Division, Bhanjanagar
54	O/o Working Plans Officer, Angul Working Plan Division, Angul
55	O/o Working Plans Officer, Bhawanipatna, Working Plan Division, Bhawanipatna
56	O/o Working Plans Officer, Koraput Working Plan Division, Koraput
57	O/o Working Plans Officer, Bhubaneswar Working Plan Division, Bhubaneswar
58	O/o Working Plans Officer, Balasore Working Plan Division, Balasore
59	O/o Principal forest Rangers College, Angul

Table No. 396

Establishment under Administrative control of Addl. PCCF (WL)

Sl.No.	Establishment
1	O/o Addl.Principal Chief Conservator of Forests, Wildlife, Orissa
2	O/o Director, Nandankanan Zoological Park, Bhubaneswar
3	O/o Field Director, Simlipal Tiger Reserve, Baripada
4	O/o Divisional Forest Officer, Mangrove Wildlife Division, Rajnagar
5	O/o Divisional Forest Officer, Satkosia Wildlife Division, Angul
6	O/o Divisional Forest Officer, Sunabeda Wildlife Division, Nuapada
7	O/o Divisional Forest Officer, Chilika Wildlife Division, Balugaon
8	O/o Divisional Forest Officer, Bhadrakh (WL) Division, Bhadrakh
9	O/o Divisional Forest Officer, Balasore (WL) Division, Balasore
10	O/o Divisional Forest Officer, Keonjhar (WL) Division, Anandapur
11	O/o Divisional Forest Officer, Hirakud (WL) Division, Sambalpur
12	O/o Divisional Forest Officer, Puri (WL) Division, Bhubaneswar
13	O/o Divisional Forest Officer, Mahanadi Wildlife Division, Kuanria
14	O/o Divisional Forest Officer, Chandaka Wildlife Division, Bhubaneswar
15	O/o Divisional Forest Officer, Bamra Wildlife Division, Bamra

3. Redeployment of Posts:

With the abolition of 18 establishments of Social Forestry Project and 11 of the PCCF, Orissa, the staff of the 29 establishments will be redeployed in the Divisions/ Circles/State Forest headquarters as per the following plan.

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Table No. 397

Deployment plan of ministerial and other office staff of the abolished Divisions/Circles in reorganise

C=Divisions / Circles/ Headquarters

Sl. No	Name of the Existing field Divisions / Circles.	Name of the Divisions/Circles in reorganized set up in which present staff are to be deployed.
1	FUO, Cuttack	City Forest Division
2	DFO,CSB Afforestation, Cuttack	Cuttack Forrest Division
3	DFO,CSB Afforestation, Bhubaneswar	Puri WL Division
4	DFO,CSB Afforestation, Balasore	WPO, Balasore
5	DFO,Affn, Koraput	Koraput Forest Division
6	DFO,Affn, Rayagada	Silviculture Divn, Rayagada
7	DFO,Affn, Rourkela	Rourkela Forest Division
8	DFO, Affn, Bhawanipatna	Kalahandi (South) Forest Division
9	DFO, Affn, Bolangir	Bolangir (East) Forest Division
10	DD, Cuttack SFP, Cuttack	Cuttack Forest Division
11	DD, Puri SFP, Bhubaneswar	WPO, Bhubaneswar
12	DD, Balasore SFP, Balasore	Balasore WL Division
13	DD, Keonjhar SFP, Keonjhar	Keonjhar WL (Hq. Anandapur)
14	DD, Rairangpur SFP, Rairanggpur	Rairanggpur Forest Division
15	DD, Sundargarh SFP, Sundargarh	Sundargarh & Sambalpur (N) Forest Division
16	DD, Sambalpur SF P, Sambalpur	Sambalpur (North) Forest Division
17	DD, Bargarh SFP, Bargarh	Bargarh Forest Division
18	DD, Bolangir SFP, Bolangir	Bolangir (East) Forest Division
19	DD, Kalahandi SFP, Bhawanipatna	Kalahandi(South) Forest Division
20	DD, Rayagada SFP, Rayagada	Koraput Forest Division
21	DD, Koraput SFP, Koraput	Malkangiri Forest Division
22	DD, Ganjam SFP, Berhampur	Berhampur Forest Division
23	DD, Dhenkanal SFP, Angul	Bhadrakh WL Division
24	CF. Affn. Sambalpur	CF, Rourkela Circle
25	RJD, Bhunbaneswar	CF, Bhubaneswar Circle
26	RJD, Berhampur	CF, Bhawanipatna Circle
27	RJD, Sambalpur	CF, Rourkela Circle
28	CF, W.P.	CF, Angul Circle & CF, Bhubaneswar Circle
29	Director, SFP	Office of PCCF, Orissa

Table No. 398

Redeployment of Officers

Sl. No.	Name of the Existing Post	Name of the post in the reorganised setup to which the officer is redeployed
1	Director, SFP, Orissa	CCF., SF & Aff, O/o- PCCF, Orissa
2	JD (Hq), O/o Director, SFP	CF (Admn.), O/o – PCCF, Orissa
3	DD (M & E) O/o Director, SFP	Dy. CF (Nodal) O/o-PCCF, Orissa
4	DD (Admn) O/o Director, SFP	Dy. CF (SF & Aff) O/o – PCCF, Orissa
5	RHD,SFO, Bhubaneswar Zone	CF, Bhubaneswar Circle
6	RJD,SFP, Sambalpur Zone	CF, Rourkela Circle

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7	RJD, SFP, Berhampur Zone	CF, Bhawanipatna Circle
8	DD, Cuttack SFP, Cuttack	DFO, Cuttack Forest Division
9	DD, Puri SFP, Bhubaneswar	Working Plans Officer, Bhubaneswar
10	DD, Balasore SFP, Balasore	DFO, Balasore (WI) Division
11	DD, Keonjhar SFP, Keonjhar	DFO, Keojhar (WL) Division
12	DD, Rairangpur SFP, Rairangpur	DFO, Rairangpur Forest Division
13	DD, Sundargarh SFP, Sundargarh	WLCO,O/o- Chief WI Warden, Orissa
14	DD, Sambalpur SFP, Sambalpur	DFO, Sambalpur (North) Forest Division
15	DD, Bargarh SFP, Bargarh	DFO, Bargarh Forest Division
16	DD, Bolangir SFP, Bolangir	DFO, Bolangir (East) Forest Division
17	DD, Kalahandi SFP, Bhawanipatna	DFO, Kalahandi(South) Forest Division
18	DD, Korapout SFP, Koraput	DFO, Malkangiri Forest Division
19	DD, Rayagada SFP, Rayagada	ACCF (Admn),O/o- PCCF, Orissa
20	DD, Ganjam SFP, Berhampur	DFO, Berhampur Forest Division
21	DD, Dhenkanal SFP, Dhenkanal	DFO, Bhadrakh (WL) Division
22	CF, Aff. Circle, Sambalpur	CF, (Aff. & SF), O/o- PCCF, Orissa
23	DFO, CSB, Aff. Division., Puri	DFO, Puri (WL) Division
24	DFO, CSB Aff. Division, Cuttack	DFO, City Forest Division
25	DFO, CSB Aff. Division, Balasore	Working Plan Officer, Balasore
26	DFO, Aff. Division, Rourkela	DFO, Rourkela Forest Division
27	DFO, Aff. Division, bhawanipatna	Dy. CF, (Enforcement) O/o- PCCF, Orissa
28	DFO, Aff Division, Koraput	DFO Koraput Forest Division
29	DFO, Aff. Division, Bolangir	Dy. Director, Simlipal Tiger Reserve, O/o FD, STR, Baripada
30	DFO, Aff. Division, Rayagada	Silviculturist, Rayagada
31	CF, Working Plans, Cuttack	CF, Working Plans, O/o- PCCF, Orissa
32	FUO, Cuttack	FUO, O/o – PCCF, Orissa
33	Geneticist, Bhubaneswar	Dy.CF,(R&T), O/o-PCCF, Orissa
34	Accf, O/o-PCCF, Orissa	ACCF(Hq), O/o-PCCF, Orissa
35	WLCO, Nandankanan	Dy. Director, Nandankanan Zoological Park
36	DFO, Puri Forest Division	DFO, Khurda Forest Division
37	DFO, Sambalpur Forest Division	DFO, Sambalpur (South) Division
38	DFO, Kalahandi Forest Division	DFO, kalahandi (North) Division
39	DFO, Bolangir Forest Division	DFO, Bolangir 9West) Division
40	DFO, Badrama (WL) Division	DFO, Hirakud (WL) Division
41	DFO, Bamra Forest Division	DFO, Bamra (WL) Division

This resolution comes into force with immediate effect and the reorganization exercise will be completed by 30th September 2003.

The PCCF Orissa will issue necessary follow up orders.

By order of the Governor
Sd/-
8/8/03
(G.B. Mukherji)
PRINCIPAL SECRETARY TO GOVERNMENT

* * *

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Notification No. 02

GOVERNMENT OF ORISSA
FOREST & ENVIRONMENT DEPARTMENT
RESOLUTION.
No.5F-C-62/2000. 13285/F&E., Dated Bhubaneswar the 23.08.2000.

In partial modification of this Department Resolution No.5503/F&E., Dated 31.03.2000 in the matter of policy on procurement and trade of Non-Timber Forest Produce, the State Government have been pleased to transfer the following seven oil seed items mentioned in Annexure-B appended to the said Resolution for inclusion of the same as Minor Forest Produce items under Annexure – A to be regulated by the Gram Panchayats henceforth.

1) Mahua Seed
2) Kusum Seed
3) Karanja Seed
4) Neem Seed
5) Char Seed
6) Chakunda Seed
7) Babul Seed

The guidelines laid down in the aforesaid Resolution for disposal of the above seven oil seed items shall be treated as ineffective.

By Order of the Governor

H.S .Chahar,
Commissioner-cum-Secretary to Government.

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Notification No. 3

THE SCHEDULE OF RATE FOR FOREST PRODUCE IN ORISSA RULES, 1977

Notification No. 30957-FFAH, dated the 14th November 1977 - In exercise of the powers conferred by Clause (d) of Section 36 of the Orissa Forest Act, 1972 (Act 14 of 1972), the State Government do hereby make the following rules for payment to be made by the inhabitants of towns and villages in the vicinity of protected forests to take trees, timber or other forest produce for their own use and for trade:

PRELIMINARY

1. Short title, extent and commencement –

(1) These rules may be called the Schedule of Rate for Forest Produce in Orissa Rules, 1977.

(2) They shall extend to the whole of the State of Orissa.

(3) They shall come into force on the date of their publication in the official Gazette.

2. Definitions – In these rules unless the context otherwise requires-

(i) "Act" means the Orissa Forest Act, 1972.

(ii) "Bahangi load" or Bhar Load" or Kawar load" means materials carried with the help of a pole resting on the shoulder with materials at either end '{***}

(iii) "Cart load" means materials carried in a cart drawn by bullock (s) or buffalo (es) ''{***}.

(iii-a) "Guttia load" or "Buffalo load" means materials carried in a cart drawn by a bullock or a buffalo.{***}

(iii-b) "Bullock" or "\ Sagar load" means materials carried with the help a bullock or a buffalo '{***}]

(iv) "Firewood" means billets of wood '{***} not fit for any purpose other than firewood.

(v) "Forest produce for own use" means forest produce removed from the protected forests for the personal consumption in the villages or town, as the case may be, and not for sale or barter.

(vi) "Form" means the form appended to these rules.

(vii) "Head load" means materials carried on head not weighing more than twenty kilograms.

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(viii) "Inhabitant" means a person owning land and/or house in the village or town, as the case may be, and living in the said village or town for not less that six months in the year.

(ix) "Permit" means a permit issued by an authority competent to issue the same under these rules.

(x) "Reserved trees" means trees which have been declared as reserved under Clause (a) of Section 34 of the Act.

(xi) "Vicinity" means the area within which inhabitants of a village or town used to exercise the right of taking forest produce at concessional rates immediately before enforcement of these rules.

(xii) All words and expressions used the these rules but not defined therein have the same meaning as are respectively assigned to them in the Act.

3. **Classification of trees** – For the purpose of Schedule of Rates the various species of trees are classified as Special Class, Class, Class II and Class III as mentioned in the Schedule I.

4. **Rules for measurement of timber and poles** –

(1) Timber and pole will be measured in multiples of ten centimeters in length and lengths below ten centimeters will be ignored for calculation of length of timber and pole.

(2) In measuring girth of timber and pole fraction of one centimeter will be ignored.

Explanation – For the purpose of this rule, timber means round timber which has not been squared or sawn in any way and whose girth at the butt end is ninety centimeters or more and pole means timber whose girth at the butt end is less than ninety centimeters.

5. **Authorisation for issue of permit** – The State Government may order, from time to time, the value up to which various categories of Forest Officer will be authorized to issue permit under these rules and until such an order is made the orders in force prior to the commencement of these rules on the subject shall continue.

5. **No permit for departmental plantation**- No permit shall be issued for sale of materials from plantations raised by the Department.

6. **No permit for trade** – No permit shall be issued for removal of timber, charcoal, firewood and bamboos for trade purpose: provided that such permit shall be necessary to be obtained for collecting and removing any other forest produce for trade purposes, in respect of any area not covered by any subsisting lease for the same produce.

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7. **Issue of permit** – A permit shall be issued in the Form appended to these rules to the inhabitants of towns and villages in the vicinity of protected forests for removal of timber, bamboos, firewood and charcoal for their own use, and of other forest produce for trade purpose on payment as mentioned in Schedule II: Provided that no permit is necessary for removal of forest produce other than timber, bamboos, firewood, charcoal for their own use.

8. **Repeal and savings** – All rules and orders to the extent that are repugnant to the provisions of these rules are hereby repealed : Provided that in respect of any forest produce not covered under Schedule- II the rate as applicable to such produce immediately before coming into force of these rules shall prevail until revised.

FORM
{Rule 8}

Name of lessee..... Book No.....

Name of locality..... Permit No.....

Name of purchaser	Number of carts and names of carter	Description of produce	Number on quantity	Value

Destination

Date of Expiry

Signature of Agent or Officer
Date of issue.

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SCHEDULE - I

{Vide Rule- 3}

Table No. 399			
CLASSIFICATION OF TREES FOR PURPOSE OF SCHEDULE OF RATE			
Sl. No.	Class	Species	Botanical Name
1.	Special Class	Teak	*Tectona grandis*
2.		Sandal	*Santalum album*
1.	1st Class	Sal, Sargi	*Shorea robusta*
2.		Piasal, Bija	*Pterocaupus marsuplum*
3.		Bandhan, Panjan	*Ougetsia ojeinensis*
4.		Sisoo	*Dalbergia sssoo*
5.		Kurum, Kaim, Haldu	*Adina cordifolia (= Haldinia cordifolia)*
6.		Khair	*Aecacia catechu*
7.		Gambhar	*Gmelina arborea*
8.		Kangada, Tangan	*Xylia xylocarpa*
9.		Champa	*Mischelia champaca*
10.		Rosewood	*Dalbergia latifolia*
11.		Toom	*Cedrela toona*
12.		Raktachandan	*Pterocarpus santalinus*
1.	2nd Class	Asan, Sahaj	*Terminalia tomentosa*
2.		Kasi	*Bridelia retusa*
3.		Kendu	*Diospyros melanoxylon*
4.		Mahul	*Madhuca indica*
5.		Mango	*Mangifera indica*
6.		Semal	*Bombax ceiba*
7.		Panasa	*Artocarpus hoterophyllus*
8.		Dhaura	*Anogeissus latifolia*
9.		Rohini	*Soymida febrifuga*
10.		Tentra	*Albizzia lebbeck, A. procera*
11.		Sidha, Sina	*Lagerstroemia parviflora*
12.		Jamu	*Syzygium cumini*
13.		Mitkunia	*Mitragyna parvifolia*
14.		Dhaman	*Grewia tilifolia*
15.		Kadamba	*Anthocephalus cadamaba*
16.		Ashok	*Saraca indica*
17.		Panigambar	*Trewia nudiflora*
18.		Ghodananjia	*Albizzia chinensis*
19.		Chhachina	*Alstonia scholaris*
20.		Mohanim	*Ailanthus excelsa*
21.		Gridihini	*Sterculia ruens*
22.		Kansa	*Hymendyctyon excelsum*
1.	3rd Class	All other species not included in 1st and 2nd class	

Note- No permit shall be issued to the tenants for Teak, Chandan and other planted species.

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SCHEDULE- II

(Vide Rule 8)
(Schedule of Rates)

A. Round Timber and Poles

Table No. 400			
SCHEDULE OF RATE FOR FOREST PRODUCE IN SAMBALPUR (PRE-REORGANISED) DIVISION			
Class	Timber / Poles	Girth class in cm	Price in Rs.
I	A. Round Timber (Rate per cum)	90 to Under 120	94.60
		120 to Under 150	144.00
		150 to Under 180	193.50
		180 to Under 210	225.75
		210 and above	225.75
	B. Poles (Rate per price)	Under 30	0.65
		30 to Under 45	1.20
		45 to Under 60	2.35
		60 to Under 75	5.50
		75 to Under 90	10.85
II	A. Round Timber (Rate per cum)	90 to Under 120	58.05
		120 to Under 150	82.80
		150 to Under 180	131.15
		180 to Under 210	144.00
		210 and above	144.00
	B. Poles (Rate per price)	Under 30	0.45
		30 to Under 45	0.85
		45 to Under 60	1.85
		60 to Under 75	3.70
		75 to Under 90	7.20
III	A. Round Timber (Rate per cum)	90 to Under 120	26.35
		120 to Under 150	37.65
		150 to Under 180	55.90
		180 to Under 210	75.25
		210 and above	75.25
	B. Poles (Rate per price)	Under 30	0.30
		30 to Under 45	0.65
		45 to Under 60	1.20
		60 to Under 75	2.35
		75 to Under 90	4.85

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B. Bamboo

Name of Bamboo	Price in Rs.
Salia (per 100)	4.30
Daba (per 100)	6.45

C. Firewood and Charcoal

A uniform rate has been prescribed for Firewood and Charcoal throughout the State as detailed below:

Table No. 401		
Unit	Firewood (In Rs.)	Charcoal (In Rs.)
Head load	0.15	0.20
Bhar load	0.30	0.50
Bullock Cart load	2.00	8.00
Bullock Cart load	3.00	12.00

NOTES
Entrial 1 to 5 have been substituted vide Orissa Gazette, Extraordinary No, 1181, dated 21.8.1978. The old entries were as follows:

Table No. 402		
Unit	Firewood (In Rs.)	Charcoal (In Rs.)
Head load	0.20	0.55
Bhar load	0.40	1.10
Bullock Cart load	4.00	10.80
Bullock Cart load	6.00	16.20
Per quintal	1.00	2.70

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D. Minor Forest Produce
Sambalpur District (Undivided)

Table No. 403

Sl. No.	Particulars of MFP	Per head load	Per Bhar load	Per cart load	Per Buffalo load	Per Bullock load	Per quintal	Per Kg.
1	Thorn leaves	0.10	0.20	0.65	0.85	-	-	-
2	Brush wood	0.20	0.45	1.30	1.60	-	-	-
3	Fodder Grass	0.10	0.20	0.65	0.85	-	-	-
4	Thatching Grass	0.20	0.30	-	1.70	1.30	-	-
5	Sabai & Panasi Grass	0.10	0.20	-	9.65	7.85	-	-
6	Creepers	0.10	0.20	-	1.60	1.60	-	-
7	Palm leaves	0.10	0.20	-	1.70	1.60	-	-
8	Ashes (Khair)	0.45	0.85	-	10.75	7.50	3.45	-
9	Pitambarang Antiapa	0.10	-	-	-	-	-	-
10	Rual	0.10	-	-	1.10	0.55	-	-
11	Siali bark	0.20	0.45	-	-	-	-	-
12	Bhalta fruits	0.20	0.55	-	-	-	-	-
13	Tamarind	0.20	0.55	-	-	-	-	-
14	Kaudia	0.20	-	-	-	-	-	-
15	Honey	-	-	-	-	-	-	1.40
16	Wax	-	-	-	-	-	-	0.90
17	Gum	-	-	-	-	-	-	0.25
18	Myrabolans	-	-	-	-	-	4.30	-
19	Simul Cotton	-	-	-	-	-	-	0.25
20	Kusum seed	-	-	-	-	-	-	0.10
21	Sunari bark	-	-	-	-	-	5.75	-
22	Asan bark	-	-	-	-	-	2.90	-
23	Other tanning bark	-	-	-	-	-	2.90	-
24	Sal resin	-	-	-	-	-	-	0.55
25	Natural gum	-	-	-	-	-	-	0.55
26	Lac	-	-	-	-	-	17.30	-
27	Kuchila	-	-	-	-	-	2.90	-
28	Bones	-	-	-	-	-	11.50	-

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Mahua flower and Seeds

A uniform rate has been prescribed for the whole State as follows:

Table No. 404

Sl. No.	Name of the MFP	Price in Rs.
1	Mohua flower (Per quintal)	7.00
2	Mohua seeds (per quintal)	13.00
3	Mohua seed kernel (per quintal)	18.00

Notification No. - 4

PROTECTION OF RESERVE FOREST AND PROTECTED FOREST AREA BY THE COMMUNITY

Forest, Fisheries & A. H. Department, Government of Orissa

Resolution No. 10 F (Pron) 4 / 90 / 29825 / FFAH, Bhubaneswar, Dated 11.12.1990

Sub: - Protection of Reserve Forest and Protected Forest areas by the community and enjoyment of certain usufructs by the community.

The question of involving village community for effective protection and conservation of Reserved Forest and Protected Forest was for some time past, under active consideration of Government. After careful consideration, Government are of the view that the task of the protecting forest is so urgent and enormous that the community should be fully and actively involved in it. Accordingly, it has been decided that the following scheme of involving the rural community will be implemented in the state Under this scheme villagers will be assigned a specific role in the protection of Reserved Forest and Protected Forests adjoining their villages and will in return, be granted under section 24 of the Orissa Forest Act, 1972 certain concessions in Reserved Forest and taking into account prevalent practice and rights if any, in respect of Protected Forest in the matter of meeting their bonafide requirement of firewood and small timbers.

(1) The concerned Divisional Forest Officer shall assign the peripheral Reserved Forest and Protected Forest area to the adjoining villages according to the compartment line. The area in one compartment may cover one or more villages. Wherever the compartment line does not exit, natural boundary like nalla, bridges, etc will form the demarcation point. Reserve Forest areas notified under section 18 (1) of the Wild Life (Protection) Act, 1972 will however be excluded from the purview of the assignment.

(2) The concerned Divisional Forest Officer shall constitute a Forest Protection Committee for each of the concerned villages in consultation with the local villagers. The committee shall comprise the Surpanch of the concerned Gram Panchayat, the Ward Members belonging to the village, the local Forester, Revenue Inspector, VLW and such

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other non official members of the village to be selected by convening a meeting of the concerned villagers. The total number of the members of the Committee shall be at least 8 which shall, as far as possible include, women and persons belonging to SC or ST and the landless, categories. The Sarpanch of the Gram Panchayat and the local Forester shall be the Chairman and convener of the Committee respectively.

(3) The villagers shall through the Forest Protection Committee, furnish an undertaking to the concerned Divisional Forest Officer for proper upkeep and maintenance of the assigned Reserved Forest and Protected Forest areas. The assigned villages shall be responsible for fire fighting and prevention of illicit fellings, theft of forest produce and encroachment in the assigned Reserved Forest and Protected areas. The Forest Protection Committee shall be responsible for ensuing performance of the above function by villagers of the assigned villages.

(4) For performance of the duties enumerated in para 3 the villagers shall be entitled to obtain their bonafide requirement of small timber and firewood for household consumption only and not for sale or barter. The Forest Protection Committee shall be responsible for proper distribution of small timber and firewood among the households, keeping in view, the following guidelines

(a) The minimum requirement of the household for building and agriculture purpose should be worked out by the Committee and the distribution made accordingly on the basis of available produce, before meeting their demand for other purposes.

(b) As regards supply of firewood the same shall be apportioned among the household keeping in view their real requirement as far as possible.

(5) Small timber and firewood shall be removed from assigned Reserved Forest areas and Protected Forest areas only in accordance with a permit issued by the two members of the Committee authorized for the purpose. The permit issued as above shall be valid only within the limits of the village boundary to which the household belongs.

(6) This supersedes this Departments resolution No. 17240 / FFAH, Dated 01.08.88 and 236 / FFAH, Dated 13.10.1988.

ORDER

Ordered that the Resolution be published in the next ordinary issue of the Orissa Gazette.

By Order of the Governor

P. K. Mohanty

Secretary to Government

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Notification No.- 5

RESOLUTION

Order No. 22180 / FE Bhubaneswar dated 30.09.1996

Subject:- Incentives to villagers for protection of forests and conferment of right to usufruct in respect of forests protected by villagers.

In our State it has been the policy of the Government to involve the villagers as partners in the task of protection of forests and rehabilitation of degraded forests in their locality. However, on account of uncertain tenure of the villagers on forests in general and forest produce in particular, satisfactory progress has not been achieved in this direction. In order to obtain active cooperation of the villagers in halting degradation of forests, it is necessary to confer specific rights in favour of the Village Communities in respect of various forest products. After careful consideration, Government has decided that right on the forest produce shall be conferred on the villagers in respect of the forest areas within the limits of the respective villages or situated adjacent to the villages. For this purpose, the concerned villagers have to form Vana Samrakshana Samiti through which they will exercise their right to control and management over the forest in question, which will also be notified as Village Forest for that village. To work out such a process of conferring collective right on the villagers, the management of the peripheral forests has to be village based, and the village has to be treated as the basic unit of management of such forests. All kinds of forests including degraded forests will be protected with the cooperation of the concerned villagers and in lieu of extending such cooperation, the villagers will be entitled to take from the forests various forest products to meet their bonafide requirements. The villagers of any particular village can exercise their collective right over the forest situated within the boundaries of the village or area notified as village forest for the village. The local forest officer will not allow villagers of other distant villages to collect firewood and other forest produce from such forests.

The scope of the collective right to be conferred on the village communities will be as follows:

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a) The village community which has taken active part in the plantation and rehabilitation of village forests and in their protection and maintenance under the Social forestry project, or have been guarding and protecting forests situated within the boundaries of the village or adjacent to the village for a number of years will be conferred the responsibilities for control, management and protection of the forests in question. Which part of the forest in question located outside the boundaries of the village will come under the control of the village community will be decided taking into account the situation and other aspects of the surrounding villages. For this purpose, the boundaries of the forest area will be demarcated on the ground through durable marks and the said forest will be declared as the "village forest" for that village. Such work of demarcation of boundaries of village forests will be carried out in a formal manner by the Divisional Forest Officer, Sub-Collector and the Tahasildar concerned on the basis of a joint verification.

b) The local village community will have the primary right of usage and management of the forest notified as village forest. A management scheme will be prepared by the village community for the purpose, and the same will be approved by the DFO concerned. As the village community takes responsibility for protection and management of the forests; it will get authority for regulating the usage of the said forest in accordance with the management scheme.

c) Each resident family who is a member of the village community will be eligible to gather wood and bamboo etc as may be available from the said forest area, free of any charges. The village community may allow any such collection by its members in its own authority. The village community may grant such permission keeping in view the state of forest and rules and regulations of management adopted for the same.

d) The members of the village community will have the full right to collection of non timber forest produce from the said forest area, the possession and storage of the same and for processing the products for preparation of their commodities. However, any such produce can be disposed of only to the lessees, agents or authorized officials of the Government at prices fixed for the same.

(Unofficial translation provided by Shri S. C. Mohanty, IFS, Special Secretary to Government, Forest & Environment Department, Orissa.)

Source: Joint Forest Management Update, 1998, Society for Promotion of Wastelands Development, New Delhi.

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Notification No. 6

LOCATIONS OF INDICATOR IN THE WORKING PLAN

Table No. 405

TITLE SUB-TITLE	CONCERNED INDICATORS	REMARKS
Introduction Glossary of Botanical Terms List of common Animals and birds	-----	Definition of Criteria, Indicator and other related terms.
Part I Summary of facts on which proposals are based	------	As per observations in the new suggested chapter on C&I based monitoring and evaluation
Chapter I The Tract Dealt with	-----	-----
Name and situation	------	Name of the Division and its Geographic Location
Configuration of the ground	------	Geomorphology of the Forest Division
Geology, rock, and soil	4.2 Area prone to soil erosion 4.3 Area under ravine, saline, alkaline soils and deserts (hot & cold) 4.4 Soil fertility/Site quality	Attempts should be made to collect quantitative information about these indicators during preparation of the working plan. The information pertaining to indicator 4.3 & 4.4 may be collected in specific locations.
Climate and rainfall	----	May use Champion and Seths parameters as given below: **Rainfall:** Wet Forests>250mm annual rainfall Moist Forests 1250 2500mm -do- Dry Forests 750-1250 mm -do- Desert Forests <750mm -do- **Temperature** Tropical > 24°C Mean annual Temp. Sub-Tropical 17-24°C -do- Temperate 7-17°C -do- Alpine < 7°C -do-
Water supply	4.5 (a) Duration of water flow in selected streams	May be observed at FMU level involving communities
	4.5 (b) Ground water in the vicinity of the forest areas	The relevant information may be collected at FMU level from the department of water resources.

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Distribution and area	1.1 Area and type of forest cover under (a) Natural forest and (b) Man-made forest (Tree plantations) 1.5 Tree cover outside forest area	Area under Natural forests and Tree plantations in the Division may be given periodically to monitor the changes. Attempts should be made to estimate the number and status of the trees growing outside forest area within the territorial limits of the Forest Division
	21. Area of protected eco-systems (Protected Areas) 7.4 Extent of cultural/ sacred protected landscapes: forests, trees, ponds, streams, etc. a) Type and area of landscape (b) Number of visitors	Area under National Parks and Sanctuaries need to be clearly delineated and demarcated. Such special areas need to be demarcated in the field and the relevant information should be recorded in the Working Plan. The information pertaining to this indicator is collected at the Forest Division Level.
State of boundaries	1.3 Forest area under encroachment	The details of the forest area may be recorded for monitoring the encroachment in the Forest area.
Legal position	1.2 Forest area officially diverted for non-forestry purposes	The details of the diverted data may provide a clue about the diversion of forest area and hence help monitoring the proportion of forests are diverted.
Rights and concessions	8.7 Status of formation dissemination and utilisation	The Nistar rights and concessions that are published in the Nistar Patrika should reach to the user communities so as to enable them to avail these facilities.
Chapter II Flora and fauna	-----	------
Chapter II A Forest flora	2.2 number of (b) Plant species	During the preparation of Working Plan, the detailed list of Plant species is prepared
Trees	2.3 Number and status of threatened species of (b) Plants 2.4 Status of locally significant species of (b) Plants	This indicator represent and assesses the status of the plant species under stress and also attempts to assess the measures taken towards protection of these species.
General description of the growing stock	-----	Forest types & sub types according to Champion and Seth classification
Status of natural regeneration	3.1 Status of natural regeneration	Number of established Tree seedlings/ha.

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Injuries to which crop is liable	3.2 Incidences of forest fires 3.3 Extent of livestock grazing (a) Forest Area open for grazing (b) Number of livestock grazing in forests 3.5 Incidence of pest and diseases	The relevant information is collected by the Working Plan Officer (WPO) and also annually maintained by the Divisional Forest Officer
Chapter IIB Forest Fauna (a) Mammals (b) Birds (c) Reptiles (d) Fish	2.2 Number of (a) Animal species 2.3 Number and status of threatened species of (a) Animals 2.4 Status of locally significant species of (a) Animals	During the preparation of Working Plan, the detailed list of Animal species is prepared. This indicator represents and assesses the status of the animal species under stress and also attempts to assess the measures taken towards protection of these species.
Injuries to which the fauna is liable; Protection and management of fauna	3.2 Incidences of forest fires 3.3 Extent of livestock grazing (a) Forest Area open for grazing (b) Number of livestock grazing in forest 3.5 Incidences of pest and diseases	This information would be crucial for designing the appropriate management strategies.
Chapter III Utilization of the produce	-----	-----
Agricultural customs and wants of the Population	-----	Information regarding human and livestock population dependent on forest and forest resources.
Markets and marketable products	6.2 Recorded collection of Non-Wood Forest Produce 6.8 Important Export of wood and Non-Wood Forest Produce	Relevant data/information is usually maintained in the division office. The relevant data is usually compiled at the National level.

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Demand and supply of forest produce and pressure on forests.	6.4 Aggregate and per capita consumption of wood and Non Wood Forest Produce 6.7 Demand and Supply of wood and Non-Wood Forest Produce.	This indicator indicates the proportion of the population and quantity of wood and NWFP used by them. This is applicable at FMU as well as National Level.
Methods of harvesting and their costs	2.5 Status of species prone to over exploitation 2.6 Status of non-destructive harvest of Wood and Non-Wood Forest Produce 6.3 Efforts towards reduction of wastages	Certain species are prone to over exploitation due to their economic importance. This may lead the species to become threatened. Therefore standards for time, method and extend of harvesting of important Wood and Non-Wood Forest Products need to be developed for specific locations. Reduction in wastages during harvests/collection, transport, storage and timely disposal of forest products.
Lines of export	-----	This refers to the roads, rivers etc for extraction/transport of forest products.
Past and current prices	-----	As per the working plan prescriptions
Chapter IV Activities of Forest Development Corporations in harvesting and marketing of forest produce, Result of Socio Economic Survey	6.6 Contribution of forests to the income of forest dependent people 7.2 Use of indigenous technical knowledge4: Identification, Documentation and Application	This pertains to the livelihood of Forest dependent people Identification, recognition and application of certain traditional knowledge of local communities in Forest Management.
Chapter V Five Year Plans	8.5 Forest Resource Accounting (b) Budgetary allocations to the forestry sector	Adequate budget provisions would facilitate to undertake planned forestry activities.
Chapter VI Staff and Labour supply	6.5 Direct employment in forestry and forest based industries	Number of persons engaged in the forestry activities.
Chapter VII Past system of Management	-----	As per earlier Working Plan
General history of the forests	-----	Historical background of the forest management from as early period as possible.
Past system of management and their results	8.6 Monitoring and Evaluation mechanisms	As per observations in the new suggested chapter on C&I based monitoring and evaluation

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Special works of improvement taken	4.1 Area under watershed treatment	Forest area requiring watershed treatment and the area treated.
	5.3 Efforts towards enhancement of forest productivity: (a) Technological inputs (b) Area under Hi-tech plantations (c) Area under Seed Production Areas, Clonal Seed Orchards etc.	Application of advanced technologies such as use of quality seeds, scientific nursery techniques, clonal plantations, tending operations, etc.
Past yield, revenue expenditure	8.5 Forest Resource Accounting (a) Contribution of forestry sector to the GDP (b) Budgetary allocations to the forestry sector	Usually given year wise in a tabular form. Efforts should be made for appropriate accounting of at least all the tangible benefits accrued from the forests particularly the timber, fuel wood, bamboo, poles, fodder and NWFPs. This should be in the form of capital accounting, production accounting and balance-sheet.
Chapter VIII Statistics of growth	5.1 Growing stock of wood	This exercise is usually carried upon by the WPO and periodic monitoring of the growing stock will indicate the change from or away sustainability.
Part II Future management discussed and prescribed.	-----	As per observations in the new suggested chapter on C&I based monitoring and evaluation
Chapter I Basis of proposals Objectives of management	-----	As per observations in the new suggested chapter on C&I based monitoring and evaluation. This would depend upon the main management objectives of the area such as Territorial Forest division, Protected Area or any other. The new prescriptions should be based on the progress towards attainment of the MAS value of identified indicators. This would also depend upon the impact of implementation of the prescriptions in the previous Working/ Management Plan. This is basically the C&I based M&E for which a new chapter is advised involving the ecological, economic and social criteria as given in the working plan code to achieve SFM.
Method of treatment to be adopted	-----	As per observations in the new suggested chapter on C&I based monitoring and evaluation

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Constitution of Working Circles	-----	As per the prescriptions of the previous working plan. However the WPO can reconstitute the working circles based on silvicultural grounds.
Period of working plan and necessity for intermediate revision	----	Five yearly review of the impacts of the working plan prescriptions in light of MAS/bench mark value of the identified indicators.
Chapter II To last Chapter (Say Z) (Name of) Working Circle	-----	-----
General Constitution of Working circle	-----	As per the prescriptions of the previous working plan. However the WPO can reconstitute the working circles based on silvicultural grounds.
General character of vegetation	1.4 Area of dense, open and scrub forests	Composition, age class, distribution, density, growing stock, status of regeneration, etc.
	3.4 Occurrence of weeds in forest (a) Area (b) Weed type	Perennial weeds (e.g. Lantana), Seasonal Weeds (e.g. Parthenium), Climbers.
Felling Series and cutting sections	-----	As per the prescriptions of the previous working plan. However the WPO can reconstitute and rename the felling series based on silvicultural grounds
Blocks and compartments	-----	As per the prescriptions of the previous working plan. However the WPO can reconstitute and rename the felling series based on silvicultural grounds
Special objectives of management	-----	This would depend upon the type of FMU such as Territorial Forest Division, Wildlife Protected Area and the likes.
Analysis and valuation of the crop	-----	Site quality, Age class distribution, special features if any and comparison with previous data.
Silvicultural system	----	Area under various silvicultural systems
Rotation and Conversion Period	-----	As per the prescriptions of the previous working plan. However the WPO can determine the conversion after analysis of the growth data.
Exploitable diameters	-----	Minimum Acceptable Standards (MAS): This should be arrived after analyzing the Current Annual Increment and Mean Annual Increment of the species.
Reducing Factors and Reduced Areas	----	Development of MAS by the analysis of Density / Basal Area for the species

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Felling Cycle	-----	As per the prescriptions of the previous working plan. However the WPO can modify / alter the felling cycle if required.
Division into Periods and allotment to Periodic blocks	----	This would depend upon the prescriptions of the previous working plan and present condition of the forest crop. Accordingly the WPO can mark the Periodic blocks.
Calculation of the yield	5.2 Increment in volume of identified species of wood.	This would enable to compare and monitor the increment/degradation in the yield over time.
Table of felling	6.1 Recorded removal of wood	Yearly tabulation for each felling series.
Methods of executing the felling	-----	Reduction in the wastage id directly proportional to the production and hence net economic gain.
Subsidiary silvicultural operations cleaning and thinning	-----	Guidelines for periodic thinning in plantations.
Artificial regeneration	-----	In case of poor natural regeneration, attempts towards improvement of regeneration through artificial / assisted regeneration should be made and recorded.
Other regulations	-----	Regulations to control grazing, lopping, fire protection, soil and water conservation and restrictions on felling along rivers, highway, hill slopes etc. should be prescribed.
Mandatory Working Circle	7.1 (a) Number of JFM committees and areas so protected by them. 7.1 (b) Degree of peoples participation in management and benefit-sharing 7.1 (c) Level of participation of women	National Working plan code has a provision to include mandatory working circles which includes Joint Forest Management, plantations, NWFPs, forest production and wildlife management working circles. As per the JFM resolutions of the government participation of communities is envisaged in protection and management of forests. The forest areas are better managed in association with JFMCs
Chapter Z + 1 General Financial Forecast and Financial Plan of operation	8.3 Level of investment in Research and Development	Adequate budgetary provisions (5% of the total budget) to undertake various research works for improving the status of forests. Research works should be undertaken for identifying and implementing site-specific indicators, develop MAS / benchmarks and monitor progress towards sustainability.

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	8.5 Forest Resources Accounting (a) Contribution of forestry sector to the GDP (b) Budgetary allocations to the forestry sector	The data of this indicator is compiled at National level
Chapter Z + 2	---	---
Petty feeling	---	Qualification of forest products for meeting the departmental requirements and for research purpose.
Deviations	---	Factors responsible for deviation from the approved Working Plan prescriptions should be recorded with justifications.
Rights and Concessions	7.3 Quality and extent to which concessions and privileges are provided 8.2 Number of forest related offences	Information / Data on wood and NWFP supplied under Nistar rights should be appropriately recorded Records pertaining to the forest related offences are usually maintained at the forest division level
	8.1 Existence of policy and legal framework	The sate policies in this regard would provide a reflection of the rights and concessions granted by the Forest Department
Research plots	---	These may include sample plots for measurational and ecological observations.
Roads, Paths, Bridges, Buildings	---	Infrastructure for communication and Establishment
Chapter Z + 3 Establishment and Labour	8.4 Human resource capacity building efforts.	---
Chapter Z + 4 Control and Records	---	---
Chapter Z + 5 Summary of prescriptions	---	Concise summary of prescriptions should be given considering the impacts of the past prescriptions. C&I based monitoring and evaluation should be introduced.
(Source: Incorporation of Criteria and Indicators in the Forest Working Plans, 2005, Indian Institute of Forest Management, Bhopal)		

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Notification No. 7.

WATERFOWL CENSUS

Identification of bird species and count their number will be our priority.

The objectives is to (i) assess population number and trends of waterfowl/aquatic birds in the wetlands/water bodies (ii) monitor habitat status and (iii) assess the effect of management inputs.

Technique for counting of waterfowl

(1) Total count- this method is used primarily to count waterfowl/aquatic birds.
(2) Sample count-useful for both wetland birds/waterfowl and land birds (Passeriformes)

A sample can be large or small portion of the area (note that sample counts deal in densities and data have to be extrapolated to the whole area of interest).

Sample fraction is: Area searched
Total area of wetland/habitat
For example: 100 sq. km./400 Sq. km. = 0.25 or 25%

Two types sample units:

(a) Counting within blocks.
(b) Counting along transect lines (This method is primarily used for counting land birds/Passeriformes)

Total Counts

This is quite adaptable method and widely used for total count of all individual birds in any area/water body. In case of large water bodies like Chilika lagoon, Bhitarkanika, Hirakud Reservoir, the water spread area was divided into a number of segments/units, and each segment/unit was entrusted to a group consisting of an Ornithology expert, a Forest official and a local volunteer. Number of birds in each segment was estimated by counting all birds one by one by gradually covering the segment bit by bit, and total number of birds in the whole water body/wetland was estimated by summing up the numbers for different segments. Total counts of wetland birds can be conducted by walking or boating through or around the area, or observing from a vantage point such as a tower. This requires involvement of a number of individual birdwatchers and agencies in collecting and collating census information.

Census Period: 11th January, 2007 - Trnining on census methodology
12th January, 2007 - Census operation

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Training on census technique:

It is important that all the bird observers and associated members should have adequate training on identification of birds and the methodology of bird census, so that they should reach a comparable level of competence. To have first hand knowledge about the waterfowl census technique, a training programme has been organized on 11th January, 2007 at a suitable location.

Time: Waterfowl count will be conducted during the period of maximum activity of birds. This is usually the hours after sunrise i.e. 6 am to 11 am.

Each census unit will be provided with:

(i) Map showing area/unit and route to follow.
(ii) Binocular Telescope
(iii) Note book and pen
(iv) Reference book (Dr. Salim Ali's Hand book of birds)
(v) Waterfowl census site and count forms
(vi) One GPS (if available)

How to count birds

Accurate counts can be made using the following techniques:-

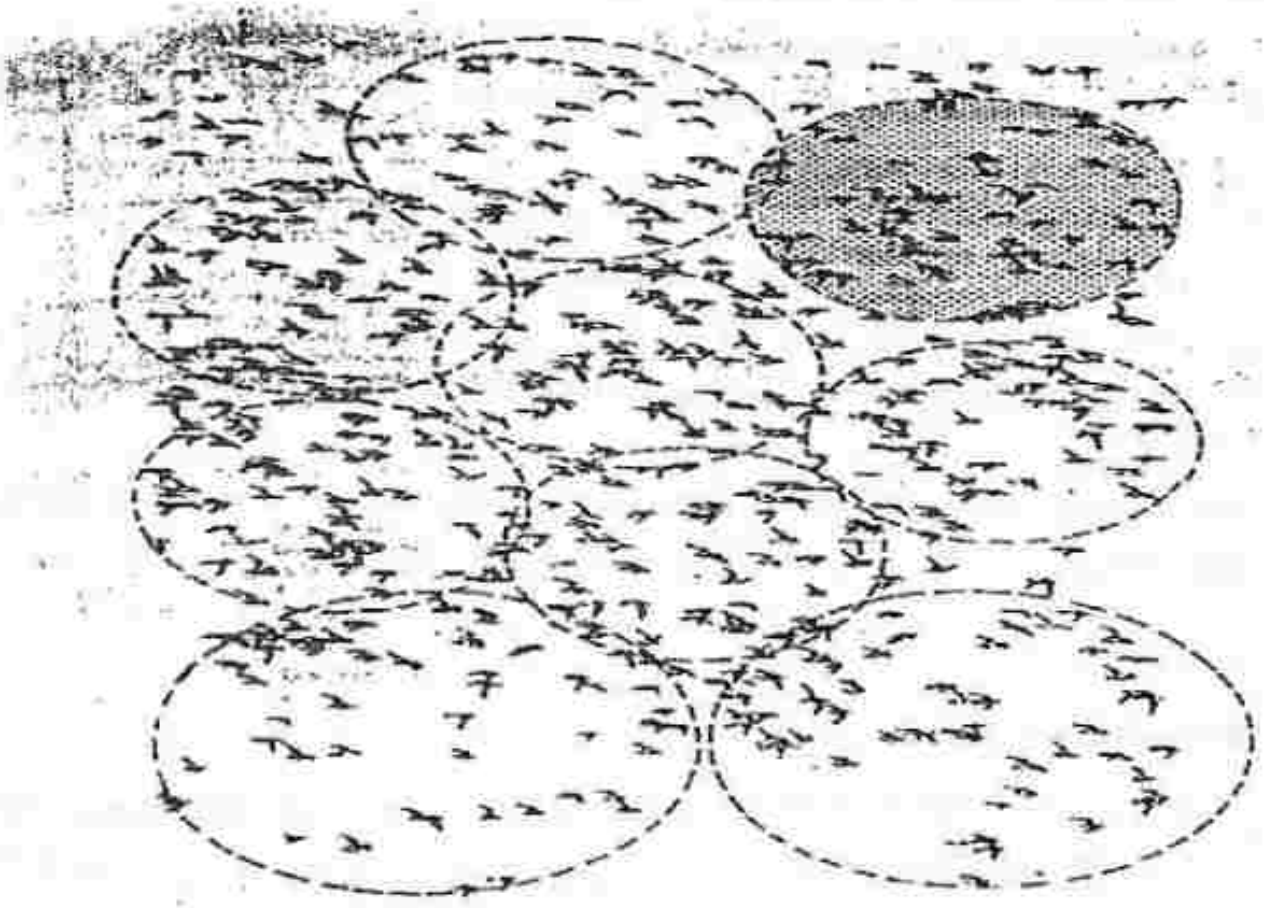
(1) Closely viewing individuals birds, either with binocular or telescope, and counting 1,2,3,4,5,6,7....etc.
(2) Counting small groups of birds within a scattered flock and noting down each total eg. 3,7,4,2,11,17,3 etc. total for each group are added to form the final total.
(3) Counting flocks in multiples i.e.2,4,6,8,10,12 ..... Etc. this method is faster than counting individually.
(4) If they are in flocks, number of birds in each flock is counted (say:110, 134, 212 and, 237) and the total birds of all the flocks (four nos.) counted: (110+134+212+237=693) will be recorded.
(5) The Block Method: Counting or estimating of birds within a flock can be used for large flocks, densely packed flocks or distant flocks, either in flight or on the ground. Depending on the overall flock size a 'block' can be 10, 100, or 200 birds. The "block" is then used as a model to measure the remainder of the flock. An example is given below:

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Shaded Circle=number accurately counted.
Un-shaded circles=number estimated

This flock contains an estimated 60-70 birds (i.e. 6 blocks of 10 birds plus several left over). (NB actual flock size is 66 birds).



This flock contains an estimated 450-500 birds (i.e. 9 blocks of 50 birds plus several left over). (NB actual flock size is 491 birds).

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While counting birds the observer must:

(i) Use either a binocular or a telescope for recording their number accurately.

(ii) Record the species of bird sighted and its number in the note book before putting the final figure/data in the Bird Count Form (Annexure),

(iii) Finally, the final details of the recorded (number and species) should be put on the Bird Count form.

Analysis of data

(i) Each census unit should submit the Bird Site form and Count form, duly field into the concerned DFO.

(ii) The forms submitted will be verified/scrutinized by the DFO/other experts.

(iii) The team leader of the unit may be asked to clarify if there is any doubt on species identification and recording of data.

(iv) All the Bird Count forms collected will be analysed thoroughly to asses the species wise number of birds counted.

(v) Finally the number of total species of birds sighted, total number of birds counted/congregated in the lake, categorization of local and long distance migratory birds, land birds (species and their number should be put in a separate sheet) habitat/area wise congregation of birds, rare and endangered birds sighted etc. will be worked out in detail.

The Divisional Forest Officer has to submit the final data of the Waterfowl Census, 2007 to the Chief Wildlife Warden, Orissa for his perusal and approval by 15th February, 2007.

Bird counts should be made when:

(i) There is limited movement of the birds, i.e. they are stationary, feeding or roosting or,

(ii) There is little or no disturbance, e.g. by peoples or birds of prey, which may force the birds to fly often or;

(iii) The birds are located in a small area or;

(iv) The birds are scattered and in an open area (e.g. foraging on a wide mudflat).

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Numbers are usually estimated when;

(i) There is a large number of birds present (3000+) or;
(ii) Birds are continually in flight; i.e. large flocks moving to a roost site or;
(iii) There is much disturbance, and therefore the birds are continually moving, making prolonged observation on the ground difficult or;
(iv) when birds are tightly packed together at a roost site and not all birds are wholly visible or;
(v) when the identification of species is not possible due to poor light conditions or the distance between the observer and the birds is large.

Precautions to be taken:

(i) Silence must be observed during the entire census operation (nobody should carry a transistor)

(ii) The boat should move in a uniform speed and adequate time should be spared to accurately observe and count the birds.

(iii) VHF system should be used to communicate with other groups and also the control room only at the time of need.

(iv) Each count must be conducted at a similar time of the day (as decided at 6 AM).

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GENERAL PRINCIPLES OF MANAGING RESCUED WILD ANIMALS:

In all cases of rescued animals the first option should be to release the animal back in the wild as soon as possible. Depending on the severity of injuries sustained by the animal it should be kept for the bare minimum time in captivity for just the first – aids or for longer treatment under the supervision of a qualified VAS, until recovery. After recovery the animal should be released in the wild.

The following additional points should be observed.

1. A register should be opened to record all events pertaining to the rescued animal. Maintain a dairy of events.
2. While releasing the animal back in the wild, the operation should preferably be at the original place of capture/rescue.
3. Returning back to nature will require patience and sustained observation. If all attempts fail and the animal doesn't return to the wild, then contact established captive facilities to transfer the animal there. Such translocation shouldn't be contemplated from the beginning. This should be the last course of action.

A detailed general guideline is given in Appendix-2 for further reference.

At a Glance: What to do

Table No. 406

Nature of injury	Treatment	Course of Action
No injury	Offer water	Maintain Dairy of Events. Release the animal back in the wild if suitable. Release should be at the original place of capture/rescue.
Minor injury	Offer water Take the advice of VAS Provide First-Aid	Maintain Dairy of Events Release the animal back in the wild if suitable. Release should be at the original place of capture/rescue.
Injuries requiring longer treatment	Take the advice of VAS and keep the animal for treatment by the VAS. Provide at least one attendant to look after the animal.	Maintain Dairy of Events Take up treatment as per the advice of VAS. Release the animal back in the wild if suitable. Release should be at the original place of capture/rescue. If the animal doesn't return to the wild and comes back to the keepers then continue to keep it at the closest 'Rescue Centre' from where attempts will be made to release the animal into the open and then allow it a voluntary return to the adjoining forests.

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INFORMATION ON RESCUED WILDLIFE

(1) Diary of Events

A register should be opened to record all events pertaining to the rescued animals.

Recording of the events should start with the following:

1. (a) Date of rescue

   (b) Place of rescue

   (c) Name and designation of persons / staff involved in the rescue operation.

   (d) Narration of the situation leading to desertion of the animal and the manner or rescue.

   (e) If any wildlife case has been booked. The reason and detail there of.

   (f) Post-rescue attendance on the day of the event.

   (g) Any other related information:

   (h) Information about the rescued animal

   Approximate age : _____

   Shoulder-level height : _____

   (If available note detail identification record)

   Reaction to people : _____

   Whether active or not: _____

   Observations of the VAS, on the first day.

   _____

   _____

(a) Date-wise diary

a. Condition of the rescues animal at 6 A.M. and later in the day

_____ _____

Feeding

_____ _____

Time Food Quantity Remark

_____

Treatment, if any

Observation by the VAS

_____

_____

_____

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(2) Return to the wild

All attempts should be made to locate the herd that deserted the calf, and explore the possibility of sending the calf back to the herd.

(3) Care and management in captivity

While keeping the rescued animal under your care please ensure the following in addition to any other aspect that may be required or suggestions that are forthcoming to improve the situation:

a. Keep the crowd away, _____ at least 30 meters away.
b. Keep the animal in a place that is sufficiently aerated and has adequate
c. The ground should be dry because wet, muddy or slushy ground will lead to infection of the feet and corners of the nail.
d. Sufficient liquid diet should be given and, if required, water may be sprayed to prevent desiccation
e. The surrounding area should present general cleanliness and be garbage-free
f. A veterinary officer must visit, examine and his observation and prescription / advice at least twice daily. Care should be taken to follow recommendation of the VAS and remain in touch with him if required at any unscheduled hour.

(4) If at anytime it is required to translocate the animal to a better facility for better care and supervision, the following points should be borne in mind.

a. Prevision of the wildlife (protection) Act, 1972 at amended in 2003

Section-12 (bb) scientific management.

The C.W.L.W. may permit in writing the "translocation of any wild animals to an alternative suitable habitat" for "scientific"

b. Translocation

This will cover three phases of work namely, loading, travel and unloading. All the three phases should be carried out with care and compassion for the animal. A veterinarian with other staff or person having some exposure to such operation should carry out or remain associated with the entire operations and following precautions / practice may be observed.

(i) For loading, the 'container' on the truck has to remain at a level to where the animal can comfortably walk in. Therefore, the animal has to be taken to a raised platform and or the truck has to be driven to such a suitable loading point.

(ii) The temperament of the animal has to be respected as regards to whether it is preferring to enter the truck-container head-first or the hind-first.

(iii) The container mustn't have any sharp edge or pointed ends. Where the animal may injure itself.

(iv) The animal has to be held secured in the container with soft jute rope tied to the legs and the back/nape.

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(iv) The animal has to be held secured in the container with soft jute rope tied to the legs and the back/nape.

(v) Loading should be completed during early morning or late afternoon cool hours depending on the distance to be covered which also has to be done during cool hours.

(vi) A supply of feed, water, moist gunny bags etc., should be carried so that the animal can be fed and protected from desiccation on the way.

(vii) The shortest possible route, but with the least hazard and least rough stretch, should be chosen to cover the distance.

(viii) While unloading the animal from the truck container, a similar point should be chosen as was done during the loading.

(ix) Immediately after reaching the destination, the animal should be offered feed, water, tranquility and rest.

(x) It must be borne in mind that transportation-shock may upset the immunological balance of certain animals against certain pathogens and may soon afterwards succumb to death. Therefore, the entire operation should be carried out with such diligence that the animal is least shocked and the least exhausted.

MONKEY MENACE PROTOCOL
(SITE SPECIFIC)

DEOGARH: (Rhesus)

Problem: Rhesus Monkeys in troupes of 20 to 30 invade the adjacent human habitations and grab the cooked food in general and other garden fruits and vegetables in particular. In the process they attack by biting to the person resisting or defending them.

Reason: Nearby waterfall "Pradhanpat" is a much sought after Picnic spot. During winter almost everyday there are picnic parties in the spot and during Sundays there are multiple parties cooking, eating and throwing away leftover and surplus food around the spot. The rhesus monkeys, by way of eating these leftovers, have changed their feeding behaviour. During no picnic days they invade the nearby human habitation in search of cooked food as they are very much used to it.

Steps to Redress to the problem:

The problem is to be redressed in two ways i.e. short term solution and long term solution.

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As these monkeys are accepting human eatables they can be lured to a large seized trap cage and captured in family group wise for shifting to far off forest area after putting them at the rehabilitation centre adjacent to the forest for acclamation and changing their food pattern.

The locations of laying the trap need to be changed to outwit the monkeys.

Long term solution:

At the picnic spot the garbage management is to be streamlined as under.

1. Large sized iron mesh covered garbage bins are to be prepared at strategic points.

2. All the picnic parties must dump their left over and surplus food in these covered garbage bins. If this is not practically possible to implement then civic authority may collect some fee from the picnickers and deploy sweepers and sanitary staff with that money for carrying out these work. At suitable interval these garbage bins may be evacuated and dumped at a far off place away from the township beyond the reach of these monkeys.

3. Selectively few predominant male monkeys can be trapped and sterilized through expert veterinary surgeon which will attribute to population decline in the long run.

4. Large size display signage are to be placed at strategic places indicating "Monkey Manners-Dos and Don'ts with Monkeys".

5. Local youth and NGOs need to be involved in redressing the problem.

PURI (Rhesus)

Problem: Hundreds of Rhesus monkeys gathering in and around Lord Jagannath temple and snatching the bags and purses of the devotees presuming to have eatables inside and attacking and biting the persons resisting. Entering to the houses of the nearby lanes and devouring the food items what so ever available. In addition to the hundreds of monkey within the shrine there are many outside and most of them are near the southern gate.

Reason: Monkeys are there in and around the shrine since last few decades but they were not eying on personal baggage. Some curious visitors have started feeding them by taking out eatables from their baggage which taught the monkeys that the bags contain food materials. Further the leftover from Ananda Bazar is also a source of food for these monkeys.

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Steps to Redress to the problem:

The effort of capturing the monkeys from the temple premises has invited adverse criticism from the priests as well as other environmentalists. To redress the problem the following steps are suggested.

1. The family groups are to be identified and their area of operation outside the temple may be earmarked.
2. Awareness signage mentioning "Monkey Manners-Dos and Don'ts with Monkeys" are to be displayed at strategic location inside the temple.
3. Feeding to the monkeys by the visitors is to be stopped totally.
4. The left over and food plates are to be dumped in closed garbage bins instead of littering have and there.
5. Traps are to be laid at roof top of near by buildings outside the temple and the monkeys are made accustomed to the trap by providing food inside it consecutively for few days. When they are used to feed inside the trap and the majority of the family members enter the long trap in one time the trap is activated and all of them are captured.
6. The release location for these monkeys needs to be selected before hand. A rehabilitation centre of propose size with food and water facility should be constructed at the location and change of food pattern be carried out there.
7. When there will be void by capturing the monkeys outside the Shrine and ther will be total stoppage of food availability inside the temple premises the monkeys shall come out and occupy the voids where they can be captured easily.
8. The local inhabitants are to be taken to confidence as their houses shall be used for trapping the monkeys.
9. The entire operation is to be made a low key event avert the adverse criticism.

KENDRAPARA- (LANGUR)

Problem- Langurs are destroying the fruit and vegetables in the backyards and attacking the defending persons. Occasionally one or two male become more menacing and attack people mostly children and male members unprovoked.

Reason- During last super cyclone lot of trees got uprooted on which the langurs were feeding as they are foliage feeder. No attempts are taken to plant such trees in the near vicinity of the villages for which the langurs eyed on the kitchen gardens and the backyard fruit bearing trees. In the process they come face to face with the villagers and attack the person resisting them.

At any point at time if any male langur (most cases the predominant one) is hurt by any person attempting to drive it away remembers the attack and counter attacks in retaliation to other human beings.

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Steps to Redress to the problem:

The problem can be redressed in two steps such as:

Short term solutions:

Traps can be laid at various places and family groups can be trapped for translocation to forests.

The menacing single langur can be captured by tranquilisation and translocated to far off forested area.

Long term solution:

Individual predominant males along with other upcoming males can be captured by trapping or tranquilisation and sterilized to curb the population growth.

Awareness can be generated by putting signage describing "Monkey Manners-Dos & Don'ts at strategic location in the monkey problem areas.

"Monkey Manners"

Dos

1. Keep the door and windows your kitchen and other rooms containing food items shut when you are away.
2. Observe the activities and inform the staff.

Don'ts

1. Never feed the monkey from your hand or by throwing food at it.
2. Never throw the leftover food to an uncovered garbage bin.
3. Never irritate the monkeys by hurting it seriously while driving away.

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DEPREDATION CONTROL MEASURES
(ELEPHANT)

Depredation Activities:

Crop damage, house damage, loss of human life & domestic live stock.

Antidepredation measures:

Permanent solution:

(a) Changing of crop pattern of forest adjacent agricultural fields from conventional paddy to any other crop which is non-palatable to elephants.
(b) Improving the habitat condition inside the forest so that the elephants get sufficient food & water and never attempt to come out in search of these.

Preventive solution:

(a) Physical barrier:

1- Electric fence- An electrically insulated fence carrying high voltage in pulse to give a strong jerk on touching but never fatal unless someone clings to it.
2- Trench fence- An elephant proof trapezoidal trench of 2 mtr. Top 1 Mtr bottom and 2 mtr. Depth is ideal physical barrier in plain ground. Some time these trenches are further enforced by a random ruble wall on the inner side.

(b) Chemical Repulsive:

1- Tiger urine acts as a strong repulsive to keep elephants away.
2- Some chemicals such as lithium chloride also acts ad repellant.
3- Fumes of red chilli also diverts elephants. Red chilli blended with cow dung and dried gives a longer effect when burn in the fringe of the paddy fields.

Immediate solution:

In spite of all above effort if the elephant came out of forest and enter into human habitation and agricultural field then the following measures can be taken.

1- Directional driving of the herd or the lower to the nearest natural habitat. Never to attempt this before sun set or else there is a chance of retaliatory charge from any of the member.
2- Capture the lone problematic elephant by tranquilisation and shifting back to its own habitat by truck.
3- Use of " Kunkee" (Highly trained elephants) to drive away the raiding elephants.

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Ultimate solution:

When any elephant goes on destroying human life and becomes dangerous to human life then it can be ordered for elimination by virtue of the power delegated to the Chief Wildlife Warden in the Wildlife (Protection) Act,1972.

Rescue of wild animals (Tiger, Leopard, Bear etc.)

1. In case any wild animal like tiger, leopard, bear, etc. enter into human habitations and if these animals are detained by people in a house by closing the doors, following actions may be taken.

(a) In case the animals is in good health and not injured, then it is advisable to keep the animal in house or room till fall of the night and a clear passage to the nearest forest should be cleared and no human being should be allowed to obstruct its movement as there will be severe injury in case of any confrontation with human beings. The animal will escape into the forest once the door is opened by forest staff by keeping themselves in secured position. The animal should be fed with water and food during the day time and it should not be irritated by human beings by throwing stones, repeated shouting etc.

(b) In case the animal is injured and bleeding or in bad shape leading to the suspicion that the animal may die if it is allowed to go into the wild, then proper food and water should be provided and animal enclosure should be sealed from all sides to avoid any human beings visibility. Concerned forest officials should take the help of nearest tranquilising unit or take assistance of Wildlife Headquarters for tranquilising and caging of the animal for its treatment and subsequent release in the wild.

(c) If an elephant / leopard/ tiger / bear falls into a well or into a deep water pond or mining pit, following actions may be taken.

(1) In case leopard, tiger, bear and other animals falling into a well or deep pit, a wooden ladder or a make shift ladder by using two long poles should be lowered into the well and people on the outside should be kept away from proposed escape routes and animal should be given a clear passage to go towards forest area or else people will be injured by the escaping animal. In most of the cases animal can climb and come out using the ladder. In case animal is not responding well a wooden platform with ropes should be lowered to the water level so that animal can climb on to the wooden platform and remain safe till alternate arrangements are made to save the animal.

(2) Once the animal is safely floating in the well then with the help of fire office / Fire Station personnel well should be filled up with water by bringing water from nearest water source and the animal automatically escapes once the water level raises and reaches the ground level. The parapet wall of the well should be broken to allow the animal to escape from well. Damage caused to the property can be properly assessed and re-imbersed may be after sanction by the DFO or it can be paid as a part of rescue operation expenditure.

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In case an elephant falls into a well it is best to call police official to control thecrowd and fire station personnel to bring the pumping system to bring the water to fill the well. Once the water is filled, then elephant will automatically float and come to the ground level and go into the forest, once the water reaches the ground level. Parapet wall of the well should be broken to allow the animal to escape. Property damaged by the animal can be sanctioned and re-imbersed by the DFO.

In case a bear entered into the habitations and injure the people, then it is better to drive the animal into a house and lock the bear for releasing the same after sunset. The animal may be given proper food and water during day time. In case it is not possible to do the above operation then fishing nets should be procured and the animal should be trapped by throwing the nets and capturing the animal by entangling in the fishing net and tying the same. The animal can be kept in the room or house till the tranquilising experts arrive for caging the animal and treating the injured animal before releasing it into wild.

In case of herbivore like Deer, Sambar, barking deer, etc then they should be given proper treatment by keeping in a confined place by calling nearest Veterinary surgeon. A temporary make shift enclosure can be created by burring few bullahs and tying bullahs to create a small enclosure of about 5 ft. height with cross bars using bullahs. The animal can be kept in this make shift enclosure for providing treatment and till alternate arrangement for caging the animal are made. After proper treatment the animal can be released in the forest with proper video graphing of the release process before the local witnesses and forest officials.

In case of injured elephant noticed in the wild, following actions are suggested.

In case an elephant is in pain and abandoned by herd of elephants then tranquilising experts should be called for from the Tranquilising teams which are stationed in following places for treatment of the animals and subsequent release into the wild.

(1) Wildlife Headquarters, Bhubaneswar/ Nandankanan Zoological Park.
(2) Conservator of Forests, Angul Circle/ DFO, Satkosia WL Division, Angul.
(3) Conservator of Forests, Sambalpur Circle, Sambalpur.
(4) Field Director, Similipal Tiger Reserve, Baripada
(5) DFO, Balasore Wildlife Division, Balasore.
(6) DFO, Chandka Wildlife Division, Bhubaneswar

The following types of chemical immobilization can be taken up.

(1) In case the animal can be treated in half an hour or one hour, then the tranquilisation can be given to freeze the animal in standing position without falling down on the ground for half an hour to one hour. Then animal can be given proper treatment and dressing of the wounds by approaching it by Veterinary surgeon and forest officials. One or two such tranquilisation and treatment episodes will be sufficient to provide the animal necessary treatment for recovery and movement into the forests.

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(2) In case the animal is injured and requires prolonged treatment then the animal can be tranquilised and tied to a tree or a huge iron peg driven into the ground and provide treatment. After recovery of the animal the same may be released in a suitable habitat by shifting by truck to deep forest area.

ANIMAL DEPREDATION, CONTROL MEASURES AND RECOMMENDATIONS

Whenever wild animals strayed into cultivated fields and habitations, it used to be locally evolved by and large tolerated and methods were adopted to scare away the animals. However, with shrinkage of habitats has resulted in animal depredation cases rising by the year new areas are affected every now and then. Providing safety to them and their livestock from wild animal depredation, and providing security becomes the moral duty of the forest personnel.

Table No. 407

SL. NO.	ANIMAL	DEPREDATION ACTIVITY	ANTI-DEPREDATION ACTIVITY
1	ELEPHANT	Crop damage, house damage, loss of human life and livestock	Motivation for changing crop pattern, Directional driving, Mechanical or Electrical exclusion device, Repellant and frightening devices, Chemical capture
2	LEOPARD	Damage to domestic poultry and other live stock. Loss of human life	Mechanical trapping, Chemical capture and translocation
3	BEAR	Death and injury to human life	Physical trap and Chemical immobilization
4	MONKEY	Crop damage, injury to human life	Cage and snare trapping, tranquilisation
5	TIGER	Loss of human life and livestock	Capture by mechanical or chemical tranquilisation and relocation
6	WILD BOAR	Crop damage	Physical barrier and directional driving

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REQUIREMENT OF A SUCCESSFUL CONTROL PROGRAMME:

Control measure shall vary from animal to animal and they are site specific. The control methods should have no adverse effect on man, domestic livestock, and remaining population of the animal causing depredation.

Before acting upon a control programme, the following facts must be considered:

1. Verification and quantification of the damage
2. Identification of the species responsible.
3. Examination of the political, ecological and human emotional factors.
4. Identification of individual / group responsible.
5. Monitoring the behavioral aspect of the target species/individual/group.
6. Analysis/estimation of degree and method of reduction desirable.
7. Analysis of safety, health hazard to human.
8. Economics of the operation.
9. Approval of the statutory authorities.
10. Obtain assistance of private/professional/technical agencies if any.

It is desirable that the ultimate decision to remove or not to remove, the method to be employed - mechanical, biological, chemical, capture and translocation or elimination and the number to be removed must be decided by wildlife professionals and ecologically intelligent local villagers. At times people take such task to themselves and with help of shikaries, stealthily eliminate the animal responsible for depredation. Before such antagonism to wildlife and wildlifers of the area develop, it is essential that the manager should take charge of the situation, deploy his men to the site of damage to instill the confidence in the people, guard the site of depredation to prevent further damage, carry out rapid investigations and plan control measures in consultation with local leaders. This will not only help to save annihilation of innocent species and innocent human individuals but will go a long way to acclaim public co-operation for protection and management of wildlife and their habitat.

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GUIDELINES FOR MONITORING OF MIGRATORY WATER BIRDS FOR DETECTION OF SUSPECTED CASE OF BIRDS INFECTED BY THE AVIAN FLU AND PROTECTION OF PERSONS HANDLING WILD / MIGRATORY BIRDS

Bird flu or highly Pathogenic Avian Influenza (HPAI) is an extremely infectious and highly contagious poultry disease that is caused by type-A influenza virus. Bird flu can affect a wide variety of birds. Domestic poultry such as chickens and Turkeys are the most susceptible.

The virus can be spread to susceptible birds through:

i. Direct contact with nasal and respiratory secretions from infected birds.
ii. Direct contact with faeces of infected birds
iii. Contamination of feed and water
iv. Contact with contaminated equipment and humans.

The virus is transmitted between affected poultry and recently from poultry to wild birds and vice-versa. It is also transmitted to humans through close contact with infected birds.

Many species of waterfowl/water birds may carry the virus without clinical signs. The virus is concentrated in faeces, nasal and eye discharges. Wild birds infected by bird flue shed vast quantities of virus in their droppings and secretions. During migration of few migratory bird species such as Barheaded goose, Great Blackheaded Gull and Great cormorant between China and south Asia, there is possibility of movement of infected birds to India. Of course, so far there is no confirmed evidence on it. Since the bird migration season is approaching fast and by end of this month they may arrive in our water bodies, we have to remain vigilant and to be in readiness to tackle the situation.

It is now essential to issue the following guidelines for monitoring of migratory water birds for detection of suspected cases of birds infected by the Avian flu and safety measures to be taken to handle birds, both migratory and resident in the water bodies in and around the Protected Areas of the State.

Symptoms

Affected birds show signs such as"

1. Lack of appetite
2. Swelling of the head, eyelids, combs, wattles and legs
3. Purple discolouration of the wattles and combs
4. Nasal discharge
5. Coughing and sneezing
6. Diarrhoea
7. Paralysis and staggering

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Preliminary information

On receipt of any preliminary report regarding unusual sickness of wild/migratory birds in an area/water body, the local Veterinary Officer (V.A.S or S.D.V.O. or C.D.V.O or Disease Investigation Officer) should be contacted first. The place shall be visited immediately by the D.F.O / other officials accompanied by the Veterinary Officer, either from the locality or sub-division or district level should be given full assistance in conducting investigation and collection of samples from dead and sick birds. While visiting to the suspected/infected place, the investigation team should be equipped with a 'kit' which should contain at least the following items.

(b) Protective clothing/disposable suits:

(c) disposable examination gloves:

(d) well fitted surgical masks:

(e) goggles:

(f) caps:

(g) disposable shoe cover:

(h) active disinfectant solution: and

(i) leak proof and disposable plastic container.

It must be ensured that these protective clothing and equipments are discarded or kept for dis-infection in the suspected site prior to departure.

Personal care and precautions

The following steps shall be taken while conducting preliminary and clinical investigation on suspected bird sickness / death cases:

1. Wear rubber gloves and protective clothing that be disinfected or disposed of and protective eyewear or a face shield while handling animals.
2. Do not eat, drink, or smock while handling animals.
3. Minimize exposure to mucosal membranes by wearing protective eye wear.
4. The influenza virus is sensitive to many common disinfectants such as detergents, 10% household bleach, alcohol and other commercial disinfectants. The virus is much more difficult to inactivate if it is encrusted in organic material such as faces or soil.
5. Wash hands frequently and disinfect exposed surfaces and field equipment between work sites.

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6. Anti-influenza drug (Tamiflu tablets) may be taken in consultation with the registered medical practitioner for the entire time you are in direct contact with infected birds or a contaminated environment.

Collection of blood and viscera samples for virological and pathological tests

1. It should be ensured that wild life birds are not harmed during trapping and collection of serum samples.
2. Preference should be given to the leg vein instead of the wing vein. Wing vein blood collections are reported to result in haemorrhage affecting normal flight, making them susceptible to predators.
3. All wild bird samples are valuable and hence all collection of samples, packing and transport should be done in collaboration with trained forest / veterinary staff. This is very important.
4. Samples collected (blood, viscera, flesh etc.) should be suitably packed and sent for virological tests to various laboratories at state and National laboratories (list enclosed).

Reporting

1. Details of sample of wild birds sent for testing and reports received must be reported as the enclosed proforma(Annexture-II) to the o/o P.C.C.F. (WL) & Chief Wildlife warden, Orissa at the earliest.

2. Fortnightly report on arrival, congregation, population status, departure, etc. of migratory bird species at the congregation sites / wetlands shall be sent (Annexure-III) in time for transmission of the information to State Government and Govt. of India.

3. Proper co-ordination is required among the District administration and CDVO to maintain surveillance of the commercial poultry farms surrounding the wetland(s).

Awareness

Awareness through press note, distribution of pamphlets, posters etc. should be spread that any sighting of a dead bird by volunteers, bird watchers, etc should be reported to the nearest forest / animal husbandry office / department. Nobody should touch the sick and dead birds, and bird meat should not be consumed.

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Procedure for destruction of infected materials

For destruction of the infected materials, the following procedures should be adopted:

(i) All non-disinfectable material must be destroyed in particular, destruction of feathers, meat, eggs, and egg shells, dead chicks must be ensured. It can be either buried in the pit or burned.

(ii) Weed/grass at the site may be more conveniently burnt.

(iii) Bird faecal/droppings present on site must be burnt

(iv) The protective clothing used by the staff engaged in handling / dissection of the birds should also be burnt.

Laboratory to which samples will be sent for testing

Table No. 408	
1	Orissa Veterinary College. Department of Pathology, OUAT, Bhubaneswar – 751003
2	The Director & Chemical Examiner to the Govt. of Orissa, State Forensic Science Laboratory, Rasulgarh, Bhubaneswar.
3	High Security Animal Diseases laboratory (HSADIL), India Veterinary research Institute, Hathai Kehda Farm, Kokta road, Anan nagar, Bhopal – 462021 Phone:0755-2759204 (O), 2758842 (Fax). Dr. H.K.Pradhan, Chief & Junior Director. Phone : 0755-2754683 (R) Email: hkpradhan45@rediffmail.com
4	Bombay Natural History Society, Hornbill House, Dr. Salim Ali Chowk (Opposite Lion gate), Sahid Bhagat Singh Road, Mumbai-400023 Phone: 022-821811 (O), 022-22837615 (fax)
5	Regional Disease Diagnostic Laboratory (RDDL), Eastern Region, Kolkata, Institute of Animal Heajlth And Veterinary Biologicals (Research & Training) 37, Belgachia Road, Kolkata-700037 Phone:033-25565021/ 033-25565476 (fax)
6	Division of Avian Diseases, IVRI, Izatnagar, Bareilly, Uttarpradesh.
7	Salim Alli Center for Ornithology & Natural History (SACON), Anaikatty, Po-Coimbatore-641108, India, Phone-0422-2657101, 2657102 (O), 0422-2657088 (fax), Email: salimali@vsnl.com

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Detail of sample of wild birds sent for testing and reports received

Table No. 409

Sl.No.	Number of sample sent	Natural of samples (dead bird / cloacal swabs / serums etc.)	Place of collection of sample	Date of dispatch	Results obtained (Y/N), if yes, details thereof

Fortnightly report on arrival, population status, departure, etc. of migratory bird species at the congregation site/ wetlands.

Table No. 410

Sl.No.	Important sites both within and outside pas which are being visited by migratory birds this year.	Number and species of birds arrived.	Approximate period of arrival and stay.	Any change in migratory pattern regarding number arrival, sites, etc. as compared to previous years

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PROTECTION OF MIGRATORY WATERBIRDS IN CHILIKA LAKE

Government of Orissa has taken the following measures to prevent poaching of migratory birds and facilitate their movement, feeding and roosting in the Chilika Lake.

1. A control room has been set up at Tangi Wildlife Range office under Chilika Wildlife Division, Balugaon for round the clock receipt of information and monitoring of all enforcement activities for bird protection.

2. 15 temporary camps have been set up at strategic points to keep watch on the birds and patrolling squads have been pressed into service. From these camps for surveillance over various activities going on in the bird congregation zones.

3. 18 Bird Protection Committees and 3 Eco-Development Committees have been formed in the villages surrounding the lake by associating members from the fisherman committees, who are closely linked with the Chilika Lake eco system as well as other sections of the society.

4. Surveillance has been mounted on the road side Dhabas (eating houses), shop selling poison (Furadin and pesticides which are frequently used to kill birds), known bird poachers and people known to be in the habit of trapping, snaring or shooting birds.

5. Informers have been deployed to cover the vulnerable points and potential offenders. Monetary incentive is paid to the informers.

6. The Forest Officers of the Chilika Wildlife Division have been equipped with patrol vehicles, boats, fire arms and VHF communication sets to enforce rigorous patrolling of the village areas and the bird congregation areas of the lake to prevent killing of birds.

7. Surprise check of boat plying in the wetland are being carried out. Similar surprise checks are also being made on the vehicles plying in the village road and National Highway to detect bird meat.

8. Police deployment is made on sustained basis in the most vulnerable area of Sorana to deal with the hardened criminals.

9. Signages have been put near the eating houses and leaflets/pamphlets have been distributed among the public to caution the people against consuming meat of birds which have been killed by poison.

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PROFORMA FOR REPORTING WILDLIFE OFFENCE (OTHER THAN ELEPHANTS)

1. Date of occurrence

2. (a) Animal killed / injured

   (b) Species / Sex / Age / Size
   (Details of each)

   (c) Apparent reason of death / injury

3. (a) Place of occurrence
   Locality / Forest Block

   (b) Range / Section / Beat

   (c) Within any P.A or outside P.A.

4. (a) Date of Post mortem, and by whom conducted

   (b) Finding as per PM report

5. Details of seizure made

   (a) Wildlife Articles

   (b) Arms and Ammunition

   (c) Vehicles / Other articles

6. Brief description of the matters leading to the incident of death of Wild animal / seizure of Wild animals or its body part / arrest of offender.

7. Name and address of the offender(s)
   (mentioned age/sex) including name of person arrested.

8. Name of the investigating officer and date of his appointment

9. (a) Case No. / year / Date

   (b) Name of the trying magistrate to whom seizure / arrest has been intimated.

10. Remarks

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SUGGESTED FORMAT FOR SENDING DEATH REPORTS ON ELEPHANT

(1) Division _____ Range _____
Section _____ Beat _____

(2) Date of Occurrence _____

(3) Place of occurrence _____

(4) Date of detection _____
(Mode of detection with justification for delay, if any, in detection)

_____
_____
_____

(5) Date of detailed spot inspection _____
Inspection by whom (name/designation of the Officer and accompanying officials including Veterinary Officials)

_____
_____
_____

(6) History of incidence
(A brief description about the manner in which the incident is known to have or might have occurred. Any related observation or information prior to the incident may also be mentioned.) (Use separate sheet, if required)

_____
_____
_____

(7) Observation at the spot
(A) Observation on the area
(Terrain, vegetation, water, disturbance in the area, animal signs, etc.)
(B) Observation on the carcass
(Size[1], Sex[2], Measurements[3], Skin, Injuries, Identifying charater[4], Peculiar character / Feature)

(8) Post-Mortem report of the Veterinary Assistant Surgeon.
(If the formal report is late, then preliminary remark of the VAS in the field should be mentioned here with particular reference to the possible cause of death with any unnatural signs and symptoms on the body.)

_____

(9) Recoveries from the field

(10) Case No. _____
Status of the case _____

(11) Conclusion regarding cause of death and / any other related matter on the basis of history, Field observation and remarks / reports of VAS.

Signature of the Reporting Officer
Designation
(Seal)

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NOTES

[1]Size

The size of elephant is expressed as shoulder height. This can be directly measured from the carcass and also the value can be obtained from the circumference of the hind foot. [Shoulder height = 2 * circumference of hind foot]

[2]Sex

The sex is confirmed as follows.

Sex	Charater to use for identification
Adult Male (Normal)	(1) Extruded genitalia (2) One or two full grown tusks (30cm+)
Adult Male (Makhna)	(1) Extruded Genitalia (2) Reduced tusks called 'tush' -20-30cm long, thin. (3) Well built compared to female of equal shoulder height.
Adult Female	(1) Reduced tusks called 'tush' -20-30cm long, thin. (2) Mammary glands with distinct teats between front legs. (3) Examination of hind quarters for vaginal position. (4) Design of pelvic region for carrying calf in womb. (For study by experienced Veterinarian.)

[3]Measurements

Following measurement may be recorded

Shoulder height: _____ Hind foot girth _____ (left) _____ (right)
Front foot girth _____ (left) _____ (right)

Tusk (left):
Length along outer curve_____, Length along inner curve _____,
Length (straight) tip to base _____,
Girth: Base_____,Middle(max)_____,Tip(10cm behind) _____,
Dry weight _____

Tusk (right):
Length along outer curve_____,Length along inner curve _____,
Length (straight) tip to base _____,
Girth: Base_____,Middle (max)_____,Tip(10cm behind) _____,
Dry weight _____

(The embedded portion of the tusk loses weight and doesn't match with exiting records. Therefore, the tusk should be dried and then weighed.)

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Identifying character

Please consult the Figures to provide features available for

Back,
Tail Length,
Tail-brush,
Tusk type.

Format for reporting

Elephant Death cases of ----------(year)

Date of	Detection	
	Death(Probable)	
Place of occurrence	Forest Blocks & Comptt. / Village	
	GPS reading (Lat – Long)	
	Beat	
	Section	
	Range	
	Division	
Date of spot inspection by DFO		
Preliminary finding of the inspection (Male or Female, height, injury marks – if any, whether gunshot / poisoned arrow/ electrocution /other cause of killing; whether any body part is missing; other important findings)		
Postmortem exam: Date name of VAS, finding as to cause of death		
Cause of death		
Tusks / Tushes stolen or present; or whether recovered		
Name of the I.O appointed by DFO; date of his appointment		
Progress of enquiry		

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Notification No. 8

Government of Orissa
Forest and Environment Department
RESOLUTION.
No.5503/F&E
Dated 31st March 2000. Bhubaneswar

Non-Timber Forest Produce (NTFP) has traditionally been perceived as an important source of forest revenue. Accordingly the policies relating to NTFP over the years have generally tended to aim of maximisation of revenue. However, NTFP is an important source of livelihood of tribals and the rural poor. These gatherers of NTFP, majority of whom are women, have limited access to the market, and their primary concern is getting a fair price for the NTFP gathered by them and being able to dispose off the produce gathered. The prevailing system does not adequately provide these facilities to the primary gatherers. At the same time, it is also equally important that collection of NTFP must be on non-destructive basis so that sustainability of forests and long term sustainability of the NTFP based livelihood can be reasonably ensured.

2. The State Government have had under their consideration proposals for formulation of an appropriate policy on Non-Timber Forest Produce, keeping in view the consideration outlined in the preceding paragraph. While formulating the policy the provisions of the Panchayats (Extension to scheduled areas) Act, 1996 have also to be kept in view. The term 'minor forest produce 'has not been defined. Under the policy of Joint Forest Management, the local communities are being closely involved as partners of Forest Department in the management of degraded forests; and the members of the Vana Samrakshyana Samiti are entitled to share of the usufructs, including the entire NTFP gathered from such a forest area. Considering all aspects of the matter, Government have been pleased to approve of the following policy guidelines for streamlining the system of collection and disposal of various Non-Timber Forest Produce items:-

Minor Forest Produce.

3 (a). The items of Non-Timber Forest Produce listed in Annexure A will be treated as Minor Forest Produce (MFP) and the term MFP will only mean and include items listed in Annexure-'A'. The list of items of NTFP to be treated as MFP may however be modified by Government from time to time, Gram Panchayat/Gram Sabha in the scheduled areas will have the ownership over MFP produced within its territorial jurisdiction, i.e. in respect of the MFP produced in and collected from the Government lands and forest lands within the limits of the revenue villages comprising the Gram Panchayat. Under law, ownership of MFP in non-scheduled areas is not vested in Gram Panchayats. Gram Panchayats both in the scheduled and non-scheduled areas will however, have the authority to regulate purchase, procurement (as distinct from collection by primary gatherers) and trading in MFP in accordance with the policy outlined in the succeeding paragraphs.

3 (b). No Gram Panchayat, whether situated within or outside the scheduled area will have ownership over MFP produced in Reserve Forests, in forest areas under Wildlife

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Sanctuaries and National Parks which are outside the limits of revenue villages. The Gram Panchayats will not therefore have the right to grant lease or licence to any individual or agency for collection of Minor Forest Produce from any Reserve Forest or Sanctuary or National Park. However, members of Vana Samrakshyana Samitis, and tribals, artisans, etc. as part of their customary rights will be free to collect Minor Forest Produce from forest areas excluding sanctuaries and National Parks. When any such MFP collected from forest areas is brought to a village, i.e. into the territory within a Gram Panchayat, it will come under the Gram Panchayat's power to regulate procurement and trading. Where Vana Samrakshyana Samiti has been formed, the Samiti and its members will have priority over the Gram Panchayat in the matter of collection and disposal of Minor Forest Produce of the respective forest area.

3(c). Any person desirous of purchasing MFP from primary gatherers or trading in MFP so purchased shall apply for registration to the concerned Gram Panchayats and the Gram Panchayat may register such dealers or traders for a season from the first day of October to the last day of September of the following year. Dealers and Traders will have to seek fresh registration for the next season. Gram Panchayats shall make all efforts to promote free competition in procurement of MFP by engaging as many dealers for each item of Minor Forest Produce as reasonably practicable. The Gram Panchayat shall also levy an annual registration fee from such dealers or traders at such rate as may be determined by the Gram Panchayats will have to furnish a monthly return to the concerned Range Officer indicating the item of MFP procured quantity procured and the GP from which procurement was made during the month. No person will be allowed to operate as a Dealer/Trader in MFP in any area without being registered as such by the concerned GP.

3 (d). The collection of MFP by the primary gatherers will be subject to reasonable control to be exercised by the DFO in accordance with the provisions of law and sound silvicultural principles laid down in the Forest Working Plan which shall be given publicity in advance in the adjoining GPs.

3 (e). The Government agencies like Orissa Forest Development Corporation; Tribal Development Co-operative Corporations etc. may also register themselves with one or more Gram Panchayats for procurement and trading in one or more items of Minor Forest Produce.

3 (f). A Gram Panchayat may cancel the registration of any dealer/trader or may refuse to grant registration for the subsequent seasons if after summary enquiry in course of which the affected party shall be given an opportunity to show cause it is satisfied that the dealer/trader has procured any MFP from the primary gatherers at a rate lower than the minimum procurement price fixed for that item of MFP under para-5 of this resolution for the relevant year.

3 (g). No lease shall be granted by Government in respect of any Minor Forest Produce nor shall it levy any royalty on these items after commencement of this Resolution. No Forest Department Transit permit will be required thereafter for transport/movement of any Minor Forest Produce within the State).

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Other items of NTFP:

4 (a). The Trade in kendu leaf will continue to be directly controlled by the State Government as there are well laid down statutory provisions for control of trade in this item. Sal Seed which is the one NTFP items notified as a specified forest produce under the Orissa Forest Produce (Control of Trade) Act 1981 will also be dealt with in accordance with the provisions of law by Government keeping the overall interest of the trade, the industries and the gatherers in view.

4 (b). Certain items, namely Sal leaves, gums and resins of different trees and climbers and roots of various species which have medicinal or other uses will not be leased out, as the collection of these items on commercial scale has adverse impact on the sustainability of the particular species and the forest. In particular localities, however, based on sound assessment of silvicultural availability and enforcement of appropriate collection procedure, any of these lease-barred items may be allowed to be collected either directly by field organisation of Forest Department or a Government undertaking.

4 (c). The remaining items of NTFP as per the list of Annexure-B, which may be modified by Government from time to time, will be allowed to be procured and traded by the dealers who have been registered for the purpose under this Resolution by the concerned Divisional Forest Officer. Individuals, societies, Co-operatives, Government Undertakings and Corporations may be registered as a dealer for the above purpose. Such registration shall ordinarily be granted by the Divisional Forest Officers for a season (from the first day of October to the last day of September of the following Calendar year) to applicants seeking such registration, unless there are valid reasons for refusing registration. The DFO will endeavour to promote competition among the traders and dealers by registering as many dealers as reasonably practicable for a specified area. For each items, as many dealers as may come forward can be engaged for each Forest Division/Range. OFDC, TDCC, Co-operative Societies like LAMPS etc. will also be eligible to register themselves with the DFOs and should be encouraged to engage themselves in trading in these items. The Vana Samrakshyana Samiti, Mahila Samiti, recognised groups of primary gatherers may also get themselves registered for this purpose. The fees to be paid for registration shall be prescribed by Government.

4 (d). The registered dealers will be required to furnish the names of their authorised agents/nominees and the names of their collection and storage centres to the concerned Divisional Forest Officers, and will also record the daily transactions in prescribed formats. The dealers will have to enter into on agreement with the concerned DFOs under which the dealers will be responsible for achieving a minimum target of procurement to be fixed by the Divisional Officer, of a particular item during a collection season. If the collection method of any particular item in any particular area is considered to be harmful or injurious to the forest, the DFO may impose temporary ban on such collection.

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4 (e). The registered dealers will have to pay royalty to the local forest Range Officer at the rate fixed for the quantity of produce collected. The rate of royalty shall ordinarily not be less than 10 percent of the minimum procurement price for the particular item, but this rate may be varied by Government from time to time, *suo muto* or on proposals submitted by the Divisional Forest Officers.

4 (f). The registered dealers will be required to take transit permits from competent Forest Officers for movement/transport of the produce out of the collection centres after setting the royalty dues, etc.

4(g) The Divisional Forest Officer may cancel the registration or refuse registration of any dealer/trader if after summary enquiry in course of which the affected party shall be given an opportunity to show cause it is found that the dealer has procured any forest produce from the primary gatherers at a price less than the minimum procurement price fixed for the relevant year under para-5 of this Resolution or has failed to achieve the minimum target of procurement, or has failed to file the prescribed returns or has failed to settle the royalty dues in time.

5. For all NTFP items including MFP, the Committee appointed by Government in SC & ST Development Department will fix the minimum procurement price each collection season or part thereof. These procurement prices shall be announced every year ordinarily during the month of September and will be given wide publicity as decided by Government.

By Order of the Governor

HS Chahar

Commissioner-cum-Secretary to Government.

ANNEXURE 'A'

Table No. 411			
SL. No.	Common Trade name of the item of forest produce.	SL. No.	Common Trade name of the item of forest produce.
1	Tamarind, de-seeded Tamarind, Tamarind Seed	31	Bana Kolatha.
2	Mahua Flower	32	Gaba
3	Hill Broom	33	Basil
4	Thorn Broom (Jhadu or Ghoda Lanji)	34	Makhana seed
5	Phula Jhadu.	35	Tala Makhana seed
6	Broom Grass	36	Baidanka Seeds
7	Nux Vomica (Kochila seeds)	37	Baghanakhi Seeds
8	Harida.	38	Kamala Gundi Fruit.
9	Bahada.	39	Landa Baguli.
10	Anla	40	Bela.
11	Soap Nut (Ritha Phala)	41	Chireita (Bhui Neem)

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12	Marking Nut (Bhalia)	42	Khajuripata
13	Cleaning Nut (Nirmala)	43	Rohini Fruit
14	Honey	44	Bhursunga Leaves.
15	Siali Leaves.	45	Rasna Root.
16	Sabai Grass	46	Phenaphena Fruit.
17	Mango Kernel	47	Sidha Fruit.
18	Thatch Grass.	48	Sathabari.
19	Simul Cotton.	49	Katha lai
20	Arrow Root (Palua)	50	Atundi Lai
21	Dhatuki Flower.	51	Khelua Lai
22	Putrani	52	Suam Lai
23	Sikakai	53	Eksira Fruit
24	Jangal jada or Gaba	54	Katha Chhatu (Mushroom)
25	Palasa Seed	55	Mat Reed (Sapa Masina Grass)
26	Suaku Seed	56	Ananta Mula.
27	Indra jaba (Korai Seed)	57	Antia Pata.
28	Gila (Seed and Coat)	58	Nageswar Flower
29	Benachera.	59	Mabjad Kendu.
30	Banahaladi.	60	Atundi Fruit.

ANNEXURE – 'B'

1. Mahula Seed
2. Kusum Seed
3. Karanja Seed
4. Neem Seed
5. Char Seed
6. Chakunda Seed
7. Babul Seed
8. Any other item(s) as may be notified by Government.

Items covered under Para – 4 (b)

1. Sal leaves
2. Sal resin (Jhuna)
3. Gum (Dharua Gum, Babul gum, Genduli gum,Bahada gum, Palas gum, Salai gum etc.
4. Khaira and Catechu.
5. Barks of trees/climbers(Sunari,Lodha, Medha,Phenohena, Arjuna barks etc.)
6. Roots of Patalo garuda (RS roots)
7. Sandal wood
8. Tassar cocoon
9. Canes.

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Notification No.9

The Orissa Gazette

EXTRAORDINARY
PUBLISHED BY AUTHORITY
No. 2091, CUTTACK, FRIDAY, NOVEMBER 15, 2002/KARTIKA 24, 1924

PANCHAYATI RAJ (G.P) DEPARTMENT
NOTIFICATION
The 14th November 2002

S.R.O. No. 934/2002 – Whereas the draft of certain rules which the State Government propose to make in exercise of the powers conferred by clause (W) of sub-Section 44 read with section 150 of the Orissa Grama Panchayats Act, 1964 (Orissa Act 1 of 1965), was published as required by sub-section (1) of section 150 of the said Act in the extraordinary issue No.1241, dated the 9th August 2002 of the *Orissa Gazette* under the notification of Government of Orissa in the Panchayati Raj (Grama Panchayat) Department No. 9570/G.P., dated the 6th July 2002 bearing S.R.O. No. 701/2002 inviting objections and suggestions from all persons likely to be affected thereby till the expiry of a period of thirty days from the date of publication of the same in the *Orissa Gazette*;

And whereas objections and suggestion received during the period specified above have been duly considered by the State Government.

Now therefore, in exercise of the powers conferred by clause (W) of sub-section (1) of section 44 read with section 150 of the said Act, the State Government do hereby make the following rules, namely: -

Short title and commencement

1. (1) These rules may be called the Orissa Grama Panchayats (Minor Forest Produce Administration) Rules, 2002.

(2) They shall come into force on the data of their publication in the Official Gazette

2. (1) these rules, unless the context otherwise requires, -

(i) "Act" means the Orissa Grama Panchayats Act, 1964

(ii) "Form" means a form appended to these rules;

(iii) "Minor Forest Produce" means any or all of the Minor Forest Produces specified in the Schedule appended to these rules;

(iv) "Section" means section of the Act; and

(v) "Trading year" means the seasonal year commencing from the first day of October and completing on the thirtieth day of September of the following year.

(2) All other words and expression used but not defined in these rules shall have the same meaning as have been respectively assigned to them in the Act

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3. Regulating procurement and trading of minor forest produce.

(1) The Grama Panchayat shall have the power to regulate procurement and trading of minor forests produce whether produced in Government lands and forest areas within the limits of the Grama or collected from Reserve Forests and brought into the Grama.

(2) In case of the forest areas where Vana Sanrakshyana Samiti has been formed the Grama Panchayats shall give priority to such Samities and its members in the matter of collection and trading of minor forest produce.

4. Registration of trades.

(1) Any person intending to procure Minor Forest Produce from the primary gatherers or to trade in minor forest produce within the limits of Grama during any trading year shall register himself as a trader in Minor Forest Produce in the Grama Panchayat.

(2) Any person intending to be registered as a trader in minor forest produce shall apply to the Grama Panchayat in form No.1. All such applications shall be placed before the Grama Panchayat immediately in its next meeting and with the approval of the Grama Panchayat the Sarpanch shall register the applicant as a trader in minor forest produce for one trading year ending next September and grant a Certificate of Registration in Form No.2 to that effect.

(3) The names of all the traders of minor forest produce registered under sub-rule (2) each year shall be recorded in a permanent Register to be maintained in Form No.3 in the Grama Panchayat.

(4) At the time of filing of application under sub-rule (2) the applicant shall deposit with the Grama Panchayats the required registration fees for each item of Minor Forest Produce applied for.

(5) No application for registration shall be entertained if the required fees has not been deposited under sub-rule(4).

(6) The fees for registration for every item of Minor Forest produce shall be such as may be notified by Government from time to time.

5. Fixation of minimum price of the minor forest produce.

(1) (a) In the month of September every year the Panchayat Samiti shall by adopting a resolution to that affect, fix-up the minimum price of procurement of different Minor Forest Produces payable to the primary latherers during the next trading year, which shall be applicable to all the Grama Panchayats within the Block.Provided the Grama Panchayat shall be competent to modify the minimum price so fixed under this sub-rule of sub-rule (3) by the Panchayat Samiti according to the local need by adopting a resolution to that effect.

(b) The representatives of Divisional Forest Officer, Tribal Development Cooperative Corporation, Orissa, Forest Development Corporation and Tribal Co-operative Marketing Development Federation of India Ltd, shall be invited to the meetings convened under this sub-rule or under sub-rule(3).

(2) The minimum price fixed under sub-rule (1) or sub-rule (3) shall be notified in the notice board of the Panchayat Samiti and copies thereof shall be communicated to the Collector, Divisional Forest Officer, District Panchayat Officer, Sub-Collector and all the Grama panchayats within the Block.

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(3) If at any time or in any case it appears to the Collector that a Panchayat Samiti has failed to fix up the minimum price for procurement of Minor Forest produce under sub-rule (1) the Collector shall convene a Special Meeting of the Panchayat Samiti preferably in the month of October to fix-up the minimum price of procurement of Minor Forest produce.

(4) On receipt of intimation under sub-rule (2) regarding fixation of the minimum procurement price of the Minor Forest Produce fixed under sub-rule(1) or (3) the Grama Panchayat shall place the same before the Grama Sabha in its next meeting for ratification.

6. Furnishing of returns.

(1) A trader registered under these rules shall furnish a monthly return of Minor Forest Produce to the Grama Panchayat within fifteen days of the following month in Form No.3.

(2) Within one month of the closure of the trading year, the dealer shall also file an annual return of the Minor Forest Produce for the trading year in Form No.3

(3) The Grama Panchayat shall communicate a copy of the annual return received under sub-rule (2) to the Forest Range officer concerned.

7. **Cancellation.**

(1) If at any time or in respect of any case it appears to the Sarpanch, that a trader registered under these rules, has failed to-

(i) Pay the minimum price of procurement to the Primary gatherers fixed by the Grama Panchayat in Minor Forest Produce.

(ii) Register himself in the Grama Panchayat, or

(iii) Comply with the conditions of registration, the Sarpanch shall issue a notice to such dealer or person, as the case may be to show cause as to why the registration shall not be cancelled or action shall not be taken against him for such illegal trading.

(2) If such trader or person fails to show cause within seven days of receipt of the notice or show cause which is not satisfactory, the Sarpanch shall conduct an inquiry and after giving the traders of the person an opportunity of being heard, place his inquiry report before the Grama Panchayat in its next meeting together with the explanation, if any, received from such trader or person for its decision.

(3) On consideration of the inquiry report of the Sarpanch and the explanation of the trader if the Grama Panchayat are satisfied that circumstances specified in sub-rule (1) exist in relation to such trader or person, the Grama Panchayat shall resolve to cancel the registration of the dealer for the trading year and may also refuse to register him as trader for the subsequent trading years.

Provided that if the person is engaged in the trading of minor forest produce without registering himself in Grama Panchayat the Sarpanch or Secretary of the Grama Panchayat shall lodge necessary complaint before the Divisional Forest Officer concerned for taking appropriate action against the person concerned for such illegal trade under the appropriate provisions of law.

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(4) In pursuance of the decisions of the Gram Panchayat under sub-rule (3), the Sarpanch/Secretary shall cancel the registration of the trader and in case of the person carrying an illegal trade in Minor Forest produce; the Sarpanch shall forthwith lodge the complaint with the concerned Divisional Forest Officer.

(5) If after cancellation of the registration under sub-rule (4) it appears to the Sarpanch/Secretary that the trader is still continuing his trade on the Minor Forest Produce, the Sarpanch/Secretary shall report the matter to the Divisional Forest Officer for taking action against the person under the appropriate provisions of law.

(6) The item of Minor Forest produce seized by the Divisional Forest officer from the dealer or person shall be sold by public auction and the sale proceeds thereof be deposited under the appropriate head of Account as provided under the Orissa Forest Act.

8. Appeal.

Any person aggrieved by the decision of the Grama Panchayat under these rules may prefer an appeal under Section 133 of the Act. The appeal shall be disposed of within thirty days from the date of admission of the appeal.

10. Deemed traders.

(1) Public Sector undertakings like the Orissa forest Development Corporation, Tribal Development Co-operative Corporation and Tribal Co-operative marketing Development Federation of India Ltd., shall be deemed to have been registered under these rules.

(2) Notwithstanding the relaxation provided under sub-rule (1), the provisions of rule 6,7, and 8 shall apply to these public sector undertakings.

11. Issuance of instructions.

The Government may, from time to time, issue such instructions, as occasion may require for,-

(a) Smooth implementation of these rules and
(b) Removal of any doubt or difficulties arising out of implementation of these rules.

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SCHEDULE
(See rule 2(i)(iii)

LIST OF MINOR FOREST PRODUCES

1. Tamarind, de-seeded Tamarind,Tamarind . Seeds
2. Mahua Flower
3. Hill Brooms
4. Thorn Broom (Jhadu or Ghoda lanji)
5. Phula Jhadu
6. Broom Grass
7. Nux Vomica(Kochila Seeds)
8. Hardad
9. Bahada
10. Anla
11. Soap Nut (Ritha Phala)
12. Marking Nut (Bhalia)
13. Cleaning Nut (Nirmala)
14. Honey
15. Siali leaves
16. Sabai grass
17. Mngo Karnel
18. thatch Grass
19. Simul Cotton
20. Arrow Roots(Palua)
21. Dhatuki Flowers
22. Purtani
23. Sikakai
24. Jungal Jada or Goba
25. Palasa Seeds
26. Siali Seeds
27. Indra Jaba(Korai Seeds)
28. Gila (Seed and Coat)
29. Benachera
30. Ban Haladi
31. Gaba
32. Basil
33. Bana Kolatha
34. Makhena Seed (Kanta Padma)
35. Tala Makhana Seed
36. Baidanka Seeds
37. Baghanakhi Seeds
38. Kamala Gundi Fruits
39. Landa Baguli
40. Bela
41. Chiraita(bhui Neem)

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42. Khajuripata
43. Rohini Fruit
44. Bhurusunga Leaves
45. Phenephena Fruits
46. Rasana Root
47. Sidha Fruit
48. Setabari
49. Katha Lai
50. Aundi Lai
51. Khelua Lai
52. Suama Lai
53. Eksira Fruit
54. Katha Chhstu(Mushroom)
55. Mat Reed(Sapa Masina Grass)
56. Anania Mula
57. Antia Pata
58. Nageswar Flower
59. Mankada Kendu
60. Mahula Seed
61. Mahula Seed
62. Kusum Seed
63. Karanja Seed
64. Neem Seed
65. Char Seed
66. Chakunda Seed
67. Baul Seed
68. Baibiranga Seed

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FORM NO.1
(See rule 4(2)

Application form for registration of trading in Minor Forest Produce

To

The Sarpanch.....Grama Panchayat

Sir,

I Sri.....Village/Post.....do hereby apply for registration as a dealer in Minor Forest Produce in .....Grama Panchayat.

Details of Trade

1. Name of the business organization with full address:-
2. Relationship of the applicant with the organization:-
3. Applicant's name/Fathers name/Permanent Address :-
4. The name of the Minor Forest Produce the dealer wants to deal
5. Type of business
   Retail/wholesale or both:-
6. Amount deposited for registration with registration with receipt number and date.
7. Trading year for which registration is applied for :-
8. Name and address of the place where Minor Forest produce to be stored :-

I hereby declare that.....

1.I shall abide the rules and regulations framed by Government for trading in Minor Forest Produce.

2.I Under take that I shall not default in making payment the registration fees and other dues fixed by the Grama Panchayat.

3.That facts stated above are true to the best of my knowledge and belief.

Yours faithfully,

Signature of the Applicant

Received Rs.....(Rupees.....)only towards registration for vide receipt No.....dated.....

SECRETARY

ORDERS

The application be placed in the next Grama Panchayat meeting for consideration.

SARPANCH
GRAMAPANCHAYAT

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FORM No.2

(See rule 4(2))

Certificate of registration for trading in Minor Forest Produce.....
Grama Panchayat.

Sri.....Son of.....

Village.....Post.....Dist.....

Registered as a dealer in Minor Forest Produce.

1. Registration No.
2. Trading year for which registration is granted.
3. Description of Minor Forest Produce to be dealt with by the dealer:-
   (a)
   (b)
   (c)
   (d)
   (e)

Secretary
.....Grama Panchayat

Sarpanch
.....Grama Panchayat

N.B: Rules and regulations of registration noted backside

Renewal Report

Date of renew	Trading year for which renewal is granted	Signature of Secretary	Signature of Sarpanch
(1)	(2)	(3)	(4)

Conditions of Registration

1. Registered Minor Forest Produces shall be purchased only from the Primary gatherers as per the price fixed from time to time.
2. While purchasing the Minor Forest Produce from the Primary gatherers the Registered dealer shall ensure proper weight of the produces purchased and the full cost thereof shall be paid to the primary gatherers on the spot.
3. The registered dealer shall submit a monthly return in the prescribed form to the concerned Forest Ranger and the Grama Panchayat.
4. The registered dealer shall abide by all such guide lines as may be issued from time to time.

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Notification No. 10

PROTECTION OF RESERVE FOREST AREA BY THE COMMUNITY

Forest, Fisheries & A. H. Department, Government of Orissa

Resolution No. 10F (Pron) - 47 / 88 / 17240 / FFAH, Dated Bhubaneshwar, 1.08.1988

Sub: - Protection of Reserve Forest areas by community.

(i) The question of involving village communities for effective protection and conservation of Reserve Forests was, for sometime past, under the active consideration of Government. After careful appraisal, Government are of the view that the task of protecting forests is so urgent and so enormous that the rural community should be fully and actively involved in it. Accordingly it has been decided that the following scheme of involving the rural community will be implemented in the state. Under this scheme, villagers will be assigned a specific role in the protection of Reserve Forest adjoining their village and will in return, be granted, under section 24 of the Orissa Forest Act, 1972 certain concessions in the matter of meeting their bonafide requirement of firewood and small timber.

(1) The concerned Divisional Forest Officer shall assign the peripheral Reserve Forest areas to be adjoining villages according to the compartment line. The area in one compartment may cover one or more villages. Wherever the compartment line does not exist, natural boundary like nala, bridges etc will form the demarcation point. Reserve Forest area notified under Section 18 (1) of the Wildlife (Protection) Act, 1972 will however be excluded from the purview of the assignment.

(2) The concerned DFO shall constitute a Forest Protection Committee for each of the assigned village. The communities shall comprise the Sarpanch of the concerned Gram Panchayat, the Ward Members belonging to the village, the local Forester, Revenue Inspector, VLW and such other persons of the said village not exceeding three as may be nominated by the concerned Gram Panchayat. The total number of the members of the Committee shall be at least eight which shall, as far as possible include persons belonging to the Scheduled Castes or Tribes women and landless categories. The Sarpanch of the Gram Panchayat and the local Forester shall be the Chairman and Convener of the Committee respectively.

(3) The villages, shall through the Forest Protection Committee, furnish an undertaking to the concerned DFO for proper upkeep and maintenance of the assigned Reserve Forest areas. The assigned villages shall be responsible for fire protection and prevention of fellings, thefts of forest produce and encroachments in the assigned Reserve Forest areas. The Forest Protection Committee shall be responsible for ensuing performance of the above functions by villagers of the assigned village.

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(4) For performance of the duties enumerated in para 3 the villagers shall be entitled to obtain their bonafide requirement of small timber and firewood for household consumption only and not for sale or barter. The Forest Protection Committee shall be responsible for proper distribution of small timber and firewood among the household, keeping in view the following guidelines.

(a) The minimum requirement of the household for building and agriculture purpose should be worked out by the Committee and distribution made accordingly on the basis of available produce, before meeting their demand for other purposes.
(b) As regards supply of firewood, the same shall be apportioned among the households keeping in view their real requirement as far as possible.

(5) Small timber and firewood shall be removed from the assigned Reserve Forest areas only in accordance with a permit issued by the two members of the committee authorized for the purpose. The permit issued as above shall be valid only within the limits of the village boundary to which the household belongs.

(6) The above scheme of assignment will come into force with effect from 2.10.1998. In the intervening period, the DFO will assign specific constitute the Forest Protection Committee.

ORDER

Ordered that the Resolution be published in the extraordinary issue of the Orissa Gazette.

By Order of the Governor

P. K. Mohanty
Secretary to Government

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Notification No. 11

THE ORISSA GAZETTE
No. 875 CUTTACK, Monday, July, 5th, 1993 / ASADHA 14, 1915.

FOREST AND ENVIRONMENT DEPARTMENT, GOVERNMENT OF ORISSA

Resolution No. 16700 - 10 F (PRON) - 20 / 93 - F & E dated 3rd July, 1993

Subject: Protection of Reserved Forest and Protected Forest areas by the community and enjoyment of certain usufruct by the community.

1. Large chunks of forest land in our state have been rendered degraded and unproductive over the years. According to recent estimates the extent of such degraded forest land in the state is about twelve lakh hectares. Degradation sets in on account of over use of the forest and ever increasing pressure of human and animal population on the forests. Forests are basically a local resource. The society has to address itself with urgency to the task of regeneration and rehabilitation of the degraded forests. The problems can be tackled effectively at the local level with the active involvement and participation of the adjoining village communities. Germane to the question of protection and regeneration of the forest is the system of management. Forest management has to be reoriented to forge an effective partnership between the Government Department and the concerned village communities.

2. In Orissa, the tradition of community initiative to protect degraded forests goes back to the early 1950s. In August 1988 the State Government had passed a resolution to formally introduce a scheme of protection of peripheral Reserve Forest areas with participation of the adjoining villages. The scope of this resolution was enlarged in December, 1990 to include the Protected Forest, and it was also laid down that Village Level Forest Protection Committees should be constituted by convening meeting of the concerned villages in return for helping the Forest Department in protection of the earmarked forest areas the villagers would be entitled to get small timber and firewood as may be available from these forest for meeting their bonafide requirement free of royalty. For a variety of reasons however this scheme has not made the desired impact in generating people's participation in protection of forests. After careful consideration Government has decided to implement the following scheme of Joint Forest Management in the State in which the Forest Department and the villagers of the adjacent village(s) will be equal partners in the task of regeneration and restoration of the degraded forests.

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Selection of the Area

3. The scheme will operate in degraded forest land (Reserved and Protected Forest) with potential for regeneration. Only such forest area will be selected where the villagers of the adjacent village or cluster of villages are willing or can be motivated to offer active cooperation in regeneration and protection of forest tract, and only such villages shall be involved which are situated adjacent to the forest area. Sanctuaries and National Parks and forest land allotted for the purpose of commercial or industrial plantation or any other Departmental afforestation scheme shall ordinarily be excluded from the ambit of this scheme. A single village committee may be allowed to develop up to about 200 ha of forest land. All the village woodlots, and Social Forestry Block plantation raised under SIDA assisted Social Forestry Project between 1984 - 1994 after being notified as Village Forest will also come under the purview of this scheme. The village in which such plantation has been raised may also be selected for the taking of regeneration and protection of abuttant degraded forest tract along with management of the said plantation.

Vana Samrakshana Samiti

4. The Gram Panchayat will convene on the suggestion of the DFO / Range Officer / Forester a general meeting of all adults living in the selected village, where the DFO / Range Officer / Forester will explain the scheme of Joint Forest Management as outlined in the following paragraphs. After evaluating the response and motivation of the villagers, and after taking due account of relevant factors, he may recommend constitution of Vana Samrakshana Samiti (VSS) of the village by the Gram Panchayat. There should be one Samiti for a group of helmets or villages if these are all located adjacent to the Forest area to be regenerated.

5. Vana Samrakshana Samiti should include as its members two adults from every household living in the village / cluster of the village, including all those who have been exercising any rights, concession or privileges over the forest area. One member of each house should be a woman.

6. The concerned Forester shall be the ex officio Secretary of the Samiti. He will convene meeting of the Samiti once in three months and keep minutes of the meetings.

7. **Constitution of the Executive Committee**

(i) Each VSS will form its own executive committee for a term of two years at a time.
(ii) The Committee will comprise ten to fifteen members and its composition will be as follows.

a)	Naib Sarpanch	Chairperson
b)	Ward Member(s) representing the villages	Members
c)	Six to Eight representatives elected /selected by the Samiti of whom atleast three shall be women members.	Members
d)	Concerned Forester	Member

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e)	Concerned Forest Guard	Member
f)	Nominee of a concerned NGO in the area to be selected by the DFO.	Member

The Range Officer concerned will act as Returning Officer for filling in the quota of elected members at the commencement of each term of the committee.

(iii) The Executive Committee shall select its own treasurer whose tenure shall be coterminus with that of the committee. The Forester and Forest Guard will not have any voting right.

(iv) Half the number of members of the Committee shall constitute the quorum in any meeting.

(v) In some cases where single villages are not coming forward to take up the responsibility, the concerned Gram Panchayat may resolve to regenerate tract of degraded forest over the villages comprising the Gram Panchayat have been traditionally exercising the rights of usage. The Divisional Forest Officer / Range Officer / Forester may explain the scheme of JFM to the members of the Gram Panchayat in a meeting, and after considering all aspects, he may recommended to the Conservator of Forests for allowing the particular Gram Panchayat as a body to participate in the scheme of JFM. On getting approval of the Conservator of Forests, the concerned Gram Panchayat will be required to constitute an Executive Committee in the above manner for the purpose of implementation of the JFM programme.

8. Duties and Responsibilities of the Samiti

(i) The members of the Samiti individually and collectively will ensure protection of the forest against grazing, fire, illicit felling, theft of forest produce and encroachment on forest land. The Samiti will adopt its own patrolling system and will contribute in cash, kind or in labour to control and regulate access to the forest by people and by domestic cattle.

(ii) It shall be the duty of all members to prevent forest offence and pass on relevant information and intelligence in this regard to the forest officials.

(iii) The member shall actively help the forest officials in apprehending any person committing offence in the forest area, and in giving proper evidence against any such person in the courts of law.

(iv) The members shall assist the forest officials in carrying out silvicultural and other forest improvement work in accordance with the joint forest management plan.

(v) There shall be a meeting of the Samiti at least once in three months and more often if required, to review the work of the Executive Committee and to decide on the future programmes and plans to be followed. For each such meeting the Samiti members will nominate their own Chairperson (if the Naib Sarpanch is absent) who will continue as such till the holding of the next meting. The quorum in any meeting of the Samiti shall be 40 % of the members.

(vi) The Samiti will have the power to remove any non official member from the Executive Committee by a majority vote in its meeting if the concerned executive committee member does not discharge his / her duties correctly and satisfactorily.

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9. Duties and responsibilities of the Executive Committee

(i) The Executive Committee shall meet at least once every month and take stock of the condition of the forest, the offence committed and other hurdles encountered in protection of the forest. There will be detailed deliberation on all aspects of protection and regeneration of the forest and execution of the management plan.

(ii) The local Forester who is the Member-Secretary will prepare the agenda notes in advance for each meeting and he will keep the minutes of the meeting. The meeting of the Executive Committee can be convened either by the concerned Forester or by the Naib Sarpanch. In the absence of the Naib Sarpanch the committee members should nominate any one of them to preside over a meeting. The Naib Sarpanch may depute her representative to the meeting of the committee on her behalf will be two third of the total number of members.

(iii) The committee will actively associate itself with the concerned forest officials in carrying out all operations as per the approved management plan, in arranging labourers, in apprehending offenders and in starting legal action against them.

(iv) The committee will be the first forum for resolution of conflicts that may arise within the village and with other villages. Information / reports on the persons committing forest offence will be discussed in the monthly meeting of the committee and suitable action as deemed proper will be initiated by the committee. Where the committee cannot amicably resolve any conflict or check any offence or restrain any offender, it shall bring the same to the concerned Forest Range Officer, with its recommendation of action to be taken.

(v) The Committee shall assist the forest officials in carrying out various silvicultural operations, intermediate and final fellings in accordance with the management plan and in distribution of the forest produce among the villagers.

(vi) Divisional Forest Officer / Assistant Conservator of Forests / Forest Range Officers will frequently familiarize themselves with the work of each committee, and may give guidance from time to time for proper functioning of the committee which will be binding on the committee members.

10. Role of the Forest Department

(i) The Range Officer will have the freedom to attend the meeting of the Executive Committee and those of the Samiti, to participate in their discussions and tender advice. He would have no voting right. The Forester concerned shall maintain the records of all meetings.

(ii) The DFO shall have the over all responsibility for implementation of the scheme, including formation of the Samiti and constitution of the Executive Committee.

(iii) The DFO will be responsible for preparation of the Joint Management Plan for the forest areas providing for the local people's requirements and wishes in the plan. It will be his responsibility to see that the approved programmes as per the JFM plan are properly executed associating the executive committee at each stage.

(iv) The Forest Officials will take suitable and immediate action against cases of forest offence brought to their notice by the Samiti or Executive Committee members.

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(v) If the work of the Executive Committee found to be detrimental to protection / regeneration or proper management of the forest, the DFO shall record his findings, and he may dissolve the Executive Committee. On dissolution of the Executive Committee a meeting of the Samiti shall be convened to constitute a new Committee. The DFO may also remove any particular member from the Executive Committee if he is satisfied about the validity of the charges against the said member. Any such action of the DFO is appealable to the concerned Conservator of Forest whose decision shall be final.

11. Role of the Gram Panchayat

(i) The Gram Panchayat in whose jurisdiction the scheme will be in operation would be advised to have a committee on Joint Forest Management. The subcommittee will review once in a quarter, the functioning of the Vana Samrakshana Samiti in general and particularly whether the responsibilities cast on the parties in the MOUs were being discharged satisfactorily. The Gram Panchayat would keep the concerned DFO apprised of the working of the Scheme from time to time.

12. Joint Forest Management Plan

(i) The ACF / Range Officer concerned will prepare a Joint Forest Management Plan by carrying out micro planning exercise. The objective of the plan will be to identify the measures necessary to increase productivity of the forest so as to cater to the demand for traditional forest products in that area particularly fuel, fodder, bamboo and timber requirement of the local people. Due emphasis will be laid on maintaining the standing biomass, its diversity and on increasing the availability of non timber forest products. If necessary, the DFO may convene a meeting of the Vana Samrakshana Samiti where he will explain the contents of the proposed management plan to the members clearly and obtain their comments and suggestions. The DFO shall also take the opinion and suggestions of the Executive Committee before submitting any plan for approval. Each plan will be scrutinized, corrected, modified if necessary, and approved by a technical committee headed by the territorial Conservator of Forests, and comprising the DFO, WPO and the Deputy Director, Social Forest Project. The Joint Forest Management plan will be prepared for a period of ten years.

ii) Soil and water conservation measures shall form an integral part of the micro plan.

iii) The plan will prescribe community based protection measures and work out the involvement of labour inputs including free labour to be contributed by the Samiti members. The executive committee shall assign specific duties and responsibilities to different members of the Samiti for smooth implement of the Management Plan. In respect of any wage employment to be created in accordance with the Management Plan, the members of the Samiti will have the first preference.

iv) The implementation of the plan programme will be the responsibility of the Range Officer with active assistance and participation of the executive committee.

v) The Management Plan will give the following details

a) Area to be naturally regenerated, and species expected to regenerate and establish in the area.

b) Action Programme for restocking the area and covering the gaps.

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c) Nature and model of plantation and choice of species. Socially useful trees like Neem, Mohua, Myrobolans, fruit bearing trees like Mango, Jackfruit, Kendu, Tamarind and Bamboo plants must be planted in reasonable number in consultation with the Samiti.

d) Details of soil and moisture conservation measures.

e) Demarcation of boundaries, watch and ward and maintenance of plantations.

13. **Financial Arrangement**

Government will bear the expenditure to be incurred for implementing the Joint Management Plan through the Forest Department. Financial assistance may be availed in shape of grant in aid from the NAEDB of the Ministry of Environment and Forest of Government of India, and assistance from Social Welfare Institutions, Industrial and commercial houses, and foreign donor agencies.

14. **Usufructuary benefits**

(i) The Vana Samrakshana Samiti will enjoy usufructoary benefits provided it discharges its duties and responsibilities as laid down in the scheme. Further duties and responsibilities in the task of regeneration and protection of the forests may also be cast on the Samiti / Committee from time to time. The Executive Committee 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.

(ii) Usufruct like leaves, fodder, grasses, thatch grasses, broom grasses, thorny fencing materials, brush wood and fallen lops and tops and twigs used as fuel wood shall be available to the members free of cost. Other usufructs like leased out minor forest produce, kendu leaves etc can be collected by the members, but these will have to be delivered to the departmental agency or lessee against payment of prescribed wages for the collection and delivery.

(iii) All intermediate yield in shape of small wood, poles, firewood etc as may be obtained in silvicultural operations will be equitably distributed among the members by the executive committee.

(iv) Timber and poles as may be obtained from a major harvest or final felling shall be shared between the forest department and the Vana Samrakshana 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 for distribution in cash among the members.

(v) In respect of the village wood lots and other Social Forestry Plantation raised under the SIDA Forestry Project on land which has been notified as village forest and brought under Joint Forest Management, village community shall be entitled to 100% usufructs including final harvest of the plantation. When the area is subsequently planted or regenerated in a second rotation, usufructuary benefits will however be as prescribed in the proceeding para 14 (i) to (iv).

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15. Memorandum of understanding

Vana Samrakshana Samiti through its executive committee shall executive an MOU with the concerned Divisional Forest Officer for active participation in the task of protection, regeneration and management of the forest area and for implementation of the programmes as per the Joint Management Plan. The members of the Samiti will be allowed to remove fallen and dry branches, leaves, grass, various usufructs of the trees, free of charge after execution of the MOU. The villagers will be eligible for getting further benefits under the scheme in shape of the share in the final harvest after successful implementation of the scheme continuously for five years. The MOU shall be in the following form.

We, the members of the executive committee of the Vana Samrakshana Samiti of village do hereby undertake individually and collectively to perform the duties and shoulders the responsibilities as detailed in the resolution No. 16700 / F&E dated 03 / 07 / 1993 of the Forest and Environment Department, Government of Orissa, for proper protection and regeneration of the degraded forest area as per the schedule given here under Schedule.

1. Name of the Vana Samrakshana Samiti
2. District or Forest Division
3. Subdivision or Forest Range
4. Police Station
5. Village
6. Name of the Forest Block
7. Legal status of the Forest land
8. Area (Hectare) of the Forest Land
9. Boundaries of the area

North	East
South	West

We understand that the usufructuary benefits as detailed in the aforesaid resolution shall be allowed only upon satisfactory observance of the duties, responsibilities and functions by this executive committee and by the members of the Vana Samrakshana Samiti as per the aforesaid resolution.

A copy of the aforesaid resolution is annexed herewith duly signed by us one every page in proof / evidence of our having read / understood the same in letter and sprit. It is hereby agreed that this MOU will come in to effect from.....

Signature of the members of the Executive Committee

Signature of the Witnesses

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Name and address	Signature with date	Name and address	Signature with date
1.		1.	
2.		2.	
3.		3.	
4.		4.	
5.		5.	
6.		6.	

Signature of the Local Forest Officers

Sl.	Designation	Name	Signature with date
1.	DFO		
2.	ACF		
3.	Forest Range Officer		
4.	Forester		
5.	Forest Guard		

16. Steering Committee

There shall be a Steering Committee at the State level which will meet once in a quarter to guide and direct the operation of the scheme. It will hold extensive deliberations on specific problems and hurdles faced in implementation of the scheme. It will take up review to identify good points and shortcomings and to amend rules and regulations to steer the course of events in a positive direction. The Steering Committee shall be headed by the Minister, Forest as the Chairman, and will have the following ten members.

1.	Secretary to Government of Orissa Forest & Environment Department	Member
2.	Principal Chief Conservator of Forests	Member
3.	Director, Social Forestry Project	Member
4.	Two Officers of the rank of CCF/ Addl. CCF / Conservator of Forests to be nominated by the Forest Department	Members
5.	Conservator of Forests, Development Circle	Member Secretary
6.	Any two activists in the field of JFM selected by Government	Members
7.	Two non official Experts nominated by Government	Members

Once nominated to the Steering Committee the incumbent will have tenure of two years.

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17. This supersedes FF & AH Department Resolution No. 29525 - 10 F (Pron) 4 / 90 FF &AH dated 11th December, 1990.

ORDER

Ordered that the Resolution be published in the extraordinary issue of the Orissa Gazette

By order of the Governor

HIMANSU SEKHAR SARKAR
Commissioner-Cum-Secretary To Government

N.B. Amendments made vide No. 10 F (Pron) - 1 / 94, 14292 / F &E Bhubaneshwar, dated 4. 8. 94 and No. F (TR) - 1 / 94 .227 / 6 / F & E (Policy & Law) dated Bhubaneshwar 7.12.94 notifications is included.

Notification No. 12

Criteria and Indicators under Bhopal India process for
Sustainable Forest Management

Sustainable Forest Management (SFM) is defined as process of managing permanent forest land to achieve one of more clearly specified objectives of forest management with regard to the production of a continuous flow of desirable forest products and services without undue reduction of its inherent value and future productivity and without undue undesirable effects on the physical and social environment.

Working plans are a means to operationalise SFM and to ensure the maintenance of Ecosystem Integrity and Social Wellbeing. **Principle** is a fundamental truth or law as the basis of reasoning or action. **Criterion** is an aspect that is considered important by which sustainable forest management may be assessed. A criterion is accompanied by a set of related indicators. **Indicator** is a quantitative, qualitative or descriptive attribute that when periodically measured or monitored, indicates the direction of change.

The Criteria and Indicators (C&I) are applicable at the National, State/Division or Forest Management Unit (FMU) level. The following is the refined set of C&I of the Bhopal India Process (2000) developed through the Indian Institute of Forest Management, Bhopal.

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Table No. 412

Criteria		Indicators	Data Availability	FMU	National
Criterion 1: Increase in the extent of forest and tree cover	1.1	Area and type of forest cover under (a) Natural forest	A	X	X
		(b) man-made forest (tree plantations)	A	X	X
	1.2	Forest area officially diverted for non-forestry purposes	A	X	X
	1.3	Forest area under encroachment	A	X	X
	1.4	Area of dense, open and scrub forests	A	X	X
	1.5	Tree cover outside forest area	C	X	X
Criterion 2: Maintenance, conservation and enhancement of biodiversity	2.1	Area of protected eco-systems (PAs)	A	X	X
	2.2	Number of (a) Animal and	B	X	X
		(b) Plant species	B	X	X
	2.3	Number and status of threatened species Animal	C	X	X
		(b) Plant species	C	X	X
	2.4	Status of locally significant species (a) Animal and	C	X	-
		(b) Plant species	C	X	-
	2.5	Status of species prone to over exploitation	C	X	X
	2.6	Status of non-destructive harvest of wood and Non-Wood Forest Produce	B	X	X
Criterion 3: Maintenance and enhancement of ecosystem function and vitality	3.1	Status natural regeneration	A	X	X
	3.2	Incidence of forest fires	A	X	X
	3.3	Extent of livestock grazing (a) Forest area open for grazing	A	X	X
		(b) Number of livestock grazing in forest	B	X	X
	3.4	Occurrence of weeds in forest (a) Area	B	X	X
		(b) Weed type	B	X	X
	3.5	Incidences of pest and diseases	B	X	—
Criterion 4:	4.1	Area under watershed treatment	A	X	X
	4.2	Area prone to soil erosion	B	X	X

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Conservation and maintenance of soil and water resources	4.3	Area under ravine, saline, alkaline soils and deserts (hot and cold)	B	X	X
	4.4	Soil fertility/Site Quality	C	X	X
	4.5	(a) Duration of water flow in the selected streams	B	X	---
		(b) Ground water in the vicinity of the forest areas	B	X	---
Criteria 5: Maintenance and Enhancement of Forest Resource Productivity	5.1	Growing stock of wood	A	X	X
	5.2	Increment in volume of identified species of wood	C	X	X
	5.3	Efforts towards enhancement of forest productivity: (a) Technological inputs	A	X	X
		(b)Area under Hi-tech plantations	A	X	X
		(c) Area under Seed Production Areas, Clonal Seed Orchards etc.	A	X	X
Criteria 6: Optimization of forest resource utilization	6.1	Recorded removal of wood	A	X	X
	6.2	Recorded collection of Non-Wood Forest Produce	A	X	X
	6.3	Efforts towards reduction of wastages of forest products	C	X	X
	6.4	Aggregate and per capita consumption of Wood and Non-Wood Forest Produce	B	X	X
	6.5	Direct employment in forestry and forest based industries	B	X	X
	6.6	Contribution of forests to the income of forest dependent people	B	X	X
	6.7	Demand and Supply of Wood and Non-Wood Forest Produce	C	X	X
	6.8	Import and Export of wood and Non-Wood Forest Produce	A	---	X
Criteria 7: Maintenance and enhancement of social, cultural and spiritual benefits	7.1	(a) Number of JFM committees and areas(s) protected by them	A	X	X
		(b) Degree of people's participation in management and benefit-sharing	A	X	X
		(c) Level of participation of women	A	X	X

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	7.2	Use of indigenous technical knowledge: Identification, Documentation and Application	A	X	---
	7.3	Quality and extent to which concessions and privileges are provided	A	X	X
	7.4	Extent of cultural/sacred protected landscapes: forests, trees, ponds, streams, etc. (a) Type and area of landscape	A	X	X
		(b) Number of visitors	A	X	X
Criteria 8: Adequacy of Policy, Legal and Institutional framework	8.1	Existence of policy and legal framework	A	X	X
	8.2	Number of forest related offences	A	X	X
	8.3	Level of investment in Research and Development	A	X	X
	8.4	Human resource capacity building efforts	A	X	X
	8.5	Forest Resource Accounting (a) Contribution of forestry sector to the GDP	B	X	X
		(b) Budgetary allocations to the forestry sector	B	X	X
	8.6	Monitoring and Evaluation mechanisms	B	X	X
	8.7	Status of information dissemination and utilization	B	X	X

Note:

- A Indicator whose data are readily available in the official records
- B Indicators whose data can be generated with some efforts and within the available resources.
- C Indicators whose data require detailed research inputs.
- X Applicability of Indicators
- --- Non applicability of Indicator

(Source: Bhopal- India Process, Indian Institute of Forest Management)

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Notification No. 13

OFFICE OF THE PRINCIPAL CCF (WILDLIFE) & CHIEF WILDLIFE WARDEN, ORISSA, NILAKANTHA NAGAR, BHUBANESWAR - 751012

Memo. No. 7376 /SWL (Res.) 38/04
Dated, Bhubaneswar the 27th December, 2006

From

S.C.Mohanty,
Principal CCF (Wildlife), Orissa.

To

All Conservators of Forests.

Sub: Elephant Depredation.

On the occasion of the Wildlife Week 2004 and celebration of Elephant Day during that week, we had brought out a brochure to raise awareness of the threats to our wild elephants and issue of elephant depredation. The precautions to be taken by villagers and the role of forest officers when wild elephants are moving in the village areas were summarized in that brochure.

During the harvest season of paddy crop, the elephant menace is at its peak, and hundreds of villages are affected in the months of Novembers, December and January. It is necessary that Forest Officers having jurisdiction gather information about the movement of elephants as a matter of routine during these months and remain physically present in the affected areas to take charge of the situation. This will prevent loss of human life, injuries and untoward incidents, and prevent panic reaction of the people as well as any harm being caused to elephants in the process.

I would reiterate the following instructions:

(a) The villagers and the areas which are normally visited by wild elephants are to be identified and the Range Officers having jurisdiction have to be kept on tackle any situation at very short notice. For this purpose, the concerned Range Officers and the DFO concerned have to adopt a system of '**group call**' which as follows.

The DFO shall ascertain every day around 8 O'clock in the morning the position of elephants through the VHF network and other communication facilities available in the Division. The Forest Guards, Foresters, Range Officers, ACFs have all to gather relevant information in this regard early in the morning and pass on the same to their counterparts and superiors so that by 8 O'clock in the morning the DFO has complete information with him about the position of elephants in different locations Such information sharing need not be confined to any fixed hour in the morning, and the 'group call' may be in the afternoon also.

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(b) Once the DFO and the forest staff are alerted, they will seek to alert the Villagers concerned, and also the Police authorities and the District Authorities, the Sub- collector or the local Magistrate. In most situations, where elephants have lodged themselves in a village area, it is necessary first of all to manage the crowd. Basically, people have to be told to leave the elephants alone and not to go near any elephant and not to crowd around the elephants. If the man management requires intervention of Police personnel, such assistance may be requested from the District SP or the local Police authorities. What is important is that depending on the gravity of the situation, senior forest officers of the Division should reach the spot as quickly as possible to take charge of the situation. It would be useful if advance information is sent to the concerned villagers so that people are properly alerted about the elephants.

(c) It may take some time or a few days to assess the original habitat of the group of elephants and where they are headed at any point of time, and whether they are going to stay for some days in a particular area for food, water or shelter. Normally during the day time, the elephants do not move and take shelter in a place where there is some tree cover. The approach should be not to disturb the elephants during day time and to facilitate their passage in the direction that they normally would take. People, Specially the old, infirm, indigent persons and womenfolk should be advised to be careful not to come on the way of elephants, more so after sun- set.

(d) The forest officers should be equipped with hand-held loudspeakers (battery operated, 'Ahuja' make) for dispersing the crowd, spot light (the type that is fitted in jeep, and another type that is slung on the shoulder, battery operated) gun or rifle for making blank fire, rocket bombs (locally available fire works), crackers, verolite pistol (flare gun), torch, and Mashal or hula on a bamboo sticks of about 5-6' long. Funds have been allotted this year to most of the Divisions for purchasing these equipments. Sometimes people come forwarding sufficient numbers equipped with Mashal, crackers, etc. to drive elephants away. While this initiative need not be curbed, the entire operation has to be properly guided and directed. Before any elephants drive is launched either by the forest staff or by the villagers, a proper plan of action has to be chalked out which should chart out a possible path along which the elephants have to be driven. The villagers falling on this path have to be informed in advance of this plan. After the plan is well discussed among all concerned then only the drive should be organized. It has to be a disciplined the path operation without creating any chaos and without obstructing the path of the elephants from various sides. Any such operation should be essentially in the night time.

(e) It is likely that the driving party loses track of the elephants in the darkness of night. Then the operation has to be abandoned for the time being. Then the operation has to be abandoned for the time being. Next morning, from the foot marks, feeding sings, dung, etc. one can make out the path that the elephants may have taken. Guided by such observation, the forest Officers/Villagers may be able to again locate, the position of the elephants, and thereafter they may again plan for the subsequent operation. This has to very very patient approach which may extend over a number of days or a few weeks, and there is no short-cut solution to the problems.

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(f) For any village located on high ground, the villager should be persuaded to store their paddy underground rather than inside rooms. Similarly, people in villages should be persuaded not to keep Mahul brew, and country liquor in their houses, since the elephants are mainly guided by smell.

(g) Extra caution has to be exercised while dealing with a lone bull or single elephant with known aggressiveness. Nothing should be done to tease such elephants.

(h) The forest officials engaging in elephant tracking or elephant drive cooperation should ensure their own safety and should not approach the elephant too close in any case.

(i) The forest-friendly committees such as VSS, EDC, Green Brigade, Eco-club etc. which are locally available should be mobilized to extend a helping hand in tackling any situation that may arise on account of migration of elephants.

I would request you to instruct to instruct all Forest Officers your control to respond proactively to all situations relating to man-elephant interface. Each situation would call for a different approach, and may be documented as a case study. It calls for a professional approach; and under your guidance it should be possible to minimize human causalities and attack on elephants and to prevent any animosity or adverse publicity building up against the Forest Department.

Sd/-
S.C. Mohanty
27.12.04
Principal CCF (Wildlife, Orissa)

Memo No. 7377 / Dated 27.12.04
Copy forwarded to Commissioner- cum- Secretary of Government.

Sd/-
S.C. Mohanty
27.12.04
Principal CCF (Wildlife, Orissa)

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OFFICE OF THE
PRINCIPAL CCF (WILDLIFE) & CHIEF WILDLIFE WARDEN,
ORISSA, PRAKRUTI BHAWAN, 5th FLOOR, NILAKANTHA NAGAR,
BHUBANESWAR – 12

Memo No 3896 /5WL 35/2005
Dated, Bhubaneswar 2.06.2005

From:

S.C. Mohanty, IFS
Principal CCF (Wildlife) &
Chief Wildlife Warden, Orissa.

To

The Field Director,
Similipal Tiger Reserve, Baripada.
Conservator of Forests and Dy. Chief Wildlife Warden,
Angul/Sambalpur/Bhubaneswar/Berhampur/Rourkela/
Bhawanipatna/Koraput Circle.

Sub: Special focus on protection of tiger-Anti-Poaching strategy in the Similipal Tiger Reserve and other tiger habitats in the State.

Estimation of the number of tiger has been conducted in our State recently in the year 2002 and 2004, but there is hardly any record on mortality of tiger in the wild. Over the 5 year period 1999-2003, only 3 cases of tiger mortality have been reported in our State, which include one case of poaching. It is absolutely necessary that no case of death of tiger, even it is due to natural causes (like old age, disease, accident, intra-species fight or such other cause not directly attributable to any deliberate malafide human action) should go un-detected and each case must be recorded, investigates and reported. Although seizure of any body part of tiger need not always automatically allude or add to tiger mortality figure, it is an indication of the mortality of an animal at some point of time. Each such case of seizure of tiger body part has to be properly investigated to trace its origin. You and the DFOs must remain alert and must strengthen information network to root-out illegal trade and transit of tiger skin, bone, claw, skull, jaw, hair, whisker or teeth. The staffs are to be conversant with the identification techniques of tiger body parts developed at the WLL, Dehradun. Proper documentation and follow up to information from primary and secondary sources are also vital for improving matters regard.

The following broad and generic points are highlight below for four immediate attention with a request top adopt site-specific strategies strengthening protection of the tiger in your jurisdiction.

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1. Review of the existing patrolling camps/anti-poaching camps/anti-depredation camps in tiger reserve and Pas. Each patrolling camp should have an average area of 25 to 30 Sq.Kms under its jurisdiction to ensure coverage of the whole area by foot patrolling on a daily basis. Prescribing a flexible schedule of patrolling (daily) keeping in mind the vulnerability of different areas from poaching/protection point of view.
2. Maintaining a daily observation register in each patrolling/anti-poaching camp in the local language in which the camp personnel can record their observation based on patrolling of the area. All tiger sighting, scat, scratch mark, pug mark, kill evidence, secondary evidence such as hearing the tiger roar or sighting the tiger etc. indicating both time and place of observation, should be recorded in this register. Simultaneously, adopting a rigorous supervision schedule for field officers, along with a minimum prescribed patrolling to be done by them jointly with these camp personnel. Maintaining a system of surprise checking of Beat headquarters/ section headquarters/patrolling camps by senior officers.
3. Keeping a record of the local village level market days in the peripheral areas deploying informers/staff in civil dress to keep track of any untoward transaction/trade relating to wildlife.
4. Organising vehicular patrolling by constituting mobile and flying squads, and strengthening such squads by police personnel wheeler feasible, equipped with wireless hand sets, means for apprehending offenders; and prescribing a patrolling calendar for such squads.
5. Maintaining a list of vehicles passing through checking station and surprise check by senior officers at all such checking stations.
6. Prompt settlement of ex-gratia relief and compassionate payment in cases of wildlife depredation.
7. Half eaten carcasses of livestock on account of carnivore depredation should be disposed of by incineration or as advise by Veterinary Doctor to guard against possibility of poisoning of the carcass by the local people for revenge killing of the carnivore. In the areas where livestock depredation is reported frequently trackers should be deployed to continuously monitor the offending animal based on field evidence.
8. Wildlife crime dossiers should be exchanged with neighbouring Division officials in monthly meeting to facilitate joint action. Similar exchange should take place with local police. Surprise raids should be organized jointly with the local police in railway stations, local trains, bus stop, buses, eating houses and cafeterias.
9. Wherever EDCs have been constituted, a village level crime register should be maintained at the EDC level to keep track of villagers involved in wildlife offence. Proactive local persons may be identified and imparted the basics of wildlife crime detection so as to avail their services as informers.
10. The patrolling staff should collect evidence like pug marks and plaster casts on regular basis, so that individual identity of tigers can be fixed on the basis of such continuous monitoring. Impression pads may be laid near water points in the villages to ascertain presence of carnivores in the area.

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11. Constitute 'Green Brigade' comprising of proactive villagers at the EDC level, which could assist the PA staff in apprehending offenders.
12. The area should be constantly monitored to take note of the presence of wandering or pastoral people or encroachers, and any temporary settlement of all such persons has to be closely monitored.
13. Preparing a monthly wildlife crime map of each PA on 1:50,000 scale indicating the place of crime with date. Recorded cases of depredation by carnivores and elephants during the period may also be recorded in this map.
14. Compulsory registration of fire arm license holders residing near the PA.
15. Using tape-record/camera to record evidence.
16. Surveillance of traditional hunters, potential poachers and other criminal elements in the locality, and surveillance of Hotels and Dhabas, tourist points, vehicles, bus stop, etc.; co-ordination with local police; and networking with the adjoining Divisions.
17. Mobilising round the clock wireless system strategically placed of forest patrolling camps and vigilant and motivated front-line staff.
18. The wireless network must be kept in proper condition for round the clock communication of messages, etc.. The patrolling camps and the Beat houses should be nodal points for dissemination of information, which should be regularly supervised by senior officers.
19. To implement the strategy outlined above, positive involvement of the local communities would be an added asset and activities have to be simultaneously planned out to build up their stakeholding of tiger conservation.
20. Extensive search of forest areas/village premises in and around tiger Reserve/PA/Tiger habitat area may be carried out for steel traps, fire arms and other contraptions used for poaching wild animals. The field staff must be on high alert in this regard, and searches may be conducted at all suspected places. The local police3 should be actively involved in antipoaching operations.
21. The registration of fire-arms, as required under Sec-34 of the Wildlife (Protection) Act, 1972 should be done, as directed by the Hon'ble Supreme Court of India.
22. In regard to Similipal Tiger Reserve monthly, half yearly and annual report have been prescribed by Govt. of India for monitoring the implementation of the project tiger activities. The monthly report is to be sent to this office by the 15th of the month following the month to which it relates. The half yearly report is to be submitted within 2 months of the expiry of the half year to which it relates. With the second half year report of a year a comprehensive assessment of the project highlighting the problems, current issues and achievement and physical and financial targets and bottleneck if any should be submitted. The annual report is to be submitted by the 1st week of June following the financial year being reported upon. The Field Director of the Similipal Tiger Reserve has to take the needful action and submit timely compliance in this regard. The prescribed formats of the monthly, half yearly and annual reports are appended.

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23. The following special protection strategy may be adopted in all tiger habitat areas during the forthcoming monsoon when due to roads being cut-off, the forest tends to become vulnerable to illicit of felling of trees, illicit grazing and poaching.

i- Deployment of staff at sensitive points, based on roster, with clear allocation of duties as well as enforcement of surprise supervisory checks.

ii- Leave should not be granted to field staff during monsoon expect under extra-ordinary circumstances. Alternative arrangement always be made while granting leave.

iii- Daily recording of patrolling undertaken (foot/vehicular/elephant back) and sending fortnightly reports of seizure and offences detected, apart from sighting/tracking data pertaining to tiger/leopard.

iv- Deployment of Forest protection force (Comprised of handpicked Forest staff, some ex-army personnel and local young men of zeal and stamina.

v- Deploying selected local persons for day to day patrolling on provision of wages

Surveillance should be strengthened at the following sensitive locations:

1. Foot-path, bridal path linking in the tiger reserve to the area outside.
2. Habitat close to electric transmission lines
3. Bee-hive bearing trees
4. Habitat close to human settlement and prone to cattle grazing
5. Areas close to weekly village markets.

Site specific proposal to beef up wildlife protection by engaging capable local persons/ex-army personnel on wages or on contract may be submitted immediately separately, for each sanctuary which may be considered by GOI in the current year itself for funding. Staff development plan should also be prepared and sent to this office for replacing ageing frontline staff by staff of right age group and for training and skill developing of staff posed to tiger reserve/tiger habitat areas.

Sd/
S.C. Mohanty
02.06.05
Principal CCF (Wildlife) &
Chief Wildlife Warden, Orissa

Memo No. 3897 /Dated 02.06.2005

Copy forwarded to the Principal Secretary to Government, Forest and Environment Department, Orissa for kind information of Government.

Sd/
S.C. Mohanty
02.06.05
Principal CCF (Wildlife) &
Chief Wildlife Warden, Orissa

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B. TREE ENUMERATION

B-(I) 5% Enumeration of SWC Area

Total SWC area is 94593.895 ha and 5% area is 4729.69 ha

Name of the Range	Block	Area in ha	Comp.	GPS Reading						Species	Pole	Girth Class in CM						
				Latitude			Longitude											
				D	M	S	D	M	S			30 to < 60	60 to< 90	90 to < 120	120 to < 135	135 to < 150	150 to above	Total
Khamar	Mahughiri RP	25	26 & 27	21	21	13.6	85	14	2.9	Sal	2813	1140	965	945	760	230	93	6846
				21	21	21.6	85	13	57.7	Pisal	17	12	7	3	0	0	0	39
				21	21	37.6	85	14	28.7	Asan	72	57	31	4	0	0	0	164
				21	21	36.0	85	14	33.8	Misc	3348	713	533	480	480	480	105	6139
		25	28	21	21	18.4	85	12	6.1	Sal	3280	983	860	654	643	318	0	6711
				21	21	15.2	85	13	55.8	Pisal	37	21	7	0	0	0	0	65
				21	21	45.6	85	12	52.4	Asan	205	143	67	40	15	10	2	482
				21	21	48.8	85	12	5.3	Misc	2748	1075	1020	990	725	560	265	7383
		25	19	21	16	47.2	85	15	47.3	Sal	2987	1320	1045	928	560	325	335	7520
				21	16	56.7	85	15	49.8	Pisal	57	35	14	0	0	0	0	106
				21	16	55.0	85	15	16.3	Asan	157	128	73	20	15	0	0	393
				21	16	46.4	85	15	12.9	Misc	3053	843	432	313	261	248	146	5296
		25	19	21	16	35.2	85	15	55.0	Sal	2907	1480	1208	990	543	360	220	7708
				21	16	42.4	85	15	47.3	Pisal	97	79	55	8	0	0	0	239
				21	16	33.6	85	15	11.2	Asan	164	132	67	40	15	0	0	418
				21	16	28.0	85	15	18.9	Misc	3082	1170	1160	980	650	160	125	7327
		25	19	21	17	34.8	85	15	52.4	Sal	2862	1290	1117	990	843	778	660	8540
				21	17	24.8	85	15	18.9	Pisal	46	35	16	4	0	0	0	101
				21	17	36.0	85	15	14.6	Asan	346	320	280	90	25	12	0	1073
				21	17	42.8	85	15	49.9	Misc	2996	1314	1280	1205	915	660	180	8550
		25	21	21	17	28.3	85	14	38.0	Sal	2854	825	703	652	440	353	147	5974
				21	17	34.9	85	14	34.5	Pisal	45	34	14	2	0	0	0	95
				21	17	34.8	85	15	10.4	Asan	97	83	72	66	14	3	0	335
				21	17	26.7	85	15	13.8	Misc	3354	737	765	625	608	26	33	6608
		25	17	21	19	18.8	85	16	16.5	Sal	2827	1315	1074	1094	543	322	83	7208
				21	19	6.0	85	15	44.7	Pisal	72	62	18	12	2	0	0	166
				21	19	15.6	85	15	39.5	Asan	287	278	263	165	71	50	0	1114
				21	19	26.8	85	16	13.9	Misc	3064	1335	1276	1249	863	259	130	8176
		25	18	21	18	18.0	85	16	5.3	Sal	2814	1450	1175	1120	820	543	245	8167
				21	18	25.2	85	16	8.8	Pisal	57	43	11	1	0	0	0	112
				21	18	37.2	85	15	38.7	Asan	84	75	63	112	73	15	1	423
				21	18	27.6	85	15	34.4	Misc	3290	1110	810	720	675	650	555	7810
		25	22	21	19	14.3	85	14	6.9	Sal	2826	1040	965	945	760	230	185	6951
				21	19	17.6	85	14	15.5	Pisal	59	44	18	8	0	0	0	129
				21	18	51.5	85	14	32.8	Asan	84	75	60	59	33	8	0	319
				21	18	46.6	85	14	24.2	Misc	2280	1013	833	580	550	290	85	5631
		0.1	7	21	26	56.6	85	14	42.5	Sal	12	0	0	2	0	0	0	14
										Pisal	0	0	0	0	0	0	0	0
										Asan	4	0	0	0	0	0	0	4
										Misc	9	0	1	0	0	0	0	10
		0.1	8	21	26	28.2	85	14	42.5	Sal	9	0	0	1	1	1	0	12
										Pisal	1	0	0	0	0	0	0	1
										Asan	5	0	1	0	0	0	0	6
										Misc	11	0	1	0	0	0	0	12
		0.1	8	21	26	35.7	85	14	32.2	Sal	8	0	0	1	1	1	1	12
										Pisal	0	0	0	0	0	0	0	0
										Asan	3	0	0	0	0	0	0	3
										Misc	16	3	1	0	0	0	0	20
		0.1	7	21	27	5.7	85	14	29.1	Sal	12	0	2	3	1	0	1	19

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								Pissul	0	1	0	0	0	0	0	1
								Anss	3	0	0	0	0	0	0	3
								Misc	10	1	1	1	0	0	0	13
0.1	7	21	27	10.1	85	13	47.5	Sal	11	0	1	1	0	1	2	16
								Pissul	0	2	0	0	0	0	0	2
								Anss	5	3	0	0	0	0	0	8
								Misc	9	1	1	0	0	0	0	11
0.1	9	21	26	36	85	15	23.3	Sal	10	0	1	2	1	0	1	15
								Pissul	1	0	0	0	0	0	0	1
								Anss	6	0	0	0	0	0	0	6
								Misc	8	1	0	0	0	0	0	9
0.1	9	21	26	24.5	85	15	59.4	Sal	7	2	1	0	0	0	0	10
								Pissul	0	0	0	0	0	0	0	0
								Anss	5	0	0	0	0	0	0	5
								Misc	13	1	0	0	0	0	0	14
0.1	9	21	26	9.3	85	16	14.3	Sal	10	0	1	1	0	0	0	12
								Pissul	0	0	0	0	0	0	0	0
								Anss	4	0	0	0	0	0	0	4
								Misc	6	2	0	0	0	0	0	8
0.1	10	21	25	51.6	85	16	16.9	Sal	9	3	0	0	0	0	0	12
								Pissul	0	0	0	0	0	0	0	0
								Anss	3	4	0	1	0	0	0	8
								Misc	8	5	5	2	0	0	0	20
0.1	9	21	25	24	85	16	10.6	Sal	7	0	0	2	1	2	1	13
								Pissul	1	0	0	0	0	0	0	1
								Anss	5	0	3	0	0	0	0	8
								Misc	6	3	0	0	0	0	0	9
0.1	9	21	25	23.9	85	15	39.5	Sal	11	0	3	4	2	0	0	20
								Pissul	0	0	0	0	0	0	0	0
								Anss	2	1	0	0	0	0	0	3
								Misc	6	1	0	0	0	0	0	7
0.1	10	21	24	26.9	85	16	0.1	Sal	5	0	0	1	4	3	0	13
								Pissul	0	0	0	0	0	0	0	0
								Anss	2	0	0	0	0	0	0	2
								Misc	12	0	0	0	0	0	0	12
0.1	10	21	24	11.9	85	16	26.5	Sal	8	0	0	0	2	1	0	11
								Pissul	0	0	0	0	0	0	0	0
								Anss	4	1	0	0	0	0	0	5
								Misc	8	3	2	0	2	0	0	15
0.1	11	21	23	45	85	16	41.4	Sal	12	1	0	1	4	1	0	19
								Pissul	0	1	0	0	0	0	0	1
								Anss	3	3	0	0	0	0	0	6
								Misc	5	13	5	6	0	0	0	29
0.1	15	21	23	18.6	85	16	54.5	Sal	8	0	3	2	5	1	0	19
								Pissul	0	3	0	0	0	0	0	3
								Anss	2	2	0	0	0	0	0	4
								Misc	9	1	0	1	0	0	0	11
0.1	11	21	23	6.3	85	17	16.6	Sal	9	0	0	4	3	4	0	20
								Pissul	0	1	0	0	0	0	0	1
								Anss	3	0	3	0	0	0	0	6
								Misc	8	2	1	0	0	0	0	11
0.1	11	21	23	2	85	17	34.6	Sal	12	0	0	0	1	3	0	16
								Pissul	0	0	0	0	0	0	0	0
								Anss	4	0	0	0	0	0	0	4
								Misc	9	1	0	1	2	1	0	14
0.1	12	21	22	56.3	85	17	48.3	Sal	9	0	0	1	2	4	0	16
								Pissul	1	0	0	0	0	0	0	1
								Anss	5	0	0	0	0	0	0	5
								Misc	11	1	1	1	0	0	0	14
0.1	12	21	22	33.6	85	17	46.2	Sal	8	1	0	1	8	3	0	21
								Pissul	0	0	5	0	0	0	0	0
								Anss	3	0	0	0	0	0	0	3

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								Misc	16	1	1	0	0	0	0	18
0.1	13	21	22	3.1	85	17	38.5	Sal	12	2	0	3	7	0	0	24
								Pimal	0	0	0	0	0	0	0	0
								Anm	3	2	0	0	0	0	0	5
								Misc	10	3	0	0	0	0	0	13
0.1	14	21	21	54.7	85	18	18	Sal	11	6	0	3	8	6	0	28
								Pimal	0	0	0	0	0	0	0	0
								Anm	5	1	0	0	0	0	0	6
								Misc	9	2	0	0	0	0	0	11
0.1	14	21	21	38	85	18	1.7	Sal	10	2	1	8	7	1	0	29
								Pimal	1	0	0	0	0	0	0	1
								Anm	6	0	0	0	0	0	0	6
								Misc	8	1	3	8	0	0	0	20
0.1	14	21	21	27.5	85	18	12.3	Sal	7	2	0	2	4	7	0	22
								Pimal	0	0	0	0	0	0	0	0
								Anm	5	4	1	1	0	0	0	11
								Misc	13	3	1	0	0	0	0	17
0.1	14	21	20	58.7	85	18	31.2	Sal	12	0	1	6	6	5	0	30
								Pimal	0	0	0	0	0	0	0	0
								Anm	4	0	0	0	0	0	0	4
								Misc	9	2	0	0	0	0	0	11
0.1	15	21	20	37.9	85	18	30.1	Sal	9	3	1	3	5	4	0	25
								Pimal	1	0	0	0	0	0	0	1
								Anm	5	0	2	1	0	0	0	8
								Misc	11	5	3	2	1	0	0	22
0.1	15	21	20	10.4	85	18	25.4	Sal	8	0	3	7	8	3	0	29
								Pimal	0	0	0	0	0	0	0	0
								Anm	3	0	0	1	0	0	0	4
								Misc	16	3	2	4	1	0	0	26
0.1	15	21	19	48	85	18	16.4	Sal	12	1	3	7	5	2	0	30
								Pimal	0	0	0	0	0	0	0	0
								Anm	3	1	0	0	1	0	0	5
								Misc	10	2	2	3	1	0	0	18
0.1	15	21	19	17.4	85	18	22.1	Sal	11	1	2	3	1	0	0	18
								Pimal	0	0	0	0	0	0	0	0
								Anm	5	2	0	0	0	0	0	7
								Misc	9	2	6	0	0	0	0	17
0.1	15	21	19	3.5	85	18	3	Sal	10	0	1	6	2	3	0	22
								Pimal	1	0	0	0	0	0	0	1
								Anm	6	1	0	0	0	0	0	7
								Misc	8	2	8	2	1	0	0	21
0.1	6	21	26	13.7	85	13	19.9	Sal	7	3	1	0	0	0	0	11
								Pimal	0	1	0	0	0	0	0	1
								Anm	5	1	0	0	0	0	0	6
								Misc	13	4	0	0	0	0	0	17
0.1	8	21	25	46.7	85	15	16.7	Sal	12	13	0	0	0	0	0	25
								Pimal	1	0	0	0	0	0	0	1
								Anm	4	1	0	0	0	0	0	5
								Misc	8	2	0	0	0	0	0	10
0.1	6	21	25	14.9	85	13	39.5	Sal	12	8	3	1	0	2	0	26
								Pimal	0	0	0	0	0	0	0	0
								Anm	4	4	1	0	0	0	0	9
								Misc	9	5	2	0	0	0	0	16
0.1	6	21	24	19.6	85	14	36.8	Sal	9	2	3	2	4	0	0	20
								Pimal	1	0	0	0	0	0	0	1
								Anm	5	1	0	1	0	0	0	7
								Misc	11	3	3	1	0	0	0	18
0.1	5	21	23	57.7	85	14	45.4	Sal	8	1	1	6	8	6	0	30
								Pimal	0	0	0	0	0	0	0	0
								Anm	3	0	2	0	0	0	0	5
								Misc	16	4	6	7	2	0	0	35
0.1	5	21	23	20.3	85	15	4.4	Sal	12	2	3	9	8	2	0	36

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								Pimal	0	0	0	0	0	0	0	0
								Anas	3	0	0	1	0	0	0	4
								Misc	10	8	5	2	2	0	0	27
0.1	5	21	23	9.3	85	14	54.8	Sal	11	0	2	3	3	4	0	23
								Pimal	0	0	0	0	0	0	0	0
								Anas	5	0	2	1	2	0	0	10
								Misc	9	1	7	9	4	1	0	31
0.1	5	21	22	49.2	85	14	10.8	Sal	10	1	2	9	9	9	0	40
								Pimal	1	0	0	0	0	0	0	1
								Anas	6	0	9	0	0	0	0	15
								Misc	8	2	1	0	0	0	0	11
0.1	3	21	23	38.9	85	13	27.9	Sal	7	0	0	5	1	0	0	13
								Pimal	0	0	0	0	0	0	0	0
								Anas	5	0	0	0	0	0	0	5
								Misc	13	0	0	0	0	0	0	13
0.1	3	21	23	6.2	85	13	8.8	Sal	10	0	0	5	1	2	0	18
								Pimal	0	0	0	0	0	0	0	0
								Anas	4	1	2	2	0	0	0	9
								Misc	8	4	3	4	0	0	0	17
0.1	3	21	22	57.3	85	13	4.5	Sal	9	0	4	5	2	0	0	20
								Pimal	0	0	0	0	0	0	0	0
								Anas	3	2	3	0	0	0	0	8
								Misc	8	7	5	3	0	0	0	23
0.1	2	21	22	36.9	85	12	43	Sal	7	0	4	5	4	2	0	22
								Pimal	1	0	0	0	0	0	0	1
								Anas	5	2	3	2	0	0	0	12
								Misc	6	2	3	0	0	0	0	11
0.1	2	21	22	38.3	85	12	31.1	Sal	11	0	0	6	4	5	0	26
								Pimal	0	0	0	0	0	0	0	0
								Anas	2	1	0	0	0	0	0	3
								Misc	6	5	2	4	4	0	0	21
0.1	2	21	22	49	85	12	30	Sal	5	0	3	7	3	2	0	20
								Pimal	0	0	0	0	0	0	0	0
								Anas	2	2	1	0	0	0	0	5
								Misc	12	3	2	0	2	1	0	20
0.1	2	21	22	30.9	85	12	3.7	Sal	8	0	0	0	0	0	0	8
								Pimal	0	0	0	0	0	0	0	0
								Anas	4	0	3	0	4	2	0	13
								Misc	8	2	8	6	2	0	0	26
0.1	1	21	22	30.2	85	11	34	Sal	12	0	4	3	5	1	0	25
								Pimal	0	0	0	0	0	0	0	0
								Anas	3	4	3	0	0	0	0	10
								Misc	5	14	5	6	0	0	0	30
0.1	1	21	22	44	85	10	8.5	Sal	8	0	0	8	3	1	0	20
								Pimal	0	0	0	0	0	0	0	0
								Anas	2	1	1	0	0	0	0	4
								Misc	9	1	2	1	0	0	0	13
0.1	1	21	22	29.8	85	9	64.5	Sal	9	3	0	0	0	0	0	12
								Pimal	0	0	0	0	0	0	0	0
								Anas	3	1	3	0	0	0	0	7
								Misc	8	8	10	4	0	0	0	30
0.1	1	21	22	13.7	85	9	52.5	Sal	12	4	3	2	0	0	0	21
								Pimal	0	0	0	0	0	0	0	0
								Anas	4	0	0	0	0	0	0	4
								Misc	9	0	5	3	0	0	0	17
0.1	30	21	21	50.9	85	10	15.9	Sal	9	0	7	9	3	0	0	28
								Pimal	1	0	0	0	0	0	0	1
								Anas	5	0	1	0	0	0	0	6
								Misc	11	3	7	4	2	0	0	29
0.1	30	21	21	26.6	85	10	53.3	Sal	8	3	5	7	4	0	0	27
								Pimal	0	0	0	0	0	0	0	0
								Anas	3	0	0	0	0	0	0	3

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									Misc	16	4	8	5	2	0	0	35
0.1	30	21	21	19.5	85	11	23.2	Sal	12	5	4	10	14	7	0	52
								Pimal	0	0	0	0	0	0	0	0
								Anim	3	0	2	0	0	0	0	5
								Misc	10	4	6	1	0	0	0	23
0.1	30	21	21	18	85	11	50	Sal	11	4	5	3	2	0	0	25
								Pimal	0	0	0	0	0	0	0	0
								Anim	5	6	4	0	0	0	0	15
								Misc	9	8	7	6	2	0	0	32
0.1	29	21	21	23.8	85	12	29.7	Sal	10	5	7	6	2	0	0	30
								Pimal	1	0	0	0	0	0	0	1
								Anim	6	2	3	0	0	0	0	11
								Misc	8	25	17	7	2	0	0	59
0.1	28	21	21	21.5	85	13	14.2	Sal	7	4	2	3	0	0	0	16
								Pimal	0	0	0	0	0	0	0	0
								Anim	5	0	2	0	0	0	0	7
								Misc	13	17	8	2	0	0	0	40
0.1	28	21	21	24.3	85	13	44.6	Sal	12	0	3	7	5	0	0	27
								Pimal	0	0	0	0	0	0	0	0
								Anim	4	0	2	0	0	0	0	6
								Misc	9	6	8	9	7	1	0	40
0.1	26	21	20	57.7	85	14	9.2	Sal	12	0	8	8	6	3	0	37
								Pimal	0	0	0	0	0	0	0	0
								Anim	4	0	2	0	0	0	0	6
								Misc	9	5	8	5	4	0	0	31
0.1	26	21	20	38.6	85	13	57.7	Sal	9	5	8	4	0	0	0	26
								Pimal	1	0	0	0	0	0	0	1
								Anim	5	0	2	0	0	0	0	7
								Misc	11	7	5	2	0	0	0	25
0.1	25	21	20	29.2	85	13	47.4	Sal	8	3	3	6	8	0	0	28
								Pimal	0	0	0	0	0	0	0	0
								Anim	3	0	0	3	0	0	0	6
								Misc	16	5	7	3	0	0	0	31
0.1	25	21	20	11.1	85	13	50	Sal	12	5	6	0	2	1	0	26
								Pimal	0	0	0	0	0	0	0	0
								Anim	3	1	2	0	0	0	0	6
								Misc	10	2	5	2	0	0	0	19
0.1	25	21	20	6.4	85	14	4.3	Sal	11	5	6	5	3	2	0	32
								Pimal	0	0	0	0	0	0	0	0
								Anim	5	2	3	0	0	0	0	10
								Misc	9	3	8	2	0	0	0	22
0.1	25	21	20	22.7	85	14	40.5	Sal	10	4	4	3	1	1	0	23
								Pimal	1	0	0	0	0	0	0	1
								Anim	6	4	2	0	0	0	0	12
								Misc	8	25	12	8	0	0	0	53
0.1	25	21	20	22.7	85	14	40.5	Sal	7	2	5	13	8	4	0	39
								Pimal	0	0	0	0	0	0	0	0
								Anim	5	0	1	0	0	0	0	6
								Misc	13	4	5	8	0	0	0	30
0.1	24	21	20	16.6	85	15	46.5	Sal	10	5	4	10	6	6	0	41
								Pimal	0	0	0	0	0	0	0	0
								Anim	4	1	0	1	0	0	0	6
								Misc	6	5	2	1	2	0	0	16
0.1	23	21	19	47.8	85	15	22.8	Sal	9	1	2	8	15	7	0	42
								Pimal	0	0	0	0	0	0	0	0
								Anim	3	0	0	0	0	0	0	3
								Misc	8	2	1	1	0	0	0	12
0.1	23	21	19	28.1	85	14	37.1	Sal	7	4	5	8	4	0	0	28
								Pimal	1	0	0	0	0	0	0	1
								Anim	5	0	0	0	0	0	0	5
								Misc	6	8	10	5	1	0	0	30
0.1	22	21	19	16.3	85	14	20.1	Sal	11	10	5	2	0	0	0	28

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									Pinnai	0	0	0	0	0	0	0	0
									Asan	2	0	0	0	0	0	0	2
0.1	22	21	18	53.4	85	13	39.9		Misc	6	11	8	2	0	0	0	27
									Sal	5	5	6	5	0	0	0	21
									Pinnai	0	0	0	0	0	0	0	0
0.1	22	21	18	45.6	85	13	40.4		Asan	2	0	1	0	0	0	0	3
									Misc	12	12	6	7	3	0	0	40
									Sal	8	3	5	8	3	0	0	27
									Pinnai	0	0	0	0	0	0	0	0
0.1	22	21	18	36.5	85	13	52.5		Asan	4	2	0	0	0	0	0	6
									Misc	8	10	8	5	0	0	0	31
									Sal	12	3	1	0	0	0	0	16
									Pinnai	0	0	0	0	0	0	0	0
0.1	22	21	18	35.9	85	14	4.2		Asan	3	1	0	0	0	0	0	4
									Misc	5	5	4	0	0	0	0	14
									Sal	8	8	0	0	0	0	0	16
									Pinnai	0	0	0	0	0	0	0	0
0.1	22	21	18	21.9	85	14	5.2		Asan	2	2	1	0	0	0	0	5
									Misc	9	18	6	2	0	0	0	35
									Sal	9	4	6	5	4	0	0	28
									Pinnai	0	0	0	0	0	0	0	0
0.1	21	21	18	7.7	85	14	5.2		Asan	3	4	0	0	0	0	0	7
									Misc	8	10	8	4	1	0	0	31
									Sal	12	7	5	5	0	0	0	29
									Pinnai	0	0	0	0	0	0	0	0
0.1	21	21	18	10.7	85	14	20.8		Asan	4	0	0	0	0	0	0	4
									Misc	9	12	5	2	0	0	0	28
									Sal	9	15	4	3	0	0	0	31
									Pinnai	1	0	0	0	0	0	0	1
0.1	21	21	18	13.3	85	14	35.8		Asan	5	4	0	0	0	0	0	9
									Misc	11	12	7	4	0	0	0	34
									Sal	8	12	4	3	0	0	0	27
									Pinnai	0	0	0	0	0	0	0	0
0.1	21	21	17	52	85	14	24		Asan	3	7	3	0	0	0	0	13
									Misc	16	20	8	1	0	0	0	45
									Sal	12	15	7	4	0	0	0	38
									Pinnai	0	0	0	0	0	0	0	0
0.1	21	21	17	31.5	85	14	16.3		Asan	3	3	1	0	0	0	0	7
									Misc	10	21	12	2	0	0	0	45
									Sal	11	9	4	3	0	0	0	27
									Pinnai	0	0	0	0	0	0	0	0
0.1	21	21	17	12.2	85	14	40.8		Asan	5	6	2	0	0	0	0	13
									Misc	9	11	4	1	0	0	0	25
									Sal	10	8	3	2	0	0	0	23
									Pinnai	1	0	0	0	0	0	0	1
0.1	21	21	16	58.7	85	14	40.8		Asan	6	3	0	0	0	0	0	9
									Misc	8	14	7	2	0	0	0	31
									Sal	7	8	3	2	0	0	0	20
									Pinnai	0	0	0	0	0	0	0	0
0.1	21	21	16	52.8	85	15	0.9		Asan	5	3	0	0	0	0	0	8
									Misc	13	14	7	2	0	0	0	36
									Sal	12	13	8	3	2	0	0	38
									Pinnai	0	0	0	0	0	0	0	0
0.1	19	21	16	36.9	85	15	8.5		Asan	4	5	2	0	0	0	0	11
									Misc	9	17	13	3	3	0	0	45
									Sal	12	14	12	2	0	0	0	40
									Pinnai	0	0	0	0	0	0	0	0
0.1	20	21	15	54.3	85	16	2.9		Asan	4	7	0	0	0	0	0	11
									Misc	9	19	8	4	0	0	0	40
									Sal	9	12	6	7	3	0	0	37
									Pinnai	1	0	0	0	0	0	0	1
									Asan	5	0	3	0	1	0	0	18

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								Mise	11	13	10	12	6	0	0	52
0.1	20	21	15	49.7	85	16	7.2	Sal	8	8	4	2	0	0	0	22
								Pistol	0	2	0	0	0	0	0	2
								Assc	3	8	2	0	0	0	0	13
								Misc	16	20	9	2	0	0	0	47
0.1	20	21	15	48.1	85	16	17.6	Sal	12	22	9	4	0	0	0	47
								Pistol	0	2	0	0	0	0	0	2
								Assc	3	16	6	0	0	0	0	25
								Misc	10	18	11	3	0	0	0	42
0.1	20	21	15	37.3	85	16	16.9	Sal	11	14	7	3	0	0	0	35
								Pistol	0	5	0	0	0	0	0	5
								Assc	5	8	2	0	0	0	0	15
								Misc	9	30	11	5	0	0	0	55
0.1	20	21	15	23.8	85	16	49	Sal	10	20	8	3	0	0	0	46
								Pistol	1	1	0	0	0	0	0	2
								Assc	6	3	0	0	0	0	0	9
								Misc	8	11	13	9	4	0	0	45
0.1	20	21	15	16.3	85	17	18.3	Sal	7	8	5	7	0	0	0	27
								Pistol	0	0	0	0	0	0	0	0
								Assc	5	4	3	0	0	0	0	12
								Misc	13	10	6	0	0	0	0	29
0.1	20	21	15	31.6	85	17	31	Sal	10	10	0	8	4	2	0	40
								Pistol	0	0	0	0	0	0	0	0
								Assc	4	10	6	0	0	0	0	20
								Misc	6	30	4	4	2	1	0	47
0.1	20	21	15	47.1	85	17	1.5	Sal	9	19	4	4	3	2	0	41
								Pistol	0	0	0	0	0	0	0	0
								Assc	3	22	3	0	0	0	0	28
								Misc	8	15	13	12	4	2	0	54
0.1	19	21	15	56.1	85	16	38.4	Sal	7	8	11	7	4	2	0	39
								Pistol	1	0	0	0	0	0	0	1
								Assc	5	7	0	0	0	0	0	12
								Misc	6	29	9	7	3	1	0	55
0.1	19	21	16	50.9	85	15	47.1	Sal	11	21	6	8	4	0	0	50
								Pistol	0	0	0	0	0	0	0	0
								Assc	2	7	4	0	0	0	0	13
								Misc	6	24	9	8	3	0	0	50
0.1	19	21	17	39.2	85	16	3.5	Sal	5	13	5	5	3	0	0	31
								Pistol	0	0	0	0	0	0	0	0
								Assc	2	12	7	0	0	0	0	21
								Misc	12	22	12	4	2	0	0	52
0.1	18	21	18	20	85	16	7.9	Sal	8	9	12	8	7	2	0	46
								Pistol	0	0	0	0	0	0	0	0
								Assc	4	4	2	0	0	0	0	10
								Misc	8	15	11	7	0	0	0	41
0.1	18	21	18	32.7	85	16	11.9	Sal	12	5	12	14	2	0	0	45
								Pistol	0	0	0	0	0	0	0	0
								Assc	3	7	0	0	0	0	0	10
								Misc	5	14	10	5	1	1	0	36
0.1	18	21	18	45.2	85	16	11.9	Sal	8	4	9	12	11	8	0	52
								Pistol	0	0	0	0	0	0	0	0
								Assc	2	5	0	0	0	0	0	7
								Misc	9	12	7	3	0	0	0	31
0.1	18	21	18	52.9	85	15	53.2	Sal	9	5	15	18	11	7	0	65
								Pistol	0	0	0	0	0	0	0	0
								Assc	3	6	3	0	0	0	0	12
								Misc	8	8	11	3	2	0	0	32
0.1	17	21	19	12.1	85	16	30.1	Sal	12	7	11	9	7	3	0	49
								Pistol	0	0	0	0	0	0	0	0
								Assc	4	11	4	0	0	0	0	19
								Misc	9	7	3	2	3	2	0	26
0.1	18	21	18	55.2	85	16	30.1	Sal	9	6	8	7	0	4	0	43

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									Pteud	1	0	0	0	0	0	1
									Anno	5	6	4	3	0	0	18
									Misc	11	10	12	4	4	0	41
0.1	17	21	19	1.1	85	16	54		Sal	8	8	9	11	5	0	41
									Pteud	0	0	0	0	0	0	0
									Anno	3	3	0	0	0	0	6
0.1	16	21	19	5.9	85	17	10.7		Misc	10	7	2	8	7	0	40
									Sal	12	7	7	8	12	7	53
									Pteud	0	0	0	0	0	0	0
									Anno	3	5	7	4	0	0	19
0.1	15	21	19	52.7	85	17	37.5		Misc	10	21	8	4	2	2	47
									Sal	11	0	0	0	0	0	11
									Pteud	0	0	0	0	0	0	0
									Anno	5	0	0	0	0	0	5
1	14	21	20	22.4	85	18	19.9		Misc	9	0	0	0	0	0	9
									Sal	115	10	8	34	44	7	22	240
									Pteud	3	3	1	0	0	0	7
									Anno	5	12	5	0	0	0	22
1	14	21	21	26.4	85	17	30.0		Misc	127	108	54	18	9	8	6	330
									Sal	112	8	22	42	56	8	28	276
									Pteud	7	2	1	0	0	0	0	10
									Anno	14	8	2	1	0	0	0	25
1	14	21	21	13.6	85	17	12.4		Misc	117	108	70	20	8	8	12	343
									Sal	109	10	8	34	44	17	32	254
									Pteud	3	6	1	0	0	0	0	10
									Anno	18	12	10	5	0	0	0	45
1	14	21	21	5.6	85	17	22.7		Misc	123	112	60	18	9	6	8	336
									Sal	108	28	6	34	26	8	30	240
									Pteud	0	0	0	0	0	0	0	0
									Anno	9	10	8	3	0	0	0	30
1	14	21	21	12.0	85	17	36.9		Misc	133	116	57	78	20	18	12	434
									Sal	160	8	22	32	56	8	34	320
									Pteud	3	2	0	0	0	0	0	5
									Anno	8	10	8	6	0	0	0	32
1	14	21	21	24.8	85	17	47.2		Misc	79	88	78	32	18	10	10	315
									Sal	115	52	32	22	60	10	36	327
									Pteud	3	3	2	0	0	0	0	8
									Anno	5	10	12	21	0	0	0	48
1	14	21	21	8.8	85	17	54.0		Misc	127	98	82	23	28	12	6	376
									Sal	112	10	34	28	44	28	40	296
									Pteud	7	3	4	1	0	0	0	15
									Anno	14	8	7	9	6	0	0	38
1	14	21	21	16.8	85	18	11.2		Misc	117	87	85	32	24	16	10	371
									Sal	109	6	38	37	54	24	32	300
									Pteud	0	0	0	0	0	0	0	0
									Anno	18	10	6	0	0	0	0	34
1	14	21	21	0.8	85	18	7.8		Misc	123	97	102	28	22	10	8	390
									Sal	108	4	40	48	66	38	22	326
									Pteud	0	0	0	0	0	0	0	0
									Anno	9	8	12	2	0	0	0	31
1	15	21	19	39.6	85	17	40.3		Misc	133	60	30	30	26	14	12	325
									Sal	160	18	24	50	72	12	42	378
									Pteud	3	2	1	0	0	0	0	6
									Anno	8	12	8	3	0	0	0	31
1	15	21	19	47.6	85	17	55.8		Misc	79	38	28	24	12	8	4	193
									Sal	112	2	1	20	30	60	28	253
									Pteud	0	0	0	0	0	0	0	0
									Anno	7	10	4	2	0	0	0	23
1	15	21	20	0.0	85	18	0.5		Misc	131	12	16	28	10	13	8	218
									Sal	117	10	20	40	55	8	30	280
									Pteud	2	2	3	0	0	0	0	7
									Anno	8	10	8	0	0	0	0	26

Pallavaram

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								Misc	124	22	26	28	0	12	4	216
1	15	21	20	12.8	85	18	1.0	Sal	114	2	7	18	48	37	36	264
								Pissal	5	3	1	0	0	0	0	9
								Asan	15	20	8	6	0	0	0	49
								Misc	116	18	32	37	20	8	6	237
1	16	21	20	4.8	85	17	30.0	Sal	115	4	40	48	66	38	42	353
								Pissal	3	2	0	0	0	0	0	5
								Asan	5	8	12	6	0	0	0	31
								Misc	127	60	50	32	26	14	12	321
1	16	21	19	42.8	85	17	17.6	Sal	112	6	38	37	54	34	32	303
								Pissal	3	3	1	0	0	0	0	7
								Asan	14	10	6	4	0	0	0	34
								Misc	117	97	102	28	22	10	10	386
1	16	21	19	50.8	85	17	5.5	Sal	109	12	32	42	60	8	34	297
								Pissal	2	1	2	0	0	0	0	5
								Asan	18	10	2	6	2	0	0	38
								Misc	123	103	70	20	18	8	14	356
1	16	21	19	28.4	85	17	2.1	Sal	108	10	8	34	44	17	32	253
								Pissal	1	1	0	0	0	0	0	2
								Asan	9	12	8	6	0	0	0	35
								Misc	133	78	87	32	18	5	9	362
1	23	21	19	41.2	85	16	55.2	Sal	112	4	38	46	64	37	30	331
								Pissal	0	0	0	0	0	0	0	0
								Asan	7	12	8	2	0	0	0	29
								Misc	131	60	50	32	28	14	10	325
1	23	21	19	30.0	85	16	41.4	Sal	117	6	38	36	55	25	32	309
								Pissal	0	0	0	0	0	0	0	0
								Asan	8	10	6	2	0	0	0	26
								Misc	124	96	100	28	22	10	8	388
1	23	21	19	18.8	85	16	46.6	Sal	114	10	33	29	45	27	42	300
								Pissal	5	3	1	0	0	0	0	9
								Asan	15	4	3	2	0	0	0	24
								Misc	116	87	86	32	24	16	10	371
1	17	21	19	28.4	85	16	22.5	Sal	115	12	32	22	60	10	36	287
								Pissal	3	2	1	0	0	0	0	6
								Asan	5	10	12	2	0	0	0	29
								Misc	122	98	82	23	28	12	6	376
1	17	21	19	17.2	85	16	27.7	Sal	112	16	22	50	70	10	42	322
								Pissal	7	2	1	0	0	0	0	10
								Asan	14	8	9	4	0	0	0	35
								Misc	117	30	20	23	14	4	8	216
1	16	21	19	12.4	85	17	3.8	Sal	109	42	12	20	30	60	28	301
								Pissal	0	0	0	0	0	0	0	0
								Asan	18	10	4	2	0	0	0	34
								Misc	123	12	26	28	10	13	8	220
1	16	21	20	4.8	85	17	7.2	Sal	108	10	18	40	68	12	37	293
								Pissal	0	0	0	0	0	0	0	0
								Asan	9	10	6	4	0	0	0	29
								Misc	133	108	54	18	9	6	8	336
1	15	21	19	54.0	85	17	51.8	Sal	112	2	8	18	48	37	30	255
								Pissal	5	2	1	0	0	0	0	8
								Asan	28	20	10	8	0	0	0	66
								Misc	106	28	32	27	24	9	8	234
1	7	21	27	5.8	85	14	17.1	Sal	112	60	30	60	10	40	8	320
								Pissal	0	0	0	0	0	0	0	0
								Asan	17	12	8	9	0	0	0	46
								Misc	131	40	27	38	16	24	12	288
1	8	21	26	37.0	85	15	12.7	Sal	117	20	0	18	8	25	22	210
								Pissal	0	0	0	0	0	0	0	0
								Asan	8	5	0	0	0	0	0	13
								Misc	124	8	10	0	0	15	17	174

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1	9	21	26	18.5	85	15	54.7
1	10	21	25	30.5	85	15	46.0
1	10	21	25	4.5	85	15	40.7
1	10	21	24	25.6	85	16	8.8
1	8	21	26	50.4	85	14	20.0
1	8	21	26	37.6	85	14	18.3
1	8	21	26	40.8	85	14	8.0
1	8	21	26	38.8	85	14	9.7
1	8	21	26	28.0	85	14	14.9
1	8	21	26	23.2	85	14	2.8
1	8	21	26	18.4	85	14	13.2
1	7	21	26	10.4	85	14	4.6
1	7	21	26	8.8	85	14	14.9
1	8	21	25	59.2	85	14	8.0
1	8	21	26	15.2	85	14	30.9
1	6	21	25	59.2	85	14	26.9

Sal	114	137	36	18	0	0	21	326
Pinnl	5	2	0	1	0	0	0	8
Anns	15	8	6	5	1	0	0	35
Misc	116	93	35	37	0	0	0	281
Sal	115	0	0	12	0	27	43	197
Pinnl	3	2	0	0	0	0	0	5
Anns	5	1	0	0	0	0	0	5
Misc	127	14	0	0	0	0	0	141
Sal	112	0	6	14	23	20	28	203
Pinnl	7	2	4	0	0	0	0	13
Anns	14	11	0	0	0	0	0	25
Misc	117	35	20	0	5	0	0	177
Sal	109	15	2	9	32	17	12	196
Pinnl	0	0	0	0	0	0	0	0
Anns	18	12	5	0	0	0	0	35
Misc	123	13	15	2	15	0	0	168
Sal	108	10	28	57	8	30	7	248
Pinnl	0	0	0	0	0	0	0	0
Anns	9	2	1	0	0	0	0	12
Misc	123	8	6	0	0	0	0	147
Sal	160	17	25	52	10	35	12	311
Pinnl	3	1	0	0	0	0	0	4
Anns	8	4	1	3	0	0	0	16
Misc	79	12	8	3	0	0	0	102
Sal	163	12	18	40	9	32	6	289
Pinnl	0	0	0	0	0	0	0	0
Anns	6	3	4	0	0	0	0	13
Misc	81	18	15	7	3	0	0	124
Sal	154	15	30	42	12	37	10	300
Pinnl	0	0	0	0	0	0	0	0
Anns	7	3	2	0	0	0	0	12
Misc	89	10	7	3	0	4	0	113
Sal	157	13	28	37	14	41	13	303
Pinnl	0	0	0	0	0	0	0	0
Anns	12	4	1	0	0	0	0	17
Misc	82	21	12	0	3	0	0	118
Sal	148	8	30	47	5	25	8	271
Pinnl	2	1	0	0	0	0	0	3
Anns	9	2	5	1	0	0	0	17
Misc	93	20	10	9	0	0	0	132
Sal	154	3	5	18	10	35	18	243
Pinnl	5	3	0	0	0	0	0	8
Anns	15	8	5	0	0	0	0	28
Misc	76	5	6	8	12	6	0	113
Sal	112	1	3	16	9	26	8	179
Pinnl	0	2	0	0	0	0	0	2
Anns	7	12	8	3	0	0	0	30
Misc	131	27	4	8	5	14	0	189
Sal	117	4	6	20	12	37	20	216
Pinnl	0	4	0	0	0	0	0	4
Anns	8	7	2	0	0	0	0	17
Misc	124	8	12	7	6	3	1	161
Sal	114	10	8	21	15	40	13	221
Pinnl	5	2	0	0	0	0	0	7
Anns	15	8	3	0	0	0	0	26
Misc	116	12	8	0	0	0	0	136
Sal	115	8	10	22	18	36	15	224
Pinnl	3	3	0	0	0	0	0	6
Anns	5	8	4	0	0	0	0	17
Misc	127	10	7	6	3	4	0	157
Sal	112	4	8	20	10	34	14	202
Pinnl	7	2	0	0	0	0	0	9

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									Anan	14	8	4	0	0	0	0	26
									Misc	117	8	10	5	3	0	2	145
1	6	21	25	49.6	85	14	18.3		Sal	109	3	5	16	8	20	8	169
									Plasal	0	2	1	0	0	0	0	3
									Anan	18	16	4	0	0	0	0	38
									Misc	123	28	6	10	5	14	3	189
1	6	21	25	51.2	85	14	35.5		Sal	108	4	6	14	10	22	10	174
									Plasal	0	3	1	0	0	0	0	4
									Anan	9	12	3	0	0	0	0	24
									Misc	133	30	9	8	7	10	2	199
1	8	21	26	26.4	85	14	37.2		Sal	100	4	5	19	10	32	14	184
									Plasal	3	3	2	0	0	0	0	8
									Anan	8	12	10	0	0	0	0	30
									Misc	79	5	8	11	14	13	12	142
1	7	21	26	37.6	85	14	52.7		Sal	163	4	7	12	14	34	16	250
									Plasal	0	0	1	0	0	0	0	1
									Anan	6	8	10	0	0	0	0	24
									Misc	81	4	12	0	3	4	1	105
1	8	21	26	23.2	85	14	54.4		Sal	154	5	10	17	35	8	14	243
									Plasal	0	2	1	0	0	0	0	3
									Anan	7	14	6	4	0	0	0	31
									Misc	89	6	14	18	4	0	3	134
1	8	21	26	12.0	85	14	45.8		Sal	157	6	7	14	20	24	18	246
									Plasal	0	3	2	0	0	0	0	5
									Anan	12	6	8	0	0	0	0	26
									Misc	82	6	9	8	4	3	4	116
1	8	21	25	59.2	85	14	40.7		Sal	148	4	8	19	9	35	12	235
									Plasal	2	2	3	0	0	0	0	7
									Anan	9	8	10	0	0	0	0	27
									Misc	93	12	4	7	0	1	0	117
1	7	21	25	57.6	85	14	56.2		Sal	154	8	7	20	10	45	14	258
									Plasal	5	1	0	0	0	0	0	6
									Anan	15	11	3	0	0	0	0	29
									Misc	76	10	3	5	0	0	0	94
1	10	21	24	13.3	85	16	15.8		Sal	157	8	0	7	47	7	13	239
									Plasal	0	0	0	0	0	0	0	0
									Anan	12	21	2	0	0	0	0	45
									Misc	82	7	2	6	1	5	0	103
1	10	21	24	4.4	85	16	17.0		Sal	148	2	1	8	7	5	22	193
									Plasal	2	0	0	0	0	0	0	2
									Anan	9	3	2	11	0	0	0	25
									Misc	93	8	16	25	2	12	34	190
1	11	21	23	1.3	85	17	19.9		Sal	154	3	5	41	27	24	31	285
									Plasal	5	15	0	0	0	0	0	20
									Anan	15	6	3	1	0	0	0	25
									Misc	76	51	6	11	0	0	0	144
1	12	21	22	22.2	85	17	30.9		Sal	157	2	5	18	9	31	25	247
									Plasal	0	9	5	0	0	0	0	14
									Anan	12	0	9	8	0	0	0	29
									Misc	82	5	8	12	15	27	18	167
1	9	21	26	23.2	85	15	22.3		Sal	148	6	8	20	15	30	12	239
									Plasal	2	1	0	0	0	0	0	3
									Anan	9	6	4	0	0	0	0	19
									Misc	93	13	5	0	8	0	0	119
1	9	21	26	23.2	85	15	5.1		Sal	154	8	5	28	17	34	14	260
									Plasal	5	3	1	0	0	0	0	9
									Anan	15	12	4	0	0	0	0	31
									Misc	76	10	8	2	6	1	5	108
1	9	21	26	23.1	85	15	39.5		Sal	157	9	10	32	11	38	10	267
									Plasal	0	1	0	0	0	0	0	1
									Anan	12	8	4	0	0	0	0	24
									Misc	82	12	2	1	3	2	1	103

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1	9	21	26	18.4	85	15	55.0	Sal	148	4	8	20	10	34	12	236
								Pistol	2	2	1	0	0	0	0	5
								Assn	9	8	6	12	1	0	0	36
								Misc	93	14	26	28	27	21	8	217
1	9	21	26	10.4	85	15	37.8	Sal	154	10	26	48	28	34	12	304
								Pistol	5	1	2	0	0	0	0	8
								Assn	15	5	7	2	1	0	0	30
								Misc	76	16	38	27	35	12	12	236
1	9	21	26	5.6	85	15	36.7	Sal	112	9	7	25	10	38	8	209
								Pistol	0	1	2	0	0	0	0	3
								Assn	7	13	16	11	6	0	0	53
								Misc	131	15	34	29	15	3	12	279
1	9	21	25	54.4	85	16	7.0	Sal	117	5	8	20	10	35	11	206
								Pistol	0	1	1	0	0	0	0	2
								Assn	8	7	5	5	6	0	0	31
								Misc	124	123	46	28	15	22	8	366
1	10	21	25	43.2	85	15	51.6	Sal	114	10	6	18	12	24	14	198
								Pistol	5	1	2	0	0	0	0	8
								Assn	15	12	7	8	0	0	0	42
								Misc	116	48	32	54	30	26	8	314
1	10	21	25	27.2	85	15	44.7	Sal	115	4	3	7	35	10	14	188
								Pistol	3	0	0	0	0	0	0	3
								Assn	15	18	16	9	0	0	0	58
								Misc	127	134	120	54	3	7	12	457
1	10	21	25	33.6	85	15	32.6	Sal	112	2	5	18	10	38	18	203
								Pistol	7	1	0	0	0	0	0	8
								Assn	14	6	4	2	0	0	0	26
								Misc	117	19	3	10	1	4	3	157
1	10	21	25	19.2	85	15	8.5	Sal	109	114	68	20	19	35	12	377
								Pistol	0	2	1	1	0	0	0	4
								Assn	18	17	16	15	0	0	0	66
								Misc	123	88	57	20	15	35	10	348
1	10	21	25	11.2	85	15	37.8	Sal	108	112	50	88	78	30	14	480
								Pistol	2	4	5	0	0	0	0	11
								Assn	29	10	26	24	0	0	0	89
								Misc	133	120	83	28	12	27	4	407
1	8	21	25	0.0	85	15	34.4	Sal	160	113	86	17	10	28	15	429
								Pistol	3	6	4	2	0	0	0	15
								Assn	8	11	23	24	0	0	0	66
								Misc	79	105	87	10	14	26	16	337
1	6	21	24	50.8	85	15	48.1	Sal	163	118	117	20	12	30	12	472
								Pistol	5	4	2	5	0	0	0	16
								Assn	26	10	23	32	2	0	0	93
								Misc	81	8	12	16	2	10	6	135
1	10	21	24	30.0	85	15	51.6	Sal	154	104	88	120	10	32	10	518
								Pistol	0	2	1	0	0	0	0	3
								Assn	27	18	20	14	0	0	0	79
								Misc	89	12	78	25	24	18	12	258
1	10	21	24	26.8	85	16	0.6	Sal	157	9	7	24	8	34	8	247
								Pistol	4	2	2	1	0	0	0	9
								Assn	12	12	27	13	0	0	0	64
								Misc	82	85	46	10	23	40	6	292
1	10	21	24	15.6	85	15	58.4	Sal	148	8	10	18	28	20	14	246
								Pistol	2	3	1	0	0	0	0	6
								Assn	9	11	17	19	0	0	0	56
								Misc	93	96	78	88	21	12	4	392
1	11	21	24	4.4	85	16	5.3	Sal	154	4	8	16	12	30	13	237
								Pistol	5	4	3	1	0	0	0	13
								Assn	15	14	13	12	0	0	0	54
								Misc	76	88	35	41	45	32	12	329
1	11	21	23	58.0	85	16	17.4	Sal	112	6	9	20	10	34	14	205
								Pistol	9	4	6	0	0	0	0	19

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								Asen	27	18	10	0	0	0	0	75
								Mee	131	112	44	28	16	12	3	346
1	11	21	23	59.6	85	16	29.4	Sal	117	8	6	24	8	30	12	205
								Pimel	0	1	0	0	0	0	0	1
								Asen	8	10	6	2	0	0	0	26
								Mee	124	100	61	44	24	14	4	371
1	11	21	23	56.4	85	16	31.9	Sal	114	4	5	69	25	29	16	224
								Pimel	5	2	1	0	0	0	0	8
								Asen	15	8	4	1	0	0	0	28
								Mee	116	88	59	28	18	4	2	295
1	11	21	23	50.0	85	16	33.5	Sal	115	2	6	18	10	35	8	196
								Pimel	3	1	1	2	0	0	0	7
								Asen	15	10	14	18	5	0	0	62
								Mee	127	86	48	12	14	8	8	303
1	11	21	23	45.2	85	16	34.6	Sal	112	4	3	7	34	8	15	183
								Pimel	7	4	2	0	0	0	0	13
								Asen	14	8	4	3	1	0	0	30
								Mee	117	12	14		2	5	6	156
1	11	21	23	43.6	85	16	12.2	Sol	109	5	8	18	12	34	10	196
								Pimel	4	2	1	0	0	0	0	7
								Asen	18	32	25	8	0	0	0	83
								Mee	123	120	60	53	44	13	4	417
1	5	21	23	30.8	85	16	24.2	Sal	108	4	8	20	10	34	8	192
								Pimel	2	2	0	0	0	0	0	4
								Asen	9	18	8	12	0	0	0	47
								Mee	133	100	89	67	14	12	3	418
1	6	21	25	38.0	85	13	48.7	Sal	160	115	104	69	15	14	8	476
								Pimel	3	2	0	0	0	0	0	5
								Asen	8	6	5	1	0	0	0	20
								Mee	79	68	47	18	15	4	4	235
1	6	21	22	50.5	85	14	29.9	Sal	163	35	9	21	23	5	31	287
								Pimel	0	0	0	0	0	0	0	0
								Asen	6	2	3	5	0	0	0	16
								Mee	81	78	77	25	15	5	2	283
1	5	21	23	37.6	85	15	18.2	Sal	154	8	3	5	6	6	27	209
								Pimel	0	0	0	0	0	0	0	0
								Asen	17	15	12	6	0	0	0	50
								Mee	89	87	35	47	11	22	1	292
1	6	21	23	51.8	85	14	99.9	Sal	157	2	5	8	0	0	6	178
								Pimel	0	0	0	0	0	0	0	0
								Asen	12	10	7	6	5	0	0	40
								Mee	82	103	78	61	35	2	4	365
1	5	21	23	1.7	85	14	48.2	Sal	148	6	4	22	8	5	28	221
								Pimel	2	2	0	0	0	0	0	4
								Asen	29	21	25	15	4	0	0	94
								Mee	93	82	31	27	12	1	8	254
1	11	21	23	30.8	85	16	43.2	Sal	154	86	58	30	23	2	4	357
								Pimel	5	3	2	0	0	0	0	12
								Asen	15	12	12	5	0	0	0	44
								Mee	76	68	38	25	2	5	4	218
1	11	21	23	24.4	85	16	32.8	Sal	157	115	100	57	4	6	9	448
								Pimel	2	1	1	0	0	0	0	4
								Asen	12	13	12	30	10	14	6	97
								Mee	82	74	54	28	6	15	8	267
1	11	21	23	13.2	85	16	32.9	Sal	148	120	85	28	14	12	12	419
								Pimel	2	2	1	0	0	0	0	5
								Asen	9	14	3	12	4	3	6	51
								Mee	93	84	57	17	39	20	9	319
1	11	21	23	19.6	85	16	44.9	Sal	154	124	78	12	0	7	6	381
								Pimel	5	4	1	0	0	0	0	10
								Asen	15	15	12	8	0	0	0	50
								Mee	76	64	53	37	32	3	6	271

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1	11	21	23	11.6	85	16	51.8	Sal	157	124	85	22	8	14	2	412
								Pistol	0	0	0	0	0	0	0	0
								Assn	12	8	13	9	0	0	0	42
								Misc	82	72	32	24	18	9	3	240
1	12	21	22	57.2	85	16	45.0	Sal	148	20	5	12	4	8	10	207
								Pistol	2	1	1	0	0	0	0	4
								Assn	9	8	3	4	0	0	0	24
								Misc	93	74	54	37	6	12	4	280
1	12	21	23	1.4	85	17	3.8	Sal	154	4	8	13	26	14	12	231
								Pistol	5	4	3	0	0	0	0	12
								Assn	15	16	13	8	0	0	0	52
								Misc	76	46	34	38	24	14	5	237
1	12	21	22	44.4	85	16	56.9	Sal	157	12	10	8	15	50	15	267
								Pistol	1	1	1	0	0	0	0	3
								Assn	12	13	12	8	5	0	0	50
								Misc	82	72	62	24	18	16	4	278
1	12	21	22	46.0	85	17	17.6	Sal	148	14	12	10	12	53	20	269
								Pistol	2	1	0	0	0	0	0	3
								Assn	9	15	15	7	0	0	0	46
								Misc	93	73	48	26	14	15	4	273
1	12	21	22	47.6	85	17	46.8	Sal	154	16	13	12	14	48	18	275
								Pistol	5	1	2	0	0	0	0	8
								Assn	15	16	8	8	4	0	0	51
								Misc	76	12	32	18	20	3	2	163
1	12	21	22	34.8	85	17	33.0	Sal	112	8	7	10	20	55	23	235
								Pistol	0	1	0	0	0	0	0	1
								Assn	7	3	4	0	0	0	0	14
								Misc	131	23	18	28	22	2	1	225
1	12	21	22	19.2	85	17	19.3	Sal	117	12	14	10	20	45	12	230
								Pistol	0	1	1	0	0	0	0	2
								Assn	8	6	4	0	0	0	0	18
								Misc	124	74	38	28	32	1	6	303
1	12	21	22	22.4	85	17	33.0	Sal	114	112	38	10	14	51	27	366
								Pistol	5	1	2	0	0	0	0	8
								Assn	15	12	7	1	0	0	0	35
								Misc	116	86	52	18	24	2	1	299
1	12	21	22	11.2	85	16	56.9	Sal	115	40	10	30	35	3	30	285
								Pistol	3	1	1	0	0	0	0	5
								Assn	5	3	5	5	2	0	0	20
								Misc	127	100	90	20	3	4	5	349
1	13	21	22	4.8	85	17	10.7	Sal	112	78	38	28	37	8	40	341
								Pistol	7	2	1	0	0	0	0	10
								Assn	14	5	3	5	0	0	0	27
								Misc	117	90	88	18	4	3	3	323
1	13	21	22	12.8	85	17	41.6	Sal	109	35	45	25	30	5	30	279
								Pistol	0	1	2	0	0	0	0	3
								Assn	18	12	9	5	0	0	0	44
								Misc	123	80	70	23	12	6	4	318
1	13	21	22	0.0	85	17	46.8	Sal	108	34	4	28	30	6	20	230
								Pistol	2	1	2	0	0	0	0	5
								Assn	9	7	4	3	3	0	0	26
								Misc	133	80	82	18	12	3	2	330
1	14	21	21	56.8	85	18	6.1	Sal	160	122	38	40	28	34	15	437
								Pistol	3	1	2	0	0	0	0	6
								Assn	8	8	4	2	0	0	0	22
								Misc	79	30	88	14	2	6	4	223
1	13	21	21	48.8	85	17	52.3 6	Sal	163	35	14	28	40	30	16	326
								Pistol	2	2	1	0	0	0	0	5
								Assn	6	8	7	1	0	0	0	22
								Misc	81	68	30	10	23	2	8	222
1	13	21	21	48.9	85	17	14.1	Sal	154	120	48	50	30	32	40	474
								Pistol	22	20	1	0	0	0	0	43

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								Anm	7	14	8	6	0	0	0	0	35
								Misc	89	67	47	32	9	3	2	249
1	13	21	21	45.6	85	18	14.7	Sal	157	132	77	48	28	30	38	510
								Pimal	2	5	1	0	0	0	0	8
								Anm	12	12	7	3	2	0	0	36
								Misc	82	30	25	5	6	4	4	156
1	14	21	21	40.8	85	17	57.5	Sal	148	14	10	46	32	30	35	315
								Pimal	2	6	2	1	0	0	0	11
								Anm	9	10	4	8	3	0	0	34
								Misc	93	54	35	25	14	6	2	229
1	14	21	21	37.6	85	17	42.0	Sal	154	136	6	54	24	26	30	430
								Pimal	5	6	2	0	0	0	0	13
								Anm	15	12	6	5	1	0	0	39
								Misc	76	64	44	22	12	3	5	226
1	14	21	21	36.0	85	17	19.3	Sal	112	88	12	48	26	28	28	343
								Pimal	4	2	1	0	0	0	0	7
								Anm	7	10	3	2	0	0	0	22
								Misc	131	114	37	57	23	4	5	371
1	7	21	27	0.0	83	14	14.9	Sal	117	102	10	44	32	24	34	363
								Pimal	5	3	2	1	0	0	0	11
								Anm	8	16	4	5	0	0	0	33
								Misc	124	103	54	8	9	6	6	310
1	30	21	21	58.4	85	10	12.0	Sal	114	92	18	30	8	30	18	310
								Pimal	5	2	1	0	0	0	0	8
								Anm	15	5	8	2	0	0	0	30
								Misc	116	35	45	38	15	13	9	271
1	1	21	22	11.2	85	10	17.2	Sal	115	12	20	32	10	32	20	241
								Pimal	3	1	0	0	0	0	0	4
								Anm	5	6	4	3	0	0	0	18
								Misc	127	62	43	40	16	8	6	302
1	1	21	22	3.2	85	10	25.8	Sal	112	8	16	30	23	24	22	235
								Pimal	7	5	2	0	0	0	0	14
								Anm	14	8	6	2	0	0	0	30
								Misc	117	30	44	38	14	6	8	257
1	1	21	22	12.8	85	10	34.4	Sal	109	12	22	28	12	28	26	237
								Pimal	0	0	0	0	0	0	0	0
								Anm	18	7	3	2	0	0	0	30
								Misc	123	72	46	36	14	12	10	313
1	1	21	21	50.4	85	10	32.6	Sal	108	8	20	34	8	36	14	228
								Pimal	0	0	0	0	0	0	0	0
								Anm	9	6	4	4	0	0	0	23
								Misc	133	23	34	42	20	10	4	266
1	1	21	22	3.3	85	10	43.0	Sal	160	14	22	30	12	36	26	300
								Pimal	3	2	0	0	0	0	0	5
								Anm	8	10	2	6	0	0	0	26
								Misc	79	33	37	43	7	6	3	208
1	1	21	22	22.4	85	10	20.6	Sal	163	6	18	33	12	36	22	290
								Pimal	2	1	1	0	0	0	0	4
								Anm	6	6	4	4	0	0	0	20
								Misc	81	30	34	42	17	8	4	216
1	30	21	21	48.8	85	10	49.9	Sal	154	12	20	32	10	30	20	278
								Pimal	0	0	0	0	0	0	0	0
								Anm	7	8	5	2	0	0	0	22
								Misc	89	28	44	35	11	25	21	253
1	6	21	26	56.8	85	13	31.9	Sal	157	12	8	17	14	5	6	219
								Pimal	2	1	1	0	0	0	0	4
								Anm	12	8	3	1	0	0	0	24
								Misc	82	20	18	5	37	8	6	176
1	7	21	26	53.6	85	13	18.1	Sal	148	8	4	12	12	6	2	192
								Pimal	2	1	0	0	0	0	0	3
								Anm	9	4	6	2	0	0	0	21
								Misc	93	18	12	7	9	8	1	148

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1	7	21	26	42.4	85	13	16.4	Sal	154	6	8	17	10	14	3	212
								Pinnal	5	2	1	0	0	0	0	8
								Anan	15	2	5	2	0	0	0	24
								Misc	76	14	13	9	6	10	4	132
1	7	21	26	44.0	85	13	28.4	Sal	157	14	18	35	7	12	10	253
								Pinnal	0	1	2	0	0	0	0	3
								Anan	12	8	3	4	0	0	0	27
								Misc	82	20	18	12	9	5	6	172
1	7	21	26	37.6	85	13	23.3	Sal	148	18	37	14	19	21	14	271
								Pinnal	2	1	1	0	0	0	0	4
								Anan	9	5	6	5	0	0	0	25
								Misc	93	31	14	9	7	6	2	162
1	7	21	26	28.0	85	13	21.6	Sal	154	19	35	18	13	20	8	267
								Pinnal	5	1	2	0	0	0	0	8
								Anan	15	8	6	3	0	0	0	32
								Misc	76	38	20	9	12	3	8	166
1	7	21	27	8.0	85	14	2.8	Sal	157	8	17	6	5	8	12	213
								Pinnal	2	1	1	0	0	0	0	4
								Anan	12	8	2	1	0	0	0	23
								Misc	82	14	15	37	10	2	6	166
1	7	21	27	4.8	85	13	54.2	Sal	148	6	16	14	8	5	10	207
								Pinnal	2	1	0	0	0	0	0	3
								Anan	8	5	4	2	0	0	0	20
								Misc	93	28	6	3	7	12	7	156
1	7	21	27	11.2	85	13	45.6	Sal	154	106	18	19	30	17	12	356
								Pinnal	5	1	0	0	0	0	0	6
								Anan	15	10	6	4	0	0	0	35
								Misc	76	30	37	3	2	5	3	156
1	7	21	27	3.2	85	13	38.8	Sal	157	111	22	30	8	12	14	354
								Pinnal	2	1	0	0	0	0	0	3
								Anan	12	3	4	2	0	0	0	21
								Misc	82	10	21	7	3	5	6	134
1	7	21	26	50.4	85	13	52.5	Sal	148	8	9	21	14	23	10	233
								Pinnal	2	1	1	0	0	0	0	4
								Anan	9	4	3	2	0	0	0	20
								Misc	93	30	9	7	8	12	4	163
1	7	21	26	48.8	85	13	35.3	Sal	154	11	13	22	10	6	6	222
								Pinnal	5	1	0	0	0	0	0	6
								Anan	15	10	3	0	0	0	0	28
								Misc	76	17	8	9	12	14	3	139
1	1	21	22	49.2	85	10	27.5	Sal	112	5	20	16	44	14	18	229
								Pinnal	0	0	0	0	0	0	0	0
								Anan	7	4	6	2	0	0	0	19
								Misc	131	88	40	35	8	4	6	312
1	1	21	22	39.6	85	10	41.2	Sal	117	7	22	15	46	16	20	243
								Pinnal	0	2	1	0	0	0	0	3
								Anan	8	10	6	8	1	10	6	49
								Misc	124	40	46	38	7	0	0	255
1	1	21	22	39.7	85	10	12.0	Sal	114	6	22	14	56	10	14	236
								Pinnal	5	3	2	0	0	0	0	10
								Anan	15	10	6	8	3	0	0	42
								Misc	116	78	48	44	8	9	6	309
1	1	21	22	34.8	85	10	39.5	Sal	115	5	20	12	50		5	207
								Pinnal	3	2	1	0	0	0	0	6
								Anan	5	8	6	10	2	0	0	31
								Misc	127	40	46	42	6	7	8	276
1	2	21	22	31.6	85	10	49.8	Sal	112	2	7	10	14	22	20	187
								Pinnal	7	5	3	0	0	0	0	15
								Anan	14	4	2	0	0	0	0	20
								Misc	117	30	20	34	18	6	4	229
1	1	21	22	36.4	85	9	52.7	Sal	109	2	5	9	13	20	18	176
								Pinnal	0	0	0	0	0	0	0	0

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								Asan	18	2	2	0	0	0	0	22
								Misc	123	20	30	35	15	8	6	237
1	1	21	22	30.0	85	10	6.9	Sal	108	4	8	12	14	24	16	186
								Pasal	0	2	1	0	0	0	0	3
								Asan	9	4	2	1	0	0	0	16
								Misc	133	32	22	36	16	7	3	249
1	1	21	22	12.8	85	10	0.0	Sal	160	6	10	14	12	34	26	262
								Pasal	3	0	0	0	0	0	0	3
								Asan	8	5	3	0	0	0	0	16
								Misc	79	30	23	37	17	8	4	198
1	2	21	22	23.1	85	11	14.6	Sal	163	30	10	40	42	50	60	395
								Pasal	0	0	0	0	0	0	0	0
								Asan	6	40	8	12	0	0	0	66
								Misc	81	30	60	70	10	8	2	261
1	2	21	22	16.0	85	11	19.1	Sal	158	30	12	42	44	60	32	378
								Pasal	0	1	2	0	0	0	0	3
								Asan	7	6	4	2	0	0	0	19
								Misc	89	52	68	72	22	10	8	321
1	2	21	22	20.8	85	11	36.3	Sal	157	35	14	43	40	55	34	378
								Pasal	0	0	0	0	0	0	0	0
								Asan	12	10	6	3	0	0	0	31
								Misc	82	48	62	65	12	2	10	281
1	2	21	22	16.1	85	11	44.9	Sal	148	102	18	42	50	60	28	448
								Pasal	2	2	1	0	0	0	0	5
								Asan	9	10	6	8	0	0	0	33
								Misc	93	50	60	61	14	5	3	286
1	1	21	22	11.2	85	10	51.6	Sal	154	110	18	55	42	60	30	469
								Pasal	5	1	0	0	0	0	0	6
								Asan	15	8	6	5	0	0	0	34
								Misc	76	48	52	70	24	11	7	288
1	30	21	22	4.8	85	11	5.3	Sal	112	58	10	60	42	54	29	365
								Pasal	0	1	2	0	0	0	0	3
								Asan	7	12	7	8	0	0	0	34
								Misc	131	55	60	48	24	12	10	340
1	30	21	21	33.2	85	11	7.9	Sal	117	78	12	24	40	35	14	320
								Pasal	0	0	0	0	0	0	0	0
								Asan	8	6	10	9	0	0	0	33
								Misc	124	122	40	30	7	4	5	332
1	30	21	21	50.4	85	11	24.2	Sal	114	102	14	34	45	38	30	377
								Pasal	5	1	0	0	0	0	0	6
								Asan	15	8	6	4	0	0	0	33
								Misc	116	18	48	28	10	9	6	235
1	1	21	21	40.8	85	10	38.5	Sal	115	100	2	20	12	32	10	291
								Pasal	3	2	0	0	0	0	0	5
								Asan	5	6	4	0	0	0	0	15
								Misc	127	84	18	10	12	10	4	265
1	30	21	21	37.6	85	11	13.9	Sal	112	78	6	22	14	34	12	278
								Pasal	7	0	0	0	0	0	0	7
								Asan	14	7	9	0	0	0	0	30
								Misc	117	85	20	14	10	12	6	264
1	3	21	23	0.4	85	13	16.4	Sal	109	68	10	18	14	34	16	269
								Pasal	2	1	0	0	0	0	0	3
								Asan	18	8	6	2	2	0	0	36
								Misc	123	84	19	12	14	12	6	270
1	4	21	22	50.8	85	13	26.7	Sal	108	88	6	40	32	38	24	336
								Pasal	0	0	0	0	0	0	0	0
								Asan	9	10	12	1	0	0	0	32
								Misc	133	112	42	22	52	12	5	378
1	4	21	23	10.0	85	13	28.4	Sal	160	144	16	42	34	40	20	456
								Pasal	3	2	0	0	0	0	0	5
								Asan	8	12	8	3	0	0	0	31
								Misc	79	49	40	24	48	9	6	255

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1	4	21	22	49.2	85	13	40.5	Sal	163	72	9	42	30	34	18	368
								Pisal	2	1	0	0	0	0	0	3
								Asm	6	10	6	2	0	0	0	24
								Misc	81	40	28	26	46	8	5	234
1	4	21	22	42.8	85	13	54.2	Sal	154	10	2	40	25	23	24	278
								Pisal	3	1	0	0	0	0	0	4
								Asm	7	8	3	2	0	0	0	20
								Misc	89	34	42	14	48	9	8	244
1	4	21	22	34.8	85	13	33.3	Sal	157	76	8	37	19	34	14	345
								Pisal	0	0	0	0	0	0	0	0
								Asm	12	12	6	2	0	0	0	32
								Misc	82	32	20	9	14	8	6	171
1	2	21	22	38.0	85	12	24.4	Sal	148	104	2	20	12	40	4	330
								Pisal	2	1	0	0	0	0	0	3
								Asm	9	10	10	4	0	0	0	33
								Misc	93	20	21	10	18	0	20	182
1	2	21	22	38.1	85	12	43.7	Sal	154	6	8	50	18	30	31	297
								Pisal	5	2	3	0	0	0	0	10
								Asm	15	2	4	6	2	0	0	29
								Misc	76	78	14	8	24	7	4	211
1	2	21	22	20.8	85	12	33.4	Sal	157	5	10	60	20	50	40	342
								Pisal	0	0	0	0	0	0	0	0
								Asm	12	4	2	10	0	0	0	28
								Misc	82	70	12	10	14	0	0	188
1	4	21	22	30.0	85	12	52.3	Sal	148	6	12	58	18	48	42	332
								Pisal	2	2	0	0	0	0	0	4
								Asm	9	6	3	12	4	0	0	34
								Misc	93	78	18	12	22	2	6	231
1	4	21	22	44.4	85	12	59.2	Sal	154	12	4	22	14	42	30	278
								Pisal	5	3	1	0	0	0	0	9
								Asm	15	10	12	2	0	0	0	39
								Misc	76	22	18	15	25	7	18	181
1	4	21	22	39.6	85	13	13.0	Sal	157	8	6	40	26	48	28	313
								Pisal	0	0	0	0	0	0	0	0
								Asm	12	12	8	2	0	0	0	34
								Misc	82	24	22	18	24	10	8	188
1	4	21	22	24.0	85	13	11.2	Sal	148	18	6	35	25	42	24	298
								Pisal	2	1	0	0	0	0	0	3
								Asm	9	9	7	3	0	0	0	28
								Misc	93	25	39	24	10	28	10	220
1	2	21	22	25.6	85	11	52.5	Sal	154	17	5	38	27	48	31	320
								Pisal	5	2	2	0	0	0	0	9
								Asm	15	12	12	6	0	0	0	45
								Misc	76	26	32	25	8	21	12	200
1	2	21	22	20.8	85	12	9.0	Sal	157	10	12	20	12	32	15	258
								Pisal	0	0	0	0	0	0	0	0
								Asm	12	6	7	3	0	0	0	28
								Misc	82	20	18	12	14	10	6	162
1	4	21	22	16.0	85	12	50.6	Sal	148	12	8	37	19	34	14	272
								Pisal	2	1	0	0	0	0	0	3
								Asm	9	12	4	2	0	0	0	27
								Misc	93	20	22	10	12	8	6	171
1	27	21	22	33.2	85	14	8.0	Sal	154	16	6	38	27	48	32	321
								Pisal	5	1	0	0	0	0	0	6
								Asm	15	10	2	6	0	0	0	33
								Misc	76	26	3	32	28	12	10	187
1	4	21	22	44.4	85	14	23.5	Sal	112	10	2	20	12	40	34	230
								Pisal	0	0	0	0	0	0	0	0
								Asm	7	10	12	2	0	0	0	31
								Misc	131	30	29	34	18	6	9	257
1	4	21	22	36.4	85	14	25.2	Sal	117	12	4	22	14	42	38	249
								Pisal	2	1	1	0	0	0	0	4

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									Asses	8	12	10	6	0	0	0	36
									Misc	124	32	18	15	25	5	12	231
1	4	21	22	42.8	85	14	39.0		Sol	114	17	5	38	27	48	31	280
									Pistol	5	2	0	0	0	0	0	7
									Asses	15	12	6	3	0	0	0	36
									Misc	116	26	32	25	8	12	16	235
1	5	21	22	30.0	85	14	47.6		Sol	115	6	12	58	18	48	42	299
									Pistol	3	2	0	0	0	0	0	5
									Asses	5	12	6	4	0	0	0	27
									Misc	127	56	18	12	22	2	10	247
1	5	21	22	38.0	85	14	51.0		Sol	112	10	0	38	27	48	18	259
									Pistol	7	1	0	0	0	0	0	8
									Asses	14	6	4	7	0	0	0	31
									Misc	117	26	32	28	14	21	12	250
1	6	21	24	49.2	85	14	32.1		Sol	109	142	6	38	27	48	18	388
									Pistol	2	1	0	0	0	0	0	3
									Asses	18	6	4	7	0	0	0	35
									Misc	123	86	32	28	14	2	12	297
1	6	21	25	1.6	85	14	43.8		Sol	108	72	5	40	30	45	22	322
									Pistol	0	0	0	0	0	0	0	0
									Asses	9	10	6	2	0	0	0	27
									Misc	133	30	36	32	18	6	15	270
1	6	21	25	8.0	85	14	26.9		Sol	160	84	7	42	32	46	30	401
									Pistol	3	1	1	0	0	0	0	5
									Asses	8	12	4	3	0	0	0	27
									Misc	79	32	34	36	19	16	17	233
1	6	21	25	17.6	85	14	11.4		Sol	163	88	10	46	30	40	28	405
									Pistol	0	1	2	0	0	0	0	3
									Asses	6	10	6	2	0	0	0	24
									Misc	81	30	32	37	14	12	18	224
1	8	21	25	19.2	85	14	40.7		Sol	154	72	7	38	29	45	30	375
									Pistol	0	0	0	0	0	0	0	0
									Asses	7	10	3	7	0	0	0	27
									Misc	89	30	32	37	14	12	18	232
1	8	21	25	25.6	85	14	25.2		Sol	157	78	12	45	38	44	32	406
									Pistol	2	1	2	0	0	0	0	5
									Asses	12	12	8	2	0	0	0	34
									Misc	82	26	32	28	16	38	14	236
1	8	21	25	35.2	85	14	37.2		Sol	148	70	14	60	42	46	29	409
									Pistol	2	1	0	0	0	0	0	3
									Asses	9	10	12	6	0	0	0	37
									Misc	93	30	28	37	18	8	18	232
1	6	21	25	36.8	85	14	51.0		Sol	154	56	12	46	38	42	29	377
									Pistol	5	1	2	0	0	0	0	8
									Asses	15	10	2	6	0	0	0	33
									Misc	76	26	34	28	17	40	16	237
1	6	21	22	52.4	85	14	45.8		Sol	112	72	6	38	27	48	32	335
									Pistol	1	1	0	0	0	0	0	2
									Asses	7	10	2	6	0	0	0	25
									Misc	131	46	32	28	12	21	12	282
1	5	21	23	3.6	85	14	56.2		Sol	117	100	22	20	12	40	34	345
									Pistol	0	0	0	0	0	0	0	0
									Asses	8	10	8	2	0	0	0	28
									Misc	124	20	24	12	18	6	20	224
1	6	21	24	1.2	85	14	52.7		Sol	114	45	10	60	20	50	40	339
									Pistol	5	2	2	0	0	0	0	9
									Asses	15	4	2	10	0	0	0	31
									Misc	116	70	8	10	14	0	0	218
1	6	21	24	14.0	85	14	45.8		Sol	115	36	12	58	18	48	42	329
									Pistol	3	1	0	0	0	0	0	4
									Asses	5	12	6	3	0	0	0	26
									Misc	127	56	18	12	22	2	10	247

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1	6	21	24	25.2	85	14	57.9	Sal	112	42	4	22	14	42	38	274
								Pimal	2	1	0	0	0	0	0	8
								Asan	14	12	10	6	0	0	0	42
								Misc	117	32	18	15	25	7	18	232
1	6	21	24	30.0	85	14	44.1	Sal	109	58	6	40	26	48	28	315
								Pimal	0	0	0	0	0	0	0	0
								Asan	18	12	8	2	1	0	0	41
								Misc	123	54	22	18	38	10	12	277
1	6	21	24	31.6	85	14	32.1	Sal	108	48	6	35	25	42	24	288
								Pimal	2	1	0	0	0	0	0	3
								Asan	9	9	7	12	0	0	0	37
								Misc	133	78	30	24	10	28	14	317
1	6	21	24	44.4	85	14	52.7	Sal	160	47	5	38	27	48	31	356
								Pimal	3	2	2	0	0	0	0	7
								Asan	8	12	12	6	0	0	0	38
								Misc	79	26	32	25	8	21	12	203
1	15	21	19	31.6	85	18	2.6	Sal	163	52	20	40	56	7	28	366
								Pimal	2	1	0	0	0	0	0	3
								Asan	6	6	2	0	0	0	0	14
								Misc	81	28	17	38	10	6	8	188
1	15	21	19	48.9	85	18	5.8	Sal	154	68	20	50	70	10	40	412
								Pimal	4	2	2	0	0	0	0	8
								Asan	7	6	10	0	0	0	0	23
								Misc	89	30	20	22	12	2	6	181
1	15	21	19	43.9	85	18	8.0	Sal	157	98	5	20	60	30	40	410
								Pimal	0	0	0	0	0	0	0	0
								Asan	12	10	6	5	0	0	0	33
								Misc	82	42	14	6	4	2	4	154
1	15	21	19	38.3	85	17	59.2	Sal	148	21	32	20	50	40	30	341
								Pimal	3	1	0	0	0	0	0	3
								Asan	9	10	20	12	3	0	0	54
								Misc	93	44	6	60	40	50	30	323
1	15	21	19	35.0	85	17	58.6	Sal	154	32	20	70	18	40	60	394
								Pimal	5	2	1	0	0	0	0	8
								Asan	15	6	3	0	0	0	0	24
								Misc	76	32	21	50	40	68	38	325
1	16	21	19	10.7	85	17	29.4	Sal	157	65	20	50	30	10	40	372
								Pimal	0	0	0	0	0	0	0	0
								Asan	12	12	2	0	0	0	0	26
								Misc	83	30	20	10	22	3	2	169
1	7	21	26	16.8	85	13	26.7	Sal	148	56	8	24	30	6	20	292
								Pimal	2	2	1	0	0	0	0	5
								Asan	9	6	10	2	0	0	0	27
								Misc	93	110	90	20	6	7	10	336
1	15	21	19	69.2	85	18	0.9	Sal	154	10	20	40	53	6	28	311
								Pimal	5	2	0	0	0	0	0	7
								Asan	15	12	6	3	1	0	0	37
								Misc	76	102	70	30	8	9	12	307
1	15	21	19	18.8	85	17	50.6	Sal	157	38	22	32	56	8	32	345
								Pimal	2	1	3	0	0	0	0	6
								Asan	12	7	9	5	0	0	0	33
								Misc	82	88	78	22	8	9	6	293
1	15	21	19	25.2	85	18	26.7	Sal	148	66	24	30	54	10	38	370
								Pimal	2	2	1	0	0	0	0	5
								Asan	0	8	6	3	0	0	0	26
								Misc	93	70	60	28	9	6	5	271
1	15	21	19	36.4	85	18	16.4	Sal	154	48	6	34	26	8	18	294
								Pimal	5	2	3	0	0	0	0	10
								Asan	15	6	8	3	0	0	0	32
								Misc	76	78	57	90	20	8	8	337
1	15	21	19	20.4	85	18	9.5	Sal	157	32	8	34	44	7	22	304
								Pimal	1	1	3	0	0	0	0	5

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								Asm	12	12	6	3	0	0	0	33
								Misc	82	108	60	18	9	6	8	291
1	14	21	20	52.8	85	17	50.0	Sal	148	16	22	50	70	16	40	336
								Pistol	2	10	2	0	0	0	0	14
								Asm	9	12	8	3	0	0	0	32
								Misc	93	30	20	22	12	4	8	189
1	14	21	20	51.2	85	17	33.4	Sal	154	52	1	20	30	60	28	345
								Pistol	5	2	1	0	0	0	0	8
								Asm	15	10	4	2	0	0	0	31
								Misc	76	32	16	18	10	13	6	171
1	14	21	20	40.0	85	17	45.4	Sal	115	15	20	40	55	8	30	283
								Pistol	3	1	2	0	0	0	0	6
								Asm	5	8	4	2	0	0	0	19
								Misc	127	58	20	40	10	7	8	270
1	13	21	20	44.8	85	17	6.1	Sal	112	65	18	40	10	7	8	260
								Pistol	7	5	2	0	0	0	0	14
								Asm	14	10	6	3	0	0	0	33
								Misc	117	42	26	28	6	2	4	225
1	14	21	20	27.2	85	17	54.0	Sal	109	5	20	47	38	12	38	269
								Pistol	2	1	0	0	0	0	0	3
								Asm	18	14	2	6	0	0	0	40
								Misc	123	30	20	10	22	3	4	212
1	15	21	20	17.6	85	17	38.6	Sal	108	12	7	18	48	37	30	260
								Pistol	0	0	0	0	0	0	0	0
								Asm	9	20	10	8	0	0	0	47
								Misc	133	38	22	27	20	9	6	255
1	15	21	20	9.6	85	17	48.9	Sal	160	28	6	34	26	8	18	280
								Pistol	3	3	2	0	0	0	0	8
								Asm	8	6	8	2	0	0	0	24
								Misc	79	70	54	80	20	8	10	321
1	14	21	20	22.4	85	18	19.9	Sal	115	10	8	34	44	7	22	240
								Pistol	3	3	1	0	0	0	0	7
								Asm	5	12	5	0	0	0	0	22
								Misc	127	108	54	18	9	8	6	330
1	14	21	21	26.4	85	17	30.0	Sal	112	8	22	42	56	8	28	276
								Pistol	7	2	1	0	0	0	0	10
								Asm	14	8	2	1	0	0	0	25
								Misc	117	108	70	20	8	8	12	343
1	14	21	21	13.6	85	17	12.4	Sal	109	10	8	34	44	17	32	254
								Pistol	3	6	1	0	0	0	0	10
								Asm	18	12	10	5	0	0	0	45
								Misc	123	112	66	18	9	6	8	336
1	14	21	21	5.6	85	17	22.7	Sal	108	28	6	34	26	8	30	240
								Pistol	0	0	0	0	0	0	0	0
								Asm	9	10	8	3	0	0	0	30
								Misc	133	116	57	78	20	18	12	434
1	14	21	21	12.0	85	17	36.9	Sal	160	8	22	32	56	8	34	320
								Pistol	3	2	0	0	0	0	0	5
								Asm	8	10	8	6	0	0	0	32
								Misc	79	88	78	32	18	10	10	315
1	14	21	21	24.8	85	17	47.2	Sal	115	52	32	22	60	10	36	327
								Pistol	3	3	2	0	0	0	0	8
								Asm	5	10	12	21	0	0	0	48
								Misc	127	98	82	23	28	12	6	376
1	14	21	21	8.8	85	17	54.0	Sal	112	10	34	28	44	28	40	296
								Pistol	7	3	4	1	0	0	0	15
								Asm	14	8	7	9	0	0	0	38
								Misc	117	87	85	32	24	16	10	371
1	14	21	21	16.8	85	18	11.2	Sal	109	6	38	37	54	24	32	300
								Pistol	0	0	0	0	0	0	0	0
								Asm	18	10	6	0	0	0	0	34
								Misc	123	97	102	28	22	10	8	390

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1	14	21	21	0.8	85	18	7.8	Sal	108	4	40	48	60	38	22	326
								Phool	0	0	0	0	0	0	0	0
								Anaj	9	8	12	2	0	0	0	31
								Misc	133	60	50	30	26	14	12	325
1	15	21	19	39.6	85	17	40.3	Sal	160	18	24	50	72	12	42	378
								Phool	3	2	1	0	0	0	0	6
								Anaj	8	12	8	3	0	0	0	31
								Misc	79	38	28	24	12	8	4	193
1	15	21	19	47.6	85	17	53.8	Sal	112	2	1	20	30	60	28	253
								Phool	0	0	0	0	0	0	0	0
								Anaj	7	10	4	2	0	0	0	23
								Misc	131	12	16	28	10	13	8	218
1	15	21	20	0.0	85	18	9.5	Sal	117	10	20	40	55	8	39	289
								Phool	2	2	3	0	0	0	0	7
								Anaj	8	10	8	0	0	0	0	26
								Misc	124	22	28	28	0	12	4	216
1	15	21	20	12.8	85	18	1.9	Sal	114	2	7	18	48	37	30	256
								Phool	5	3	1	0	0	0	0	9
								Anaj	15	20	8	6	0	0	0	49
								Misc	116	18	32	37	20	8	6	237
1	16	21	20	4.8	85	17	30.0	Sal	115	4	40	48	66	38	42	353
								Phool	3	2	0	0	0	0	0	5
								Anaj	5	8	12	6	0	0	0	31
								Misc	127	60	50	32	26	14	12	321
1	16	21	19	42.8	85	17	17.6	Sal	112	6	38	37	54	24	32	303
								Phool	3	3	1	0	0	0	0	7
								Anaj	14	10	6	4	0	0	0	34
								Misc	117	97	102	28	22	10	10	386
1	16	21	19	50.8	85	17	5.5	Sal	109	12	32	42	60	8	34	297
								Phool	2	1	2	0	0	0	0	5
								Anaj	18	10	2	6	2	0	0	38
								Misc	123	103	70	20	18	8	14	356
1	16	21	19	28.4	85	17	2.1	Sal	108	10	8	34	44	17	32	253
								Phool	1	1	0	0	0	0	0	2
								Anaj	9	12	8	6	0	0	0	35
								Misc	133	78	87	32	18	5	9	362
1	23	21	19	41.2	85	16	55.2	Sal	112	4	38	46	64	37	30	331
								Phool	0	0	0	0	0	0	0	0
								Anaj	7	12	8	2	0	0	0	29
								Misc	131	60	59	32	28	14	10	325
1	23	21	19	30.0	85	16	41.8	Sal	117	6	38	36	55	25	32	309
								Phool	0	0	0	0	0	0	0	0
								Anaj	8	10	6	2	0	0	0	26
								Misc	124	96	100	28	22	10	8	388
1	23	21	19	18.8	85	16	46.6	Sal	114	10	33	29	45	27	42	300
								Phool	5	3	1	0	0	0	0	9
								Anaj	15	4	3	2	0	0	0	24
								Misc	116	87	86	32	24	16	10	371
1	17	21	19	28.4	85	16	22.5	Sal	115	12	32	22	60	10	36	287
								Phool	3	2	1	0	0	0	0	6
								Anaj	5	10	12	2	0	0	0	29
								Misc	127	98	82	23	28	12	6	376
1	17	21	19	17.2	85	16	27.2	Sal	112	16	22	30	70	10	42	322
								Phool	7	2	1	0	0	0	0	10
								Anaj	14	8	9	4	0	0	0	35
								Misc	117	30	20	23	14	4	8	216
1	16	21	10	12.4	85	17	3.8	Sal	109	42	12	20	30	60	28	301
								Phool	0	0	0	0	0	0	0	0
								Anaj	18	10	4	2	0	0	0	34
								Misc	123	12	26	28	10	13	8	220
1	16	21	20	4.8	85	17	7.2	Sal	108	10	18	40	68	12	37	293
								Phool	0	0	0	0	0	0	0	0

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										Asm	9	10	6	4	0	0	0	29
										Misc	133	108	54	18	9	6	8	336
		1	15	21	19	54.0	85	17	51.8	Sal	112	2	8	18	48	37	30	255
										Pissd	5	2	1	0	0	0	0	8
										Asm	28	20	10	8	0	0	0	66
										Misc	106	28	32	27	24	9	8	234
Pableiura	Saida RF	1	1	21	28	56.5	85	17	1.6	Sal	95	40	57	117	37	9	23	378
										Pissd	0	0	0	0	0	0	0	0
										Asm	16	12	7	1	0	0	0	36
										Misc	66	89	30	3	0	0	0	188
		1	1	21	28	12.8	85	16	58.4	Sal	110	10	8	51	58	29	30	287
										Pissd	0	0	0	0	0	0	0	0
										Asm	12	8	12	7	0	0	0	39
										Misc	53	40	22	13	0	1	0	129
		1	1	21	28	50.0	85	16	50.9	Sal	109	30	12	108	41	18	28	346
										Pissd	0	0	0	0	0	0	0	0
										Asm	14	14	5	3	0	0	0	36
										Misc	52	35	48	7	4	0	0	146
		1	1	21	28	21.2	85	16	46.6	Sal	123	8	12	48	62	25	32	310
										Pissd	0	0	0	0	0	0	0	0
										Asm	17	14	2	3	0	0	0	36
										Misc	47	37	20	31	0	5	0	140
		1	1	21	28	51.6	85	16	44.9	Sal	117	34	55	99	39	12	25	381
										Pissd	0	0	0	0	0	0	0	0
										Asm	19	5	8	0	2	0	0	34
										Misc	53	93	27	5	8	0	4	200
		0.1	1	21	28	43.3	85	16	39.3	Sal	8	9	2	5	1	5	1	31
										Pissd	1	0	0	0	0	0	0	1
										Asm	6	0	0	0	0	0	0	6
										Misc	11	8	4	2	0	0	0	25
		0.1	1	21	27	34.4	85	16	55	Sal	7	0	0	5	4	2	4	22
										Pissd	0	0	0	0	0	0	0	0
										Asm	4	0	0	0	0	0	0	4
										Misc	14	1	1	1	0	0	0	17
		0.1	1	21	29	34.1	85	17	29	Sal	8	3	7	10	1	2	0	31
										Pissd	0	0	0	0	0	0	0	0
										Asm	4	0	0	0	0	0	0	4
										Misc	13	11	4	0	0	0	0	28
		0.1	1	21	29	20.4	85	17	5.2	Sal	9	0	0	2	1	2	1	15
										Pissd	0	0	0	0	0	0	0	0
										Asm	3	0	0	0	0	0	0	3
										Misc	12	1	2	1	2	1	2	21
Deogarh	Singlidihi PRF	4.5	1	21	42	49.2	84	39	23.5	Sal	234	156	178	127	96	41	22	854
										Pissd	6	4	2	0	0	0	0	12
										Asm	79	35	30	6	2	0	0	152
										Misc	482	341	398	303	231	98	55	1908
		0.1	1	21	42	40.8	84	39	20.2	Sal	10	5	3	4	2	2	1	27
										Pissd	0	0	0	0	0	0	0	0
										Asm	1	3	1	0	0	0	0	5
										Misc	7	20	10	10	4	3	1	55
		0.1	1	21	42	53.3	84	39	25.6	Sal	8	6	4	3	3	2	1	27
										Pissd	0	0	0	0	0	0	0	0
										Asm	1	2	1	0	0	0	0	4
										Misc	9	18	4	4	3	2	1	41
Rengali	Naktal PRF	30	1	21	18	38.0	84	55	58.5	Sal	646	430	388	468	194	102	17	2245
				21	18	58.1	84	56	5.4	Pissd	44	35	8	0	0	0	0	87
				21	19	12.0	84	55	48.2	Asm	82	67	61	28	5	0	0	243
				21	19	8.8	84	55	37.8	Misc	5318	3519	3203	3915	1631	858	163	18607
		30	1	21	18	5.2	84	56	43.2	Sal	576	785	348	496	124	97	17	2443
				21	18	10.5	84	56	50.0	Pissd	54	36	7	0	0	0	0	97
				21	18	29.9	84	56	20.8	Asm	97	58	63	21	3	0	0	242
				21	18	23.4	84	56	17.4	Misc	5428	3569	3278	3948	1625	758	141	18747

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		21	18	46.1	84	56	27.7	Sel	700	486	421	507	210	110	19	2433
		21	18	42.9	84	56	31.1	Pasal	48	38	8	0	0	0	0	94
32.5	1	21	19	0.7	84	56	53.2	Asm	89	73	66	30	5	0	0	263
		21	19	3.9	84	56	48.3	Misc	5761	3812	3470	4241	1767	930	136	20157
0.1	1	21	18	15.1	84	55	36.7	Sel	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Misc	9	29	18	8	5	2	2	73
0.1	1	21	18	20	84	55	39.3	Sel	7	0	0	0	0	0	0	7
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Misc	10	43	20	23	12	4	0	112
0.1	1	21	18	37	84	55	58.3	Sel	9	0	0	0	0	0	0	9
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	8	32	24	13	9	6	4	96
0.1	1	21	18	34.9	84	55	34.6	Sel	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	2	3	1	0	0	0	9
								Misc	9	23	18	15	8	4	3	80
0.1	1	21	18	43.6	84	55	48.4	Sel	7	0	0	0	0	0	0	7
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	3	2	4	1	0	0	13
								Misc	10	28	29	13	12	3	1	96
0.1	1	21	18	33.5	84	55	45.9	Sel	9	0	0	0	0	0	0	9
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	9	14	17	13	8	3	2	66
0.1	1	21	18	21.6	84	55	41	Sel	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Misc	9	15	10	12	4	1	1	52
0.1	1	21	18	35.7	84	56	3.7	Sel	7	7	3	0	0	0	0	17
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	2	4	2	1	0	0	12
								Misc	9	23	17	15	6	3	2	75
0.1	1	21	18	36.8	84	56	9	Sel	8	5	0	0	0	0	0	13
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	6	5	1	0	0	0	15
								Misc	9	29	19	11	2	0	0	70
0.1	1	21	18	37.2	84	56	11.9	Sel	7	22	12	4	0	0	0	45
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	6	2	0	0	0	0	11
								Misc	10	22	12	8	4	2	0	58
0.1	1	21	18	36.4	84	56	17.5	Sel	9	19	12	11	5	0	0	56
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	9	4	2	0	0	0	17
								Misc	8	14	8	9	8	2	0	49
0.1	1	21	18	31.8	84	56	23.2	Sel	8	6	3	0	0	0	0	17
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	4	3	0	0	0	0	10
								Misc	9	18	12	8	4	1	0	52
0.1	1	21	18	29.2	84	56	25.2	Sel	7	0	0	0	0	0	0	7
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	5	3	0	0	0	0	11
								Misc	10	17	12	4	3	2	5	53
0.1	1	21	18	22	84	56	26.8	Sel	9	7	3	0	0	0	0	19
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	5	4	3	2	2	0	18
								Misc	9	29	14	12	6	2	0	72
0.1	1	21	18	15.6	84	56	26.6	Sel	8	14	10	7	4	2	0	45
								Pasal	0	0	0	0	0	0	0	0

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										Anne	3	12	10	4	3	0	0	32
										Misc	9	23	13	13	3	2	3	66
		0.1	1	21	18	2.2	84	57	21.6	Sal	7	0	0	0	0	0	0	7
										Pissd	0	0	0	0	0	0	0	0
										Anne	3	0	0	0	0	0	0	3
										Misc	9	18	14	10	7	4	1	63
		0.1	1	21	17	59.6	84	57	25.1	Sal	7	0	0	0	0	0	0	7
										Pissd	0	0	0	0	0	0	0	0
										Anne	3	0	0	0	0	0	0	3
										Misc	10	30	13	8	5	2	2	70
		0.1	1	21	17	56	84	57	39	Sal	9	12	8	3	0	0	0	32
										Pissd	0	3	1	0	0	0	0	4
										Anne	2	13	9	4	3	3	0	34
										Misc	8	20	22	17	8	3	0	78
		0.1	1	21	17	53.6	84	57	31.2	Sal	8	0	0	0	0	0	0	8
										Pissd	0	0	0	0	0	0	0	0
										Anne	3	7	4	0	0	0	0	14
										Misc	9	28	17	14	5	4	3	80
		0.1	1	21	17	51.1	84	57	34.8	Sal	7	0	0	0	0	0	0	7
										Pissd	0	2	2	0	0	0	0	4
										Anne	3	0	0	0	0	0	0	3
										Misc	10	36	19	16	8	4	2	95
		0.1	1	21	17	48.3	84	57	36.7	Sal	9	0	0	0	0	0	0	9
										Pissd	0	0	0	0	0	0	0	0
										Anne	2	0	0	0	0	0	0	2
										Misc	0	29	13	8	9	3	2	73
				21	13	8.4	84	49	40.7	Sal	7542	7017	7755	4212	3858	3006	537	33927
				21	13	6.3	84	49	56.2	Pissd	112	206	117	25	0	0	0	460
		120	1	21	13	53.2	84	50	32.7	Anne	2231	2063	2550	893	467	150	0	8154
				21	14	20.4	84	50	20.6	Misc	12424	11352	13280	7635	7366	4360	775	57192
		0.1	1	21	13	47.4	84	51	49.3	Sal	8	11	6	3	4	2	0	34
										Pissd	0	0	0	0	0	0	0	0
										Anne	2	6	4	3	2	2	0	19
										Misc	12	21	7	4	3	2	1	50
		0.1	1	21	13	53.3	84	51	32.4	Sal	10	12	7	4	3	2	1	39
										Pissd	0	0	0	0	0	0	0	0
										Anne	2	11	3	4	2	1	0	23
										Misc	10	17	7	6	4	3	2	49
		0.1	1	21	14	22.4	84	51	19	Sal	7	10	4	3	2	0	0	26
										Pissd	0	0	0	0	0	0	0	0
										Anne	4	3	3	22	22	1	0	55
										Misc	9	11	4	4	3	1	0	32
		0.1	1	21	14	6.5	84	51	4.8	Sal	8	7	0	0	0	0	0	15
										Pissd	0	2	0	0	0	0	0	2
										Anne	2	3	3	4	1	0	0	13
										Misc	12	12	6	4	51	0	0	85
		0.1	1	21	14	7.6	84	50	55.7	Sal	10	7	4	3	2	1	0	27
										Pissd	0	2	1	0	1	0	0	4
										Anne	2	8	4	2	1	0	0	17
										Misc	10	12	6	4	3	1	1	37
		0.1	1	21	14	8	84	50	50	Sal	7	7	4	3	3	1	0	25
										Pissd	0	2	1	3	1	0	0	7
										Anne	4	3	3	3	2	1	0	16
										Misc	9	11	7	4	3	2	0	36
		0.1	1	21	14	10.5	84	50	35.7	Sal	8	7	4	3	3	1	0	26
										Pissd	0	0	0	0	0	0	0	0
										Anne	2	12	3	2	1	0	0	20
										Misc	12	13	4	3	1	1	0	34
		0.1	1	21	14	18.8	84	50	28.2	Sal	10	8	4	3	2	1	0	28
										Pissd	0	0	1	0	0	0	0	1
										Anne	2	4	3	2	1	1	0	13

Rasmi

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								Min	10	13	9	4	3	1	0	40
0.1	1	21	14	29.3	84	50	1.2	Sal	7	9	4	3	2	1	0	26
								Pisal	0	0	0	0	0	0	0	0
								Asas	4	4	2	2	1	1	0	14
								Min	9	15	6	3	2	2	0	37
0.1	1	21	14	27.8	84	49	50.6	Sal	8	8	5	2	2	1	0	26
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	3	2	2	1	0	0	10
								Min	12	12	7	5	3	2	0	45
0.1	1	21	15	50.2	84	45	41	Sal	10	7	8	4	8	2	0	41
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	5	3	4	6	3	0	23
								Min	10	18	7	5	3	2	2	47
0.1	1	21	15	27.2	84	46	51.3	Sal	7	6	5	6	2	2	2	30
								Pisal	0	0	0	0	0	0	0	0
								Asas	4	2	3	3	1	0	0	17
								Min	9	6	4	2	2	1	0	24
0.1	1	21	15	20.9	84	46	50.5	Sal	8	6	5	3	2	1	0	25
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	5	3	4	0	0	0	14
								Min	12	9	6	4	1	0	0	32
0.1	1	21	15	15	84	47	22.3	Sal	10	4	6	2	0	0	0	22
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	4	3	0	0	0	0	9
								Min	10	14	8	5	3	0	0	40
0.1	1	21	15	11.9	84	47	34.6	Sal	7	6	6	7	3	2	0	31
								Pisal	0	0	0	0	0	0	0	0
								Asas	4	2	1	1	0	0	0	8
								Min	9	10	8	3	2	0	0	32
0.1	1	21	15	9.4	84	47	33.5	Sal	8	7	4	7	3	2	2	33
		1						Pisal	0	0	0	0	0	0	0	0
								Asas	2	4	4	3	0	0	0	13
								Min	12	10	8	3	2	0	0	35
0.1	1	21	14	34.2	84	47	59.5	Sal	10	12	12	7	3	1	1	46
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	6	4	3	2	3	0	20
								Min	10	18	13	7	4	2	2	56
0.1	1	21	14	54.9	84	48	31.6	Sal	7	34	17	17	4	3	2	84
								Pisal	0	0	0	0	0	0	0	0
								Asas	4	15	4	0	0	0	0	23
								Min	9	10	5	8	0	0	0	32
0.1	1	21	14	49.9	84	48	47.9	Sal	8	29	19	7	5	3	4	75
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	9	7	3	0	0	0	21
								Min	12	12	8	3	1	2	1	39
0.1	1	21	14	47	84	49	2.8	Sal	10	24	4	7	4	3	3	55
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	14	4	3	4	4	3	34
								Min	10	8	7	4	3	4	2	38
0.1	1	21	14	24.1	84	49	39.4	Sal	7	13	7	4	2	7	3	43
								Pisal	0	0	0	0	0	0	0	0
								Asas	4	8	3	4	4	3	0	26
								Min	9	16	7	4	4	2	4	46
0.1	1	21	12	58.9	84	52	35.2	Sal	8	4	3	2	0	0	0	17
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	4	4	0	0	0	0	10
								Min	12	4	4	3	2	3	1	29
0.1	1	21	12	27.8	84	52	33.2	Sal	10	7	2	0	0	0	0	19
								Pisal	0	0	0	0	0	0	0	0
								Asas	2	3	0	3	0	0	0	8
								Min	10	19	14	8	3	0	0	54
0.1	1	21	13	44.4	84	51	59.3	Sal	7	8	5	3	2	1	0	26

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										Pistil	0	0	0	0	0	0	0	0
										Anth	4	3	2	3	1	0	0	13
										Misc	9	13	8	5	7	2	0	44
		0.1	1	21	13	43.2	84	52	13.9	Sal	8	8	6	4	2	2	1	31
										Pistil	0	0	0	0	0	0	0	0
										Anth	2	3	3	2	2	0	0	12
										Misc	12	15	9	9	9	3	2	59
		0.1	1	21	13	39.7	84	52	33.6	Sal	10	11	8	8	2	1	0	40
										Pistil	0	0	0	0	0	0	0	0
										Anth	2	5	4	3	2	0	0	16
										Misc	10	14	9	4	3	2	1	43
		0.1	1	21	13	30.2	84	53	5.2	Sal	7	8	4	4	3	2	1	29
										Pistil	0	0	0	0	0	0	0	0
										Anth	4	7	4	3	2	0	0	20
										Misc	9	18	12	11	5	4	2	61
		0.1	1	21	13	26.1	84	53	22.7	Sal	8	13	4	3	2	2	0	32
										Pistil	0	0	0	0	0	0	0	0
										Anth	2	3	3	2	1	0	0	11
										Misc	12	13	8	4	3	2	2	44
		0.1	1	21	13	10	84	53	32.6	Sal	10	15	4	3	2	2	0	34
										Pistil	0	0	0	0	0	0	0	0
										Anth	2	6	4	2	1	0	0	15
										Misc	10	18	13	7	0	0	1	49
		0.1	1	21	12	26.7	84	53	1.7	Sal	7	14	13	4	2	1	0	41
										Pistil	0	0	0	0	0	0	0	0
										Anth	4	10	6	2	1	0	0	23
										Misc	9	18	8	6	4	2	0	47
		0.1	1	21	12	50.9	84	50	269	Sal	8	7	4	3	2	1	0	25
										Pistil	0	0	0	0	0	0	0	0
										Anth	2	4	3	2	3	1	0	15
										Misc	12	12	7	8	4	2	1	46
		0.1	1	21	13	20.4	84	49	18.9	Sal	10	7	4	3	2	1	0	27
										Pistil	0	0	0	0	0	0	0	0
										Anth	2	4	3	3	2	1	0	15
										Misc	10	16	7	8	4	1	2	48
		0.1	1	21	13	24.1	84	49	1.3	Sal	7	4	4	3	2	1	0	21
										Pistil	0	0	0	0	0	0	0	0
										Anth	4	4	3	2	2	1	0	16
										Misc	9	16	10	7	4	1	1	48
		0.1	1	21	13	33.4	84	48	36.9	Sal	8	7	3	4	2	1	0	25
										Pistil	0	0	0	0	0	0	0	0
										Anth	2	6	4	3	3	2	0	20
										Misc	12	16	9	6	4	3	2	52
		0.1	1	21	14	16.2	84	47	26.4	Sal	10	7	9	8	4	2	0	40
										Pistil	0	0	0	0	0	0	0	0
										Anth	2	4	3	6	2	0	0	17
										Misc	10	10	8	4	3	2	0	37
Rennul	Kankarkhol PHF	100	1	21	19	46.0	84	40	34.4	Sal	7280	7740	8498	3399	1768	680	559	29824
				21	19	49.2	84	41	5.4	Pistil	217	234	128	51	26	0	0	656
				21	20	25.6	84	40	55.1	Anth	2611	2814	3605	1442	780	136	13	11401
				21	20	19.2	84	40	27.5	Misc	11752	12669	13522	5408	2626	884	728	47589
		122	1	21	21	29.2	84	44	13.2	Sal	8760	9440	10346	4146	2220	850	729	36491
				21	21	29.6	84	44	45.9	Pistil	265	286	156	62	31	0	0	809
				21	20	44.8	84	44	47.6	Anth	3185	3433	4380	1759	1015	104	5	13881
				21	20	59.2	84	44	9.8	Misc	14337	15450	16463	6599	3078	1120	852	57899
		0.1	1	21	16	18.9	84	46	8.1	Sal	10	11	6	3	3	1	0	34
										Pistil	0	0	0	0	0	0	0	0
										Anth	3	4	3	3	2	0	0	15
										Misc	9	17	11	6	4	2	1	50
		0.1	1	21	16	26	84	46	4.2	Sal	8	8	5	4	3	3	1	32

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0.1	1	21	16	52.4	84	45	34.5	Pinus	0	0	0	0	0	0	0	0	0
								Asm	2	10	3	2	2	1	0	20
								Misc	12	15	10	10	6	3	2	58
								Sal	8	6	4	3	2	1	0	24
0.1	1	21	16	56.5	84	45	21.6	Pinus	0	0	0	0	0	0	0	0	0
								Asm	3	3	2	3	1	1	0	12
								Misc	12	15	10	8	7	4	2	58
								Sal	9	0	0	0	0	0	0	9
0.1	1	21	17	11.6	84	45	219	Pinus	0	0	0	0	0	0	0	0	0
								Asm	3	4	3	2	2	1	1	15
								Misc	10	15	11	11	11	3	2	63
								Sal	8	2	2	1	0	0	0	13
0.1	1	21	17	21.1	84	44	49	Pinus	0	0	0	0	0	0	0	0	0
								Asm	3	3	2	3	3	1	0	15
								Misc	9	15	12	5	0	0	0	41
								Sal	7	9	5	3	3	2	0	29
0.1	1	21	17	46.5	84	44	40.6	Pinus	0	0	0	0	0	0	0	0	0
								Asm	3	4	3	2	3	1	0	16
								Misc	12	16	8	6	4	3	1	50
								Sal	10	13	7	5	4	2	0	41
0.1	1	21	19	16.8	84	41	45.5	Pinus	0	1	0	0	0	0	0	1	0
								Asm	3	4	3	2	1	1	0	14
								Misc	9	15	12	4	3	0	0	43
								Sal	8	0	0	0	0	0	0	8
0.1	1	21	19	22.2	84	41	54.3	Pinus	0	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2	0
								Misc	12	5	3	2	3	2	0	27
								Sal	8	5	2	0	0	0	0	15
0.1	1	21	19	9.8	84	42	8.6	Pinus	0	0	0	0	0	0	0	0	0
								Asm	2	1	0	0	0	0	0	3	0
								Misc	12	13	4	1	2	0	0	32
								Sal	9	0	0	0	0	0	0	9
0.1	1	21	18	53.7	84	42	47.6	Pinus	0	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2	0
								Misc	10	18	10	3	2	0	0	43
								Sal	8	1	1	0	0	0	0	10
0.1	1	21	18	50.3	84	42	55.8	Pinus	0	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3	0
								Misc	9	13	12	2	2	1	0	39
								Sal	7	0	0	0	0	0	0	7
0.1	1	21	18	45.2	84	43	8.6	Pinus	0	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3	0
								Misc	12	15	10	6	3	2	0	48
								Sal	10	0	0	0	0	0	0	10
0.1	1	21	18	27.3	84	43	33.3	Pinus	0	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3	0
								Misc	9	17	13	13	3	2	0	57
								Sal	8	0	0	0	0	0	0	8
0.1	1	21	19	10	84	41	7.9	Pinus	0	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2	0
								Misc	12	18	13	6	4	2	0	55
								Sal	8	0	0	0	0	0	0	8
0.1	1	21	19	6.9	84	40	58.7	Pinus	0	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2	0
								Misc	12	12	13	8	2	2	0	49
								Sal	9	0	0	0	0	0	0	9
0.1	1	21	19	4.1	84	40	58.1	Pinus	0	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2	0
								Misc	10	19	14	4	2	0	0	49
								Sal	8	0	0	0	0	0	0	8
								Pinus	0	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3	0

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									Mac	9	13	7	3	1	0	0	33
0.1	1	21	19	3.7	84	40	40.5	Sal	7	0	0	0	0	0	0	7
								Pinal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Mac	12	20	14	4	0	0	0	50
0.1	1	21	18	58.3	84	40	21.8	Sal	10	0	0	0	0	0	0	10
								Pinal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Mac	9	14	8	9	0	0	0	40
0.1	1	21	18	49.8	84	39	39.9	Sal	8	0	0	0	0	0	0	8
								Pinal	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Mac	12	13	8	4	2	3	0	42
0.1	1	21	18	46.7	84	39	37.7	Sal	8	0	0	0	0	0	0	8
								Pinal	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Mac	12	13	4	2	0	0	0	31
0.1	1	21	19	39.9	84	40	2.5	Sal	9	14	8	4	2	0	0	37
								Pinal	0	0	0	0	0	0	0	0
								Asm	2	8	6	2	0	0	0	18
								Mac	10	16	13	4	0	0	0	43
0.1	1	21	19	18.6	84	39	38.4	Sal	8	7	3	3	1	0	0	22
								Pinal	0	0	0	0	0	0	0	0
								Asm	3	8	5	3	1	0	0	20
								Mac	9	18	8	3	2	0	0	40
0.1	1	21	19	9.1	84	39	16.2	Sal	7	18	7	2	1	0	0	35
								Pinal	0	0	0	0	0	0	0	0
								Asm	3	8	4	3	0	0	0	18
								Mac	12	18	5	4	2	0	0	41
0.1	1	21	18	55.5	84	39	43.4	Sal	10	22	4	0	0	0	0	36
								Pinal	0	0	0	0	0	0	0	0
								Asm	3	2	1	0	0	0	0	6
								Mac	9	4	2	0	0	0	0	15
0.1	1	21	18	48.7	84	39	20.8	Sal	8	24	7	1	0	0	0	40
								Pinal	0	0	0	0	0	0	0	0
								Asm	2	4	3	0	0	0	0	9
								Mac	12	7	3	1	0	0	0	23
0.1	1	21	20	14.2	84	40	44.9	Sal	8	43	0	0	0	0	0	51
								Pinal	0	0	0	0	0	0	0	0
								Asm	2	4	0	0	0	0	0	6
								Mac	12	13	0	0	0	0	0	25
0.1	1	21	20	40.4	84	41	49.3	Sal	9	33	9	0	0	0	0	51
								Pinal	0	0	0	0	0	0	0	0
								Asm	2	2	0	0	0	0	0	4
								Mac	10	9	3	0	0	0	0	22
0.1	1	21	20	49.6	84	41	56.4	Sal	8	34	8	0	0	0	0	50
								Pinal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Mac	9	12	6	0	0	0	0	27
0.1	1	21	20	44.8	84	42	53.8	Sal	7	24	4	0	0	0	0	35
								Pinal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Mac	12	9	3	0	0	0	0	24
0.1	1	21	20	57	84	42	3.9	Sal	10	22	13	0	0	0	0	45
								Pinal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Mac	9	4	3	0	0	0	0	16
0.1	1	21	20	54.4	84	42	22	Sal	8	13	3	0	0	0	0	24
								Pinal	0	0	0	0	0	0	0	0
								Asm	2	2	0	0	0	0	0	4
								Mac	12	8	1	0	0	0	0	21
0.1	1	21	20	36.4	84	42	50	Sal	8	35	11	0	0	0	0	54

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								Pissi	0	0	0	0	0	0	0	0
								Asm	2	13	5	0	0	0	0	23
0.1	1	21	19	25.6	84	40	19.9	Misc	12	9	0	0	0	0	0	21
								Sal	9	7	4	3	3	1	0	27
								Pissi	0	0	0	0	0	0	0	0
								Asm	2	4	3	3	1	0	0	13
0.1	1	21	19	40.8	84	41	6	Misc	10	12	5	4	3	0	0	34
								Sal	8	8	4	2	3	1	0	26
								Pissi	0	0	0	0	0	0	0	0
								Asm	3	4	3	2	2	1	0	15
0.1	1	21	20	16.2	84	41	46.2	Misc	9	0	0	0	0	0	0	9
								Sal	7	8	3	4	0	0	0	22
								Pissi	0	0	0	0	0	0	0	0
								Asm	3	4	3	2	0	0	0	12
0.1	1	21	20	14	84	42	12.8	Misc	12	11	5	4	1	0	0	33
								Sal	10	12	7	4	1	0	0	34
								Pissi	0	0	0	0	0	0	0	0
								Asm	3	6	7	3	1	0	0	20
0.1	1	21	20	18.7	84	42	53.1	Misc	9	11	6	3	1	1	0	31
								Sal	8	8	3	3	2	1	0	25
								Pissi	0	0	0	0	0	0	0	0
								Asm	2	3	4	3	1	0	0	13
0.1	1	21	20	19	84	42	58.7	Misc	12	12	6	5	4	1	0	40
								Sal	8	9	6	4	2	0	0	29
								Pissi	0	0	0	0	0	0	0	0
								Asm	2	6	3	2	1	0	0	14
0.1	1	21	20	22.3	84	43	0.8	Misc	12	13	6	4	1	1	0	37
								Sal	9	6	4	2	1	0	0	22
								Pissi	0	0	0	0	0	0	0	0
								Asm	2	4	2	1	1	0	0	10
0.1	1	21	18	55.2	84	44	9.5	Misc	10	36	4	4	1	0	0	75
								Sal	8	11	7	6	4	2	1	39
								Pissi	0	1	0	1	0	0	0	2
								Asm	3	4	3	2	2	1	0	15
								Misc	9	18	10	6	8	3	2	56
0.1	1	21	18	54.5	84	43	59.2	Sal	7	12	7	6	5	3	0	40
								Pissi	0	0	0	0	0	0	0	0
								Asm	3	4	3	5	1	1	0	17
								Misc	12	17	11	6	4	2	1	53
0.1	1	21	19	8.1	84	43	27.8	Sal	10	8	5	3	2	1	0	29
								Pissi	0	0	0	0	0	0	0	0
								Asm	3	4	7	2	2	1	0	15
								Misc	9	16	11	6	4	2	1	49
0.1	1	21	19	6.5	84	43	34.9	Sal	8	7	4	3	2	1	0	25
								Pissi	0	0	0	0	0	0	0	0
								Asm	2	6	4	3	1	1	0	17
								Misc	12	16	7	7	6	2	2	52
0.1	1	21	19	13.9	84	43	32.5	Sal	8	7	4	3	2	1	1	26
								Pissi	0	0	0	0	0	0	0	0
								Asm	2	7	3	3	2	1	1	19
								Misc	12	16	8	3	3	1	1	44
0.1	1	21	19	31.4	84	43	47	Sal	9	8	5	3	2	1	1	29
								Pissi	0	0	0	0	0	0	0	0
								Asm	2	3	2	2	1	1	0	11
								Misc	10	16	11	6	3	2	1	49
0.1	1	21	19	36.2	84	43	50.9	Sal	8	3	2	3	2	1	2	21
								Pissi	0	1	1	0	0	0	0	2
								Asm	3	3	2	3	2	2	1	16
								Misc	9	13	7	3	2	1	1	36
0.1	1	21	19	27.7	84	40	37.9	Sal	7	24	3	0	0	0	0	34
								Pissi	0	0	0	0	0	0	0	0
								Asm	3	4	3	0	0	0	0	10

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		0.1	1	21	19	27.9	84	40	58.7	Mite	12	6	4	4	3	0	0	29
										Sal	10	12	9	6	2	1	0	40
										Pissul	0	0	0	0	0	0	0	0
										Asan	3	7	6	0	0	0	0	16
										Misc	9	8	5	4	3	0	0	29
		0.1	1	21	19	24.8	84	41	63	Sal	8	10	13	8	0	0	0	39
										Pissul	0	0	0	0	0	0	0	0
										Asan	2	8	5	0	0	0	0	15
										Misc	12	5	4	4	3	2	0	30
		0.1	1	21	19	26	84	41	58.3	Sal	8	13	8	3	0	0	0	32
										Pissul	0	0	0	0	0	0	0	0
										Asan	2	8	4	0	0	0	0	14
										Misc	12	8	4	0	0	0	0	24
		0.1	1	21	19	19.4	84	42	19.9	Sal	9	15	9	0	0	0	0	33
										Pissul	0	0	0	0	0	0	0	0
										Asan	2	8	4	0	0	0	0	14
										Misc	10	13	8	0	0	0	0	31
		0.1	1	21	19	23.1	84	42	34.7	Sal	8	10	5	0	0	0	0	23
										Pissul	0	0	0	0	0	0	0	0
										Asan	3	8	8	0	0	0	0	19
										Misc	9	18	2	3	3	1	0	36
		0.1	1	21	19	14	84	43	0.4	Sal	7	15	8	5	0	0	0	35
										Pissul	0	0	0	0	0	0	0	0
										Asan	3	9	8	0	0	0	0	20
										Misc	12	13	8	7	4	2	0	46
Deegath & Hemmal	Hadamunda PRF			21	29	9.2	84	39	39.0	Sal	1053	384	568	635	334	139	87	3300
		11.6	1	21	29	25.2	84	39	40.7	Pissul	26	18	12	9	4	0	0	69
				21	29	28.4	84	39	30.4	Asan	315	119	202	190	93	15	0	934
				21	29	12.4	84	39	28.7	Misc	1239	395	482	755	346	148	122	3487
		0.1	1	21	29	13.9	84	39	16.1	Sal	8	13	8	3	2	0	0	34
										Pissul	0	0	0	0	0	0	0	0
										Asan	4	8	0	0	0	0	0	12
										Misc	10	19	3	4	3	2	0	41
		0.1	1	21	29	11.6	84	39	34.6	Sal	9	12	7	3	0	0	0	31
										Pissul	0	0	0	0	0	0	0	0
										Asan	3	3	4	0	0	0	0	10
										Misc	11	14	18	2	0	0	0	45
		0.1	1	21	29	0.9	84	40	19.7	Sal	8	12	8	3	1	0	2	34
										Pissul	1	1	0	0	0	0	0	2
										Asan	4	2	1	0	0	0	0	7
										Misc	10	9	4	5	4	2	1	35
		0.1	1	21	28	52.2	84	40	51.3	Sal	10	2	4	1	0	0	0	17
										Pissul	0	0	0	0	0	0	0	0
										Asan	1	2	0	0	0	0	0	3
										Misc	12	17	9	4	3	0	0	45
		0.1	1	21	28	43.1	84	41	25.3	Sal	12	12	9	2	0	0	0	35
										Pissul	0	0	0	0	0	0	0	0
										Asan	3	3	4	0	0	0	0	10
										Misc	9	13	9	17	7	3	0	58
		0.1	1	21	28	41.9	84	41	38.5	Sal	8	4	3	4	0	2	3	24
										Pissul	0	0	0	0	0	0	0	0
										Asan	4	7	4	3	0	0	0	18
										Misc	10	23	14	9	3	4	2	65
		0.1	1	21	28	59.7	84	42	24	Sal	9	13	4	1	1	1	0	29
										Pissul	0	0	0	0	0	0	0	0
										Asan	3	1	2	0	0	0	0	6
										Misc	11	10	4	1	0	0	0	26
		0.1	1	21	29	6.6	84	41	50.1	Sal	8	8	8	4	1	0	0	29
										Pissul	1	0	0	0	0	0	0	1
										Asan	4	2	1	0	0	0	0	7
										Misc	10	12	4	1	2	1	0	30
		0.1	1	21	29	32.5	84	40	4.8	Sal	10	9	5	2	3	1	0	30

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									Pinsal	0	0	0	0	0	0	0	0
									Asan	1	2	1	0	0	0	0	4
	0.1	1	21	29	25.4	84	39	5.2	Misc	12	15	7	5	1	1	0	41
									Sal	12	13	7	8	4	2	0	46
									Pinsal	0	0	0	0	0	0	0	0
	0.1	1	21	29	34.6	84	39	31.9	Asan	3	3	3	4	2	0	0	15
									Misc	9	13	7	6	7	3	0	45
									Sal	8	12	6	7	4	2	0	39
									Pinsal	0	0	0	0	0	0	0	0
	0.1	1	21	29	34.8	84	39	41.2	Asan	4	6	3	3	2	2	0	20
									Misc	10	13	7	6	4	2	1	43
									Sal	9	13	7	6	3	3	2	43
									Pinsal	0	0	0	0	0	0	0	0
	0.1	1	21	29	30.1	84	40	3.3	Asan	3	3	3	4	3	3	0	19
									Misc	11	14	11	8	4	3	2	53
									Sal	8	12	7	4	3	2	0	36
									Pinsal	1	0	0	0	0	0	0	1
	0.1	1	21	29	29.9	84	40	11.4	Asan	4	6	3	2	2	0	0	17
									Misc	10	15	8	6	4	2	0	45
									Sal	10	9	4	3	2	1	0	29
									Pinsal	0	0	0	0	0	0	0	0
									Asan	1	4	4	3	3	1	0	16
									Misc	12	16	9	7	4	2	0	50
			21	41	12.0	84	41	39.7	Sal	1277	542	642	606	481	156	75	3779
	14.5	1	21	41	20.0	84	41	43.2	Pinsal	155	63	59	44	12	0	0	333
			21	41	18.4	84	41	22.6	Asan	623	227	253	192	164	35	0	1494
			21	41	10.4	84	41	22.7	Misc	1062	429	539	637	517	203	114	3501
	0.1	1	21	41	3.6	84	41	28.7	Sal	10	12	8	5	8	4	3	50
									Pinsal	0	0	0	0	0	0	0	0
									Asan	2	4	4	3	2	0	0	15
									Misc	10	19	13	9	8	3	3	65
	0.1	1	21	41	4.2	84	41	34.2	Sal	9	0	2	3	3	0	0	17
									Pinsal	0	0	0	0	0	0	0	0
									Asan	0	0	0	0	0	0	0	0
									Misc	12	29	19	9	5	2	0	76
	0.1	1	21	41	8.5	84	40	51.1	Sal	8	2	5	17	10	5	8	55
									Pinsal	0	0	0	0	0	0	0	0
									Asan	0	0	0	0	0	0	0	0
									Misc	13	0	0	1	2	1	0	17
	29	1	21	38	56.4	84	37	40.3	Sal	3381	1243	1275	1674	2025	239	143	9980
			21	38	50.0	84	37	54.1	Pinsal	307	113	120	63	36	0	0	639
			21	39	12.4	84	37	57.5	Asan	1844	407	505	474	441	65	0	3736
			21	39	14.0	84	37	40.3	Misc	616	498	506	949	1180	131	117	3997
	12.8	1	21	39	15.6	84	37	12.4	Sal	1541	549	562	738	286	105	62	3843
			21	39	9.2	84	37	19.3	Pinsal	140	50	53	27	3	0	0	273
			21	39	20.4	84	37	31.7	Asan	560	229	180	181	52	12	0	1214
			21	39	26.8	84	37	24.5	Misc	562	170	266	448	179	75	52	1752
	0.1	1	21	39	47	84	36	45.1	Sal	8	4	5	2	4	2	0	25
									Pinsal	0	0	0	0	0	0	0	0
									Asan	0	3	2	3	2	1	0	11
									Misc	13	8	9	7	4	1	0	42
	0.1	1	21	39	43.4	84	36	56.3	Sal	12	4	3	2	4	6	0	31
									Pinsal	0	0	0	0	0	0	0	0
									Asan	1	4	2	2	1	1	0	11
									Misc	11	12	4	7	8	2	0	44
	0.1	1	21	39	43.4	84	37	12.3	Sal	12	8	3	6	3	2	1	35
									Pinsal	0	0	0	0	0	0	0	0
									Asan	4	1	1	2	1	0	0	9
									Misc	7	8	7	4	6	2	0	34
	0.1	1	21	39	40.5	84	37	32.7	Sal	9	4	2	3	3	4	2	27
									Pinsal	1	1	0	0	0	0	0	2
									Asan	5	4	1	2	1	1	0	14

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									Misc	10	8	4	7	4	3	1	37
		0.1	1	21	39	37.3	84	38	0.3	Sal	8	4	3	4	3	4	2	28
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	1	1	2	3	0	0	8
										Misc	13	8	7	4	3	2	0	37
		0.1	1	21	39	18.4	84	38	13.1	Sal	12	8	4	3	4	2	4	37
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	2	3	2	1	0	0	10
										Misc	11	8	3	2	1	2	2	29
		0.1	1	21	39	25.5	84	38	26.7	Sal	12	8	0	2	4	7	3	41
										Plasal	0	0	0	0	0	0	0	0
										Asan	4	1	2	3	4	1	0	15
										Misc	7	4	7	4	7	1	0	30
		0.1	1	21	39	2.2	84	37	39	Sal	9	0	0	3	8	3	3	26
										Plasal	0	0	0	0	0	0	0	0
										Asan	5	2	1	0	0	0	0	8
										Misc	10	0	2	3	0	0	0	15
		0.1	1	21	39	11.7	84	37	42.3	Sal	8	0	0	5	7	5	5	30
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	13	3	2	1	0	0	0	19
		0.1	1	21	39	5.8	84	37	53.6	Sal	12	0	0	5	7	4	3	31
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	11	3	1	2	0	0	0	17
		0.1	1	21	38	58.3	84	38	2.8	Sal	12	0	2	8	7	5	3	37
										Plasal	0	0	0	0	0	0	0	0
										Asan	4	3	2	0	0	0	0	9
										Misc	7	0	0	2	4	1	0	14
		0.1	1	21	38	47.9	84	38	13.9	Sal	9	5	8	12	7	4	2	47
										Plasal	0	0	0	0	0	0	0	0
										Asan	5	2	2	0	0	0	0	9
										Misc	10	0	0	4	3	0	0	17
		0.1	1	21	38	44.2	84	38	44.9	Sal	8	0	4	12	8	5	3	40
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	13	0	0	3	3	0	0	19
		0.1	1	21	38	51.1	84	38	44.3	Sal	12	7	10	9	8	9	0	55
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	1	2	0	2	2	1	10
										Misc	11	0	0	0	0	0	0	11
Deogarh	Kendarp Lanadurn PHE	51	1	21	42	0.00	84	42	17.6	Sal	4509	3791	3625	1706	1435	719	369	16154
				21	42	1.6	84	42	35.2	Plasal	429	270	172	62	33	0	0	966
				21	42	38.0	84	42	35.8	Asan	1610	1173	690	291	166	36	0	3966
				21	42	27.2	84	42	12.4	Misc	4189	3794	4144	2102	1705	1043	355	17532
		30	1	21	43	42.0	84	40	45.4	Sal	2652	937	2132	1028	785	422	217	8173
				21	43	24.4	84	40	36.1	Plasal	189	44	101	36	12	0	0	382
				21	43	30.8	84	40	55.1	Asan	1136	267	355	171	98	9	0	2036
				21	43	51.6	84	40	46.4	Misc	2338	983	2489	1212	1069	626	326	9043
		0.1	1	21	41	52.9	84	42	18.2	Sal	12	3	4	4	3	2	2	30
										Plasal	0	0	0	0	0	0	0	0
										Asan	3	3	0	0	0	0	0	6
										Misc	6	4	3	2	2	3	2	32
		0.1	1	21	41	58.3	84	42	0.6	Sal	8	4	0	2	3	4	3	34
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	12	3	0	2	0	0	0	17
		0.1	1	21	42	4.6	84	41	49.9	Sal	9	3	4	4	3	3	2	28
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	2	1	0	0	0	0	4
										Misc	11	7	4	3	2	1	0	28

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	0.1	1	21	42	13.4	84	41	21.7	Sal	7	4	3	4	6	5	3	32
									Pistil	0	0	0	0	0	0	0	0
									Anth	3	2	2	1	0	0	0	8
									Misc	10	5	1	3	2	1	0	24
	0.1	1	21	42	18.3	84	41	18.9	Sal	13	1	2	4	4	1	2	30
									Pistil	0	0	0	0	0	0	0	0
									Anth	1	0	0	0	0	0	0	3
									Misc	6	0	0	0	0	0	0	15
	0.1	1	21	44	22.8	84	36	33.9	Sal	8	0	0	1	3	1	0	12
									Pistil	0	0	0	0	0	0	0	0
									Anth	0	4	4	1	4	2	0	21
									Misc	12	13	11	9	8	0	0	53
	0.1	1	21	41	9.1	84	40	9.1	Sal	0	0	3	4	3	3	0	14
									Pistil	0	0	0	0	0	0	0	0
									Anth	1	4	1	2	2	0	0	12
									Misc	11	8	7	8	2	1	0	37
	0.1	1	21	43	40.3	84	40	22.4	Sal	7	4	3	3	3	1	0	25
									Pistil	0	0	0	0	0	0	0	0
									Anth	3	2	3	2	1	0	0	11
									Misc	10	13	8	3	7	7	0	88
	0.1	1	21	43	38.8	84	40	35.1	Sal	12	8	3	4	3	1	0	37
									Pistil	0	0	0	0	0	0	0	0
									Anth	3	3	2	2	1	1	0	12
									Misc	6	12	8	7	9	2	0	44
	85	1	21	36	21.6	84	41	8.8	Sal	1468	824	1073	818	392	399	77	5251
			21	36	24.8	84	41	26.0	Pistil	81	41	56	27	7	0	0	212
			21	37	36.4	84	41	27.7	Anth	816	494	678	545	332	199	11	3095
			21	37	22.4	84	41	10.5	Misc	13955	6886	9498	7705	6104	3397	1017	48562
	0.1	1	21	37	2.1	84	39	32.9	Sal	8	7	5	4	2	0	0	26
									Pistil	0	0	0	0	0	0	0	0
									Anth	0	6	4	3	0	0	0	13
									Misc	12	11	5	4	4	2	1	39
	0.1	1	21	36	56.5	84	39	35.4	Sal	9	10	8	6	0	0	0	33
									Pistil	0	0	0	0	0	0	0	0
									Anth	1	6	4	0	0	0	0	11
									Misc	10	8	5	4	3	2	2	34
	0.1	1	21	36	50.2	84	39	45.6	Sal	7	10	8	7	2	3	0	37
									Pistil	0	0	0	0	0	0	0	0
									Anth	3	8	3	2	0	0	0	16
									Misc	9	14	12	8	4	3	1	51
	0.1	1	21	37	0.5	84	39	31.6	Sal	12	4	5	3	2	0	0	26
									Pistil	0	0	0	0	0	0	0	0
									Anth	2	4	3	0	0	0	0	9
									Misc	6	9	8	4	3	2	0	32
	0.1	1	21	36	45.6	84	39	51.5	Sal	8	12	9	9	4	0	3	45
									Pistil	0	0	0	0	0	0	0	0
									Anth	2	3	3	2	0	0	0	10
									Misc	12	9	10	8	5	2	2	48
	0.1	1	21	37	20.6	84	41	3.7	Sal	9	11	8	3	4	1	0	36
									Pistil	0	0	0	0	0	0	0	0
									Anth	1	4	4	3	3	0	0	15
									Misc	11	12	8	12	4	3	1	51
	0.1	1	21	37	16.4	84	41	1.4	Sal	7	9	8	4	2	2	0	32
									Pistil	0	0	0	0	0	0	0	0
									Anth	3	3	2	3	1	0	0	12
									Misc	10	11	13	7	4	3	0	48
	0.1	1	21	37	16.4	84	40	36.6	Sal	8	4	1	2	1	1	0	19
									Pistil	0	0	0	0	0	0	0	0
									Anth	9	3	3	2	1	0	0	9
									Misc	12	11	8	13	4	2	0	50
	0.1	1	21	37	20.7	84	41	5.3	Sal	9	7	8	4	3	1	1	33
									Pistil	0	0	0	0	0	0	0	0

Chhimkhuri PRF

Nagesh

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									Asas	1	1	2	3	1	0	0	8
									Misc	10	12	10	8	6	4	0	50
		0.1	1	21	37	15.2	84	41	10.1	Sal	7	7	4	3	2	2	0	25
										Pinsal	0	0	0	0	0	0	0	0
										Asas	3	1	2	2	1	1	0	10
										Misc	9	12	8	8	4	3	1	45
		0.1	1	21	37	4.4	84	41	20.2	Sal	12	8	6	4	2	2	1	35
										Pinsal	0	0	0	0	0	0	0	0
										Asas	2	4	3	0	0	0	0	9
										Misc	6	12	7	7	4	3	2	41
		0.1	1	21	36	56.4	84	41	22.4	Sal	8	8	5	4	4	4	1	34
										Pinsal	0	0	0	0	0	0	0	0
										Asas	2	4	2	2	0	0	0	10
										Misc	12	12	9	7	7	4	2	53
		0.1	1	21	37	21.5	84	41	7.1	Sal	9	9	9	8	3	0	0	38
										Pinsal	0	0	0	0	0	0	0	0
										Asas	1	4	3	1	0	0	0	9
										Misc	11	8	5	6	4	2	0	36
		0.1	1	21	37	28.8	84	41	29.3	Sal	7	7	4	4	3	2	0	27
										Pinsal	0	0	0	0	0	0	0	0
										Asas	3	3	2	0	0	0	0	8
										Misc	10	8	5	4	3	2	0	32
		0.1	1	21	37	15.3	84	41	19.1	Sal	8	0	0	0	0	0	0	8
										Pinsal	0	0	0	0	0	0	0	0
										Asas	0	3	2	1	0	0	0	6
										Misc	12	11	7	7	5	4	2	48
		0.1	1	21	37	20.2	84	41	25.4	Sal	9	7	6	4	4	3	1	34
										Pinsal	0	0	0	0	0	0	0	0
										Asas	1	4	3	2	0	0	0	10
										Misc	10	10	4	3	4	4	1	36
		0.1	1	21	37	28.5	84	41	31.3	Sal	7	0	0	0	0	0	0	7
										Pinsal	0	0	0	0	0	0	0	0
										Asas	3	0	0	0	0	0	0	3
										Misc	9	0	0	0	0	0	0	9
		0.1	1	21	37	37.1	84	43	14.3	Sal	12	8	2	0	0	0	0	22
										Pinsal	0	0	0	0	0	0	0	0
										Asas	2	6	2	0	0	0	0	10
										Misc	6	10	5	2	2	1	0	26
		0.1	1	21	37	25.2	84	43	15.9	Sal	8	5	3	2	0	0	0	18
										Pinsal	0	0	0	0	0	0	0	0
										Asas	2	4	3	2	0	0	0	11
										Misc	12	10	7	7	4	0	0	40
		0.1	1	21	37	5.9	84	43	20.4	Sal	9	9	7	4	3	2	1	35
										Pinsal	0	0	0	0	0	0	0	0
										Asas	1	7	4	2	0	0	0	14
										Misc	11	12	7	5	4	3	2	44
Deoganti	Jhadeswar PRF	114	1	21	30	36.8	84	40	55.0	Sal	13236	8115	9843	8853	4894	2099	1056	48096
				21	30	32.0	84	41	22.6	Pinsal	540	324	203	88	48	0	0	1203
				21	31	21.6	84	41	34.6	Asas	4051	2596	2611	2478	1398	671	64	13869
				21	31	24.8	84	41	8.8	Misc	9186	5195	7432	6287	3648	1429	1036	34213
		0.1	1	21	32	9.8	84	37	50.2	Sal	11	2	3	1	2	2	1	22
										Pinsal	0	0	0	0	0	0	0	0
										Asas	2	0	0	0	0	0	0	2
										Misc	10	7	1	1	1	0	2	23
		0.1	1	21	32	8.7	84	38	20.7	Sal	10	4	2	5	5	2	7	35
										Pinsal	0	0	0	0	0	0	0	0
										Asas	2	0	0	0	0	0	0	2
										Misc	11	4	2	5	3	2	5	32
		0.1	1	21	31	52.8	84	38	39.9	Sal	9	2	1	3	2	2	0	19
										Pinsal	0	0	0	0	0	0	0	0
										Asas	1	2	1	1	0	0	0	5

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									Misc	13	7	0	4	4	0	1	29
0.1	1	21	31	46.6	84	39	49.8		Sal	10	2	2	3	1	2	1	21
									Pissal	0	0	0	0	0	0	0	0
									Asses	2	0	1	0	0	0	0	3
0.1	1	21	31	46.9	84	40	17.6		Misc	10	3	5	0	0	1	2	21
									Sal	9	4	2	3	2	0	4	24
									Pissal	0	0	0	0	0	0	0	0
									Asses	2	0	0	2	0	0	0	4
0.1	1	21	31	38	84	40	40.2		Misc	12	0	3	0	4	0	2	21
									Sal	10	8	10	2	0	0	2	32
									Pissal	0	0	0	0	0	0	0	0
									Asses	2	6	0	0	0	0	0	8
0.1	1	21	30	59	84	42	22.4		Misc	10	8	0	0	0	0	2	20
									Sal	9	27	6	1	1	0	1	45
									Pissal	1	1	0	2	0	0	0	4
									Asses	3	14	3	0	0	0	0	20
0.1	1	21	30	54.8	84	42	36.3		Misc	10	18	4	1	1	0	0	34
									Sal	11	29	5	1	0	0	0	46
									Pissal	0	6	1	0	0	0	0	7
									Asses	2	12	2	1	0	0	0	17
0.1	1	21	31	17.1	84	41	53.1		Misc	12	30	0	1	0	0	0	43
									Sal	11	12	6	4	3	2	0	38
									Pissal	0	0	0	0	0	0	0	0
									Asses	2	5	2	3	1	0	0	13
0.1	1	21	31	53.3	84	40	48.4		Misc	10	7	3	4	2	0	0	26
									Sal	8	18	5	2	0	0	0	33
									Pissal	0	0	0	0	0	0	0	0
									Asses	4	0	0	0	0	0	0	4
									Misc	10	7	3	0	0	0	0	20
78.5	1	21	35	19.2	84	43	18.2		Sal	5067	1565	2101	1933	1754	277	165	12866
		21	35	22.4	84	43	30.8		Pissal	316	47	65	30	21	0	0	479
		21	35	55.1	84	43	26.6		Asses	1900	521	855	785	635	75	7	4776
		21	35	56.7	84	43	5.1		Misc	8552	2610	3554	3295	2870	490	363	21734
0.1	1	21	36	44.8	84	42	46.1		Sal	8	8	3	12	8	7	3	49
									Pissal	0	0	0	0	0	0	0	0
									Asses	3	3	2	2	0	0	0	10
									Misc	9	11	7	3	0	0	0	30
0.1	1	21	36	46.9	84	42	35.1		Sal	7	8	8	13	12	5	4	57
									Pissal	0	0	0	0	0	0	0	0
									Asses	3	3	5	2	0	0	0	13
									Misc	10	10	8	4	3	0	0	35
0.1	1	21	36	46.4	84	42	21.1		Sal	9	7	5	3	0	0	0	24
									Pissal	0	0	0	0	0	0	0	0
									Asses	2	8	3	0	0	0	0	13
									Misc	8	13	8	6	2	0	0	37
0.1	1	21	37	9	84	42	1.3		Sal	8	3	2	12	8	6	3	42
									Pissal	0	0	0	0	0	0	0	0
									Asses	3	2	2	2	0	0	0	9
									Misc	9	6	6	8	6	3	0	38
0.1	1	21	37	14.6	84	42	12.8		Sal	7	4	3	2	2	1	1	20
									Pissal	0	0	0	0	0	0	0	0
									Asses	3	4	3	2	0	0	0	12
									Misc	9	12	9	11	4	2	2	46
0.1	1	21	37	9.7	84	42	46.6		Sal	9	5	3	6	5	4	3	35
									Pissal	0	0	0	0	0	0	0	0
									Asses	2	3	2	2	0	0	0	9
									Misc	9	12	7	6	5	4	2	45
0.1	1	21	37	11.8	84	43	8.6		Sal	8	5	3	3	3	2	2	26
									Pissal	0	0	0	0	0	0	0	0
									Asses	3	4	3	4	3	0	0	17
									Misc	9	8	7	7	7	4	2	44
0.1	1	21	37	6.5	84	46	35		Sal	7	6	1	1	1	0	0	16

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									Pasal	0	0	0	0	0	0	0	0
									Asan	3	11	3	2	2	2	1	24
									Mise	10	17	7	6	2	2	2	46
0.1	1	21	37	6	84	46	15.3		Sal	9	4	1	1	1	0	0	16
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	4	3	2	2	1	0	14
									Mise	8	12	7	8	4	2	1	42
0.1	1	21	37	6.2	84	46	4.3		Sal	8	12	3	2	2	2	1	36
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	6	4	2	2	1	0	18
									Mise	9	16	7	2	3	1	1	39
0.1	1	21	37	9	84	45	18.7		Sal	7	7	2	2	2	1	0	21
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	4	3	2	1	1	0	14
									Mise	10	15	7	6	4	1	1	44
0.1	1	21	37	11.8	84	45	4.1		Sal	9	12	6	3	4	1	1	36
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	7	4	2	3	1	1	20
									Mise	9	16	7	6	3	1	1	43
0.1	1	21	37	13.6	84	44	53.6		Sal	8	11	6	4	3	1	2	35
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	6	3	3	3	1	2	21
									Mise	9	13	4	3	5	2	0	36
0.1	1	21	37	13.1	84	44	34.3		Sal	7	12	6	4	2	1	0	32
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	15	9	2	1	0	0	30
									Mise	9	15	5	5	1	1	1	37
0.1	1	21	36	39.9	84	47	6.7		Sal	8	7	4	3	0	0	0	22
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	4	3	1	0	0	0	11
									Mise	9	18	9	3	3	2	0	44
0.1	1	21	36	39.8	84	46	49.4		Sal	7	4	3	0	0	0	0	14
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	3	2	0	0	0	0	8
									Mise	10	16	19	9	6	3	0	63
0.1	1	21	36	45.4	84	46	31.6		Sal	9	0	0	0	0	0	0	9
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	2	1	0	0	0	0	5
									Mise	8	9	11	6	2	0	0	36
0.1	1	21	36	35.5	84	46	6.4		Sal	8	0	0	0	0	0	0	8
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	3	2	3	0	0	0	9
									Mise	9	13	12	4	2	1	0	41
0.1	1	21	36	27.5	84	45	57		Sal	7	8	4	2	3	2	1	27
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	7	4	2	0	0	0	16
									Mise	9	17	8	5	4	2	0	45
0.1	1	21	36	49.6	84	44	18.2		Sal	9	7	7	9	8	7	3	50
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	4	3	2	0	0	0	11
									Mise	9	12	8	6	4	2	0	41
0.1	1	21	39	47	84	36	45.1		Sal	8	4	5	2	4	2	0	25
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	3	2	3	2	1	0	14
									Mise	9	8	9	7	4	1	0	38
0.1	1	21	39	43.4	84	36	56.3		Sal	7	4	3	2	4	6	0	26
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	4	2	2	1	1	0	13
									Mise	10	12	4	7	8	2	0	43
0.1	1	21	39	43.4	84	37	12.3		Sal	9	8	3	6	3	2	1	32
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	1	1	2	1	0	0	7

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		0.1	1	21	39	40.5	84	37	32.7	Misc	8	8	7	4	6	2	0	35
										Sal	8	4	2	3	3	4	2	26
										Pistil	0	1	0	0	0	0	0	1
										Anm	3	4	1	2	1	1	0	12
		0.1	1	21	39	37.3	84	38	0.3	Misc	9	8	4	7	4	3	1	36
										Sal	7	4	3	4	3	4	2	27
										Pistil	0	0	0	0	0	0	0	0
										Anm	3	1	1	2	3	0	0	10
		0.1	1	21	39	18.4	84	38	13.1	Misc	10	8	7	4	3	2	0	34
										Sal	9	8	4	3	4	2	4	34
										Pistil	0	0	0	0	0	0	0	0
										Anm	2	2	3	2	1	0	0	10
		0.1	1	21	39	25.5	84	38	26.7	Misc	9	8	3	2	1	2	2	27
										Sal	8	8	9	2	4	7	3	41
										Pistil	0	0	0	0	0	0	0	0
										Anm	3	1	2	3	4	1	0	14
		0.1	1	21	39	2.2	84	37	39	Misc	9	4	7	4	7	1	0	32
										Sal	7	0	0	3	8	3	3	24
										Pistil	0	0	0	0	0	0	0	0
										Anm	3	0	0	0	0	0	0	3
		0.1	1	21	39	11.7	84	37	42.3	Misc	0	0	2	3	0	0	0	14
										Sal	8	0	0	5	7	5	5	39
										Pistil	0	0	0	0	0	0	0	0
										Anm	3	0	0	0	0	0	0	3
		0.1	1	21	39	5.8	84	37	53.6	Misc	9	3	2	1	0	0	0	15
										Sal	7	0	0	5	7	4	3	26
										Pistil	0	0	0	0	0	0	0	0
										Anm	3	0	0	0	0	0	0	3
		0.1	1	21	38	58.3	84	38	2.8	Misc	10	3	1	2	0	0	0	16
										Sal	9	0	2	8	7	5	3	34
										Pistil	0	0	0	0	0	0	0	0
										Anm	2	0	0	0	0	0	0	2
		0.1	1	21	38	47.9	84	38	13.9	Misc	8	0	0	2	4	1	0	15
										Sal	8	0	8	12	7	4	2	41
										Pistil	0	0	0	0	0	0	0	0
										Anm	3	0	0	0	0	0	0	3
		0.1	1	21	38	44.2	84	38	44.9	Misc	9	0	0	4	3	0	0	16
										Sal	7	0	4	12	8	5	3	39
										Pistil	0	0	0	0	0	0	0	0
										Anm	3	0	0	0	0	0	0	3
		0.1	1	21	38	51.1	84	38	44.3	Misc	9	0	0	3	3	0	0	15
										Sal	9	7	10	9	8	9	0	52
										Pistil	0	0	0	0	0	0	0	0
										Anm	2	0	2	0	2	2	1	9
										Misc	9	0	0	0	0	0	0	9
Rakesh	Khalmidhoolar PRF	4	1	21	38	59.6	84	56	12.7	Sal	291	56	38	7	11	7	0	410
				21	38	43.4	84	56	19.6	Pistil	0	0	0	0	0	0	0	0
				21	38	41.7	84	56	23.0	Anm	32	14	11	0	0	0	0	57
				21	38	56.4	84	56	17.8	Misc	425	312	122	487	389	26	12	1773
		0.1	1	21	39	47.4	84	54	28.3	Sal	8	12	11	13	7	0	0	51
										Pistil	0	1	0	0	0	0	0	1
										Anm	0	2	3	4	1	0	0	10
										Misc	10	14	9	6	0	0	0	39
		0.1	1	21	39	47.7	84	55	7.4	Sal	9	0	0	0	0	0	0	9
										Pistil	0	0	0	0	0	0	0	0
										Anm	1	0	0	2	2	0	0	5
										Misc	9	16	9	14	7	3	0	58
		0.1	1	21	39	28.8	84	55	44	Sal	10	0	0	0	0	0	0	10
										Pistil	0	0	0	0	0	0	0	0
										Anm	2	5	2	1	1	1	0	12
										Misc	7	14	3	6	3	0	0	33
		0.1	1	21	39	45.8	84	56	8.7	Sal	8	0	0	0	0	0	0	8

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									Pissal	0	0	0	0	0	0	0	0
									Asan	2	3	1	0	0	0	0	6
									Misc	7	16	4	3	2	1	1	34
		0.1	1	21	40	9.8	84	54	17.9	Sal	9	10	4	3	1	1	3	31
										Pissal	1	2	1	2	0	0	0	6
										Asan	2	0	0	0	0	0	0	2
										Misc	7	28	18	19	2	3	4	81
		0.1	1	21	39	59.1	84	54	28.5	Sal	8	5	0	0	2	3	0	18
										Pissal	0	2	2	1	2	0	0	7
										Asan	0	0	0	0	0	0	0	0
										Misc	10	30	23	16	9	4	7	99
		0.1	1		40	4.1	84	54	46.7	Sal	9	0	0	0	0	0	0	9
										Pissal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	9	34	22	18	13	0	0	96
Khanna	Bankhot PRF	2	1	21	20	37.6	85	6	17.4	Sal	98	37	18	13	8	23	7	204
										Pissal	0	0	0	0	0	0	0	0
										Asan	6	5	2	0	5	0	0	18
										Misc	76	112	80	62	0	2	3	335
		2	1	21	20	43.2	85	6	29.4	Sal	70	33	15	10	6	18	9	161
										Pissal	0	1	0	0	0	0	0	1
										Asan	7	6	0	0	4	0	0	17
										Misc	105	106	72	55	4	3	6	351
		2	1	21	20	45.6	85	6	20.8	Sal	72	26	12	18	7	27	6	168
										Pissal	0	0	0	0	0	0	0	0
										Asan	8	6	3	6	2	0	0	25
										Misc	107	121	79	48	6	9	2	372
		2	1	21	20	41.6	85	6	9.6	Sal	75	25	10	17	6	28	8	169
										Pissal	0	1	0	0	0	0	0	1
										Asan	12	8	2	6	2	0	0	30
										Misc	112	124	70	53	7	8	4	378
		2	1	21	20	52.8	85	6	12.2	Sal	56	39	19	23	12	22	7	178
										Pissal	0	1	2	0	0	0	0	3
										Asan	3	6	2	5	0	0	0	16
										Misc	123	138	60	51	12	6	3	393
		2	1	21	20	48.0	85	6	58.4	Sal	69	27	9	31	14	10	6	167
										Pissal	0	0	0	0	0	0	0	0
										Asan	9	4	3	6	0	0	0	22
										Misc	110	142	69	53	18	14	9	415
		2	1	21	20	43.2	85	6	49.9	Sal	68	29	17	12	14	33	6	179
										Pissal	0	0	2	0	0	0	0	2
										Asan	12	9	6	2	0	0	0	29
										Misc	114	150	93	67	4	2	10	440
		2	1	21	20	59.2	85	6	0.2	Sal	69	32	14	19	12	24	8	178
										Pissal	1	0	0	0	0	0	0	1
										Asan	14	7	1	2	0	0	0	24
										Misc	106	178	63	51	17	9	4	428
		2	1	21	20	28.3	85	6	27.1	Sal	98	2	0	4	0	0	0	104
										Pissal	0	0	0	0	0	0	0	0
										Asan	6	3	2	2	0	0	0	13
										Misc	79	170	80	47	13	5	20	414
		2	1	21	20	38.8	85	6	13.5	Sal	71	34	22	6		17	8	158
										Pissal	0	0	0	0	0	0	0	0
										Asan	6	0	6	0	7	0	0	19
										Misc	103	120	90	58	12	8	2	393
		2	1	21	20	34.1	85	6	27.8	Sal	69	20	12	43	0	2	0	146
										Pissal	0	3	0	0	0	0	0	3
										Asan	7	2	3	2	0	0	0	14
										Misc	105	98	67	75	8	4	3	360
		2	1	21	20	41.7	85	6	30.7	Sal	65	10	63	69	8	2	3	220
										Pissal	0	0	0	0	0	0	0	0
										Asan	13	7	3	1	0	0	0	24

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2	1	21	20	38.4	85	5	27.5	Misc	110	70	35	2	3	0	1	221
								Sal	56	68	46	48	35	41	38	332
								Pinsal	0	0	0	0	0	0	0	0
								Asan	3	21	13	18	7	0	0	62
2	1	21	20	43.2	85	5	12.0	Misc	123	67	55	47	43	18	20	373
								Sal	69	48	57	33	38	61	45	342
								Pinsal	0	0	0	0	0	0	0	0
								Asan	9	18	27	15	12	0	0	81
2	1	21	20	51.2	85	5	33.5	Misc	110	27	44	51	38	42	11	333
								Sal	67	71	68	53	42	43	50	394
								Pinsal	0	0	0	0	0	0	0	0
								Asan	10	6	11	15	9	0	0	51
2	1	21	21	6.3	85	5	46.4	Misc	112	81	59	33	46	37	0	368
								Sal	69	25	20	13	18	0	0	145
								Pinsal	1	0	0	0	0	0	0	1
								Asan	14	43	27	25	9			118
2	1	21	21	12.0	85	5	51.6	Misc	106	68	57	38	44	39	18	370
								Sal	97	57	41	46	50	37	21	349
								Pinsal	0	0	0	0	0	0	0	0
								Asan	6	20	15	17	8	3	0	69
2	1	21	21	13.6	85	5	34.4	Misc	88	48	41	37	25	15	10	264
								Sal	70	31	37	25	30	0	0	193
								Pinsal	0	6	5	2	0	0	0	13
								Asan	7	5	8	4	0	0	0	24
2	1	21	21	23.2	85	5	41.2	Misc	105	85	76	70	65	41	8	450
								Sal	72	24	15	8	3	6	4	132
								Pinsal	0	7	4	2	0	0	0	13
								Asan	8	6	5	0	0	0	0	19
2	1	21	21	28.0	85	5	31.8	Misc	107	97	90	86	51	30	15	476
								Sal	75	68	43	38	40	27	23	314
								Pinsal	0	0	0	0	0	0	0	0
								Asan	12	12	18	11	6	0	0	59
2	1	21	21	34.4	85	5	47.3	Misc	112	48	58	47	34	13	15	327
								Sal	56	21	25	18	7	4	7	138
								Pinsal	0	5	4	4	0	0	0	13
								Asan	3	20	18	15	3	0	0	59
2	1	21	21	32.8	85	6	1.9	Misc	123	75	70	62	43	31	20	424
								Sal	60	46	35	37	45	50	40	313
								Pinsal	0	0	0	0	0	0	0	0
								Asan	9	25	17	13	9	0	0	73
2	1	21	21	47.2	85	6	55.0	Misc	110	37	41	39	26	27	18	298
								Sal	68	48	35	30	21	20	25	247
								Pinsal	0	0	0	0	0	0	0	0
								Asan	12	8	18	16	11	8	0	73
0.1	1	21	20	27.1	85	8	6.5	Misc	114	63	49	55	27	17	16	341
								Sal	8	0	0	0	0	0	0	8
								Pinsal	0	0	0	0	0	0	0	0
								Asan	2	1	0	1	1	0	0	5
								Misc	9	21	4	3	2	0	0	39
0.1	1	21	20	31.8	85	7	15.7	Sal	9	12	3	1	0	0	0	25
								Pinsal	1	0	0	0	0	0	0	1
								Asan	1	0	0	0	0	0	0	1
								Misc	8	15	8	5	3	0	0	39
0.1	1	21	20	35.7	85	6	27.5	Sal	8	5	4	7	2	0	0	26
								Pinsal	0	1	0	0	0	0	0	1
								Asan	0	2	2	0	0	0	0	4
								Misc	10	24	11	9	0	0	0	54
0.1	1	21	20	35.8	85	6	19.9	Sal	8	6	5	7	3	0	0	29
								Pinsal	0	2	0	0	0	0	0	2
								Asan	2	1	3	0	0	0	0	6
								Misc	9	15	8	8	2	0	0	42
0.1	1	21	20	32.9	85	6	37.4	Sal	9	4	3	4	2	0	0	22

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										Pinnai	1	0	0	0	0	0	0	1
										Asan	1	0	0	0	0	0	0	1
										Misc	8	7	5	3	7	0	0	30
		0.1	1	21	20	37.8	85	5	57.6	Sal	8	5	3	5	2	0	0	23
										Pinnai	0	0	0	0	0	0	0	0
										Asan	0	3	2	0	0	0	0	5
										Misc	10	10	4	2	2	0	0	28
		0.1	1	21	21	27.4	85	5	31.4	Sal	8	5	4	2	1	0	0	20
										Pinnai	0	0	0	0	0	0	0	0
										Asan	2	2	1	2	0	0	0	7
										Misc	9	5	1	3	0	0	0	18
		0.1	1	21	21	24.7	85	5	37.1	Sal	9	4	3	2	0	0	0	18
										Pinnai	1	0	0	0	0	0	0	1
										Asan	1	3	2	3	0	0	0	9
										Misc	8	6	4	3	0	0	0	21
		0.1	1	21	21	17.5	85	5	56.3	Sal	8	5	3	2	1	0	0	19
										Pinnai	0	1	0	0	0	0	0	1
										Asan	0	2	1	0	0	0	0	3
										Misc	10	4	3	2	1	0	0	20
		0.1	1	21	21	5	85	6	2.4	Sal	8	5	3	3	4	0	0	23
										Pinnai	0	0	0	0	0	0	0	0
										Asan	3	2	1	0	0	0	0	5
										Misc	9	6	2	2	1	0	0	20
		1	1	21	21	16.8	85	9	44.1	Sal	47	25	18	22	8	3	1	124
										Pinnai	1	2	2	0	0	0	0	5
										Asan	14	3	5	0	0	0	0	22
										Misc	117	68	47	41	31	15	9	328
		1	1	21	21	31.2	85	9	45.9	Sal	45	18	23	15	11	7	2	121
										Pinnai	0		0	0	0	0	0	0
										Asan	18	8	9	0	0	0		35
										Misc	112	48	47	32	15	8	5	267
		1	1	21	21	20.0	85	9	26.9	Sal	44	22	30	21	12	11	5	145
										Pinnai	0	0	0	0	0	0	0	0
										Asan	17	11	6	3	0	0	0	37
										Misc	115	56	38	24	20	13	6	272
		1	1	21	21	15.2	85	9	13.2	Sal	46	21	19	17	9	5	7	124
										Pinnai	0	0	0	0	0	0	0	0
										Asan	9	5	2	0	0	0	0	16
										Misc	114	38	27	13	6	0	0	198
		1	1	21	21	28.0	85	9	16.2	Sal	48	32	27	15	8	11	9	150
										Pinnai	0	0	0	0	0	0	0	0
										Asan	12	13	11	6	3	0	0	45
										Misc	119	46	40	37	21	9	10	282
		1	1	21	21	18.4	85	9	2.9	Sal	40	21	15	17	5	7	0	105
										Pinnai	0	0	0	0	0	0	0	0
										Asan	8	11	7	10	3	0	0	39
										Misc	120	31	25	27	19	10	12	244
		1	1	21	21	28.0	85	9	1.1	Sal	43	25	34	26	15	9	8	160
										Pinnai	0	0	0	0	0	0	0	0
										Asan	12	15	18	5	5	0	0	55
										Misc	118	43	32	17	28	15	11	264
		1	1	21	21	37.6	85	8	56.0	Sal	39	39	17	12	15	9	3	134
										Pinnai	0	0	0	0	0	0	0	0
										Asan	15	8	5	2	0	0	0	30
										Misc	119	19	18	13	6	7	4	186
		1	1	21	21	16.8	85	8	6.3	Sal	38	23	18	20	11	6	5	121
										Pinnai	0	0	0	0	0	0	0	0
										Asan	11	13	8	5	2	0	0	39
										Misc	114	31	19	15	5	10	3	197
		1	1	21	21	26.4	85	8	43.9	Sal	35	18	21	15	7	5	4	105
										Pinnai	2	4	1	0	0	0	0	7
										Asan	16	16	12	7	4	0	0	55
	Kanimpal PRF																		
Khunnar																			

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								Misc	109	24	18	22	11	3	6	193
		21	21	44.0	85	8	45.7	Sal	47	15	13	9	7	5	0	96
1	1							Pisnal	0	0	0	0	0	0	0	0
								Asan	8	2	6	0	0	0	0	16
		21	21	32.8	85	8	33.6	Misc	123	28	13	17	15	4	6	206
1	1							Sal	32	24	16	9	6	4	0	91
								Pisnal	0	0	0	0	0	0	0	0
								Asan	9	6	3	0	0	0	0	18
		21	21	47.2	85	8	31.9	Misc	117	28	13	17	15	4	6	200
1	1							Sal	40	21	20	17	11	12	0	121
								Pisnal	0	0	0	0	0	0	0	0
								Asan	12	2	8	0	0	0	0	22
		21	21	37.6	85	8	21.6	Misc	114	33	30	41	20	15	8	261
1	1							Sal	41	16	12	6	5	4	3	87
								Pisnal	0	0	0	0	0	0	0	0
								Asan	13	5	3	0	0	0	0	21
		21	21	50.4	85	8	16.4	Misc	120	25	15	20	12	9	3	204
1	1							Sal	37	22	18	12	7	3	2	101
								Pisnal	1	1	1	0	0	0	0	3
								Asan	9	4	6	3	2	0	0	24
		21	21	42.4	85	8	11.2	Misc	119	20	12	8	6	3	4	172
1	1							Sal	33	18	10	17	9	8	5	100
								Pisnal	1	1	0	0	0	0	0	2
								Asan	11	6	3	1	2	1	1	25
		21	21	45.6	85	8	0.9	Misc	114	12	8	4	6	4	3	151
1	1							Sal	45	28	40	27	1	0	0	141
								Pisnal	0	0	0	0	0	0	0	0
								Asan	5	4	3	2	0	0	0	14
		21	21	56.8	85	8	52.3	Misc	117	70	37	53	17	1	2	297
1	1							Sal	34	37	28	23	1	2	0	125
								Pisnal	1	1	0	0	0	0	0	2
								Asan	14	2	4	0	0	0	0	20
		21	21	24.8	85	8	52.5	Misc	118	88	70	34	27	7	3	347
1	1							Sal	44	30	70	8	28	18	0	198
								Pisnal	0	0	0	0	0	0	0	0
								Asan	9	8	6	4	0	0	0	27
		21	21	44.0	85	8	21.6	Misc	112	54	22	61	17	37	2	305
1	1							Sal	47	38	27	16	0	0	1	129
								Pisnal	0	0	0	0	0	0	0	0
								Asan	11	5	6	0	0	0	0	22
		21	21	15.0	85	8	58.5	Misc	118	72	32	1	6	0	4	233
1	1							Sal	49	32	21	18	0	0	0	120
								Pisnal	2	7	2	0	0	0	0	11
								Asan	0	0	0	0	0	0	0	0
								Misc	117	107	98	50	37	7	16	432
0.1	1	21	21	11	85	9	3.5	Sal	7	4	4	2	0	0	0	17
								Pisnal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	8	7	3	0	0	0	0	18
0.1	1	21	21	14.5	85	8	58.2	Sal	6	6	4	3	0	0	0	19
								Pisnal	0	0	0	0	0	0	0	0
								Asan	2	6	0	0	0	0	0	8
								Misc	10	8	5	7	2	0	0	32
0.1	1	21	21	11.7	85	9	7	Sal	8	3	7	13	3	0	0	34
								Pisnal	0	0	0	0	0	0	0	0
								Asan	1	1	1	3	0	0	0	6
								Misc	9	5	2	6	2	4	0	28
0.1	1	21	21	31.8	85	9	18.9	Sal	6	10	12	19	5	0	0	52
								Pisnal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	10	6	13	17	3	0	0	49
0.1	1	21	21	24.5	85	9	1.2	Sal	7	0	0	2	6	0	0	15

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										Pinal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	8	7	1	1	0	0	0	17
		0.1	1	21	21	21.1	85	9	1.1	Sal	6	5	1	3	0	0	0	15
										Pinal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	10	5	0	1	0	0	0	16
		0.1	1	21	21	14.1	85	9	0	Sal	8	2	2	1	3	0	0	16
										Pinal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	9	6	8	3	4	0	0	30
Deigarh & Barkote	Pridhanpur RF	67	24	21	32	32.5	84	46	52.0	Sal	3251	2872	1619	2184	2393	663	253	13235
				21	32	35.4	84	47	20.4	Pinal	863	760	429	437	378	74	0	2941
				21	33	7.8	84	47	8.9	Asan	2238	1977	943	1638	1511	442	13	8762
				21	33	5.7	84	46	49.4	Misc	10867	9600	5585	6662	8314	2506	1141	44675
		110	13	21	32	47.6	84	43	37.0	Sal	5337	4714	2658	3586	3929	1089	416	21729
				21	33	19.6	84	43	42.2	Pinal	1413	1249	704	717	620	48	0	4751
				21	33	24.4	84	43	6.1	Asan	3675	5246	1549	2689	2481	726	21	14587
				21	32	47.2	84	43	2.7	Misc	17844	15716	9169	10937	13649	4114	1873	73902
		100	7	21	33	13.2	84	39	35.5	Sal	4552	4286	2417	3260	3572	990	378	19453
				21	33	53.2	84	39	52.7	Pinal	1284	1135	640	652	564	110	0	4785
				21	33	58.0	84	39	36.9	Asan	3340	2951	1408	2445	2256	600	19	13019
				21	33	19.6	84	39	9.7	Misc	16220	14328	8335	9943	12408	3740	1703	66677
		90	15 & 22	21	33	56.4	84	46	31.1	Sal	4367	3857	2175	2934	3215	891	340	17779
				21	34	14.0	84	46	17.4	Pinal	1156	1022	576	587	507	99	0	3947
				21	33	29.2	84	45	43.0	Asan	3006	2656	1267	2200	2030	594	17	11770
				21	33	21.2	84	46	3.6	Misc	14590	12895	7502	8949	11168	3366	1532	60051
		50	23 & 24	21	32	28.6	84	46	31.2	Sal	2426	2143	1208	1630	1786	495	189	9877
				21	32	27.0	84	46	47.6	Pinal	642	568	320	326	282	55	0	2193
				21	33	1.6	84	46	44.9	Asan	1670	1475	704	1222	1128	330	10	6339
				21	32	58.1	84	46	27.1	Misc	8110	7164	4168	4972	6204	1870	851	33339
		0.1	8	21	32	39.5	84	42	1	Sal	9	15	0	0	0	0	0	24
										Pinal	1	0	0	0	0	0	0	1
										Asan	2	4	0	0	0	0	0	6
										Misc	13	6	1	0	0	0	0	20
		0.1	8	21	32	40.9	84	41	26	Sal	8	17	3	5	0	0	0	33
										Pinal	0	0	0	0	0	0	0	0
										Asan	3	7	0	0	0	0	0	10
										Misc	14	5	2	1	2	1	4	29
		0.1	7	21	32	45.5	84	41	2.8	Sal	8	3	0	0	0	0	0	11
										Pinal	0	2	0	0	0	0	0	2
										Asan	2	17	3	0	0	0	0	22
										Misc	13	10	2	0	2	2	1	30
		0.1	8	21	32	39.7	84	40	29.4	Sal	9	20	0	0	1	1	0	31
										Pinal	0	0	0	0	0	0	0	0
										Asan	4	5	0	0	0	0	0	9
										Misc	11	3	0	0	0	0	0	14
		0.1	8	21	32	56.3	84	40	4.7	Sal	9	10	0	5	0	0	0	24
										Pinal	1	0	0	0	0	0	0	1
										Asan	2	6	1	2	0	0	0	11
										Misc	13	7	2	3	0	1	1	27
		0.1	7	21	32	52.2	84	39	52.4	Sal	8	3	1	1	2	0	0	15
										Pinal	0	0	0	0	0	0	0	0
										Asan	3	2	5	1	1	0	0	12
										Misc	14	10	2	2	4	3	1	36
		0.1	1	21	33	10	84	39	29.8	Sal	8	2	1	2	1	0	0	14
										Pinal	0	0	0	0	0	0	0	0
										Asan	2	2	5	2	0	0	0	11

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		0.1	7	21	32	15.5	84	39	6.8	Misc	13	4	3	2	0	3	1	26
										Sal	9	18	10	5	6	3	4	55
										Pissal	0	0	0	0	0	0	0	0
										Asan	4	2	5	4	2	0	0	17
		0.1	1	21	34	3.9	84	38	2	Misc	11	0	0	0	0	0	0	11
										Sal	9	7	6	12	4	1	1	40
										Pissal	1	0	0	0	0	0	0	1
										Asan	2	3	2	0	1	0	0	8
		0.1	2	21	33	42.9	84	38	8	Misc	13	6	2	1	0	0	0	22
										Sal	8	5	4	4	3	0	0	24
										Pissal	0	0	0	0	0	0	0	0
										Asan	3	2	0	0	0	0	0	5
		0.1	1	21	33	17.2	84	37	52	Misc	14	6	3	2	0	7	0	32
										Sal	8	6	0	0	0	0	0	14
										Pissal	0	0	0	0	0	0	0	0
										Asan	2	2	0	0	0	3	0	7
		0.1	1	21	32	45.6	84	37	29.6	Misc	13	2	5	3	2	0	0	25
										Sal	9	12	0	0	0	3	2	26
										Pissal	0	0	0	0	0	0	0	0
										Asan	4	0	0	0	0	0	0	4
										Misc	11	10	2	0	0	0	0	23
		37.5	1	21	30	27.7	85	7	57.7	Sal	1959	1451	1064	685	561	347	147	6214
				21	30	32.6	85	8	4.6	Pissal	638	405	248	75	49	0	0	1415
				21	31	5.2	85	7	11.5	Asan	1458	1080	841	529	146	30	2	4086
				21	30	55.4	85	7	8.0	Misc	5058	3814	2797	1824	1682	1010	376	16561
		32	1	21	34	11.0	85	4	10.3	Sal	1785	1195	918	578	432	196	135	5239
				21	34	2.9	85	4	3.4	Pissal	564	345	201	69	37	0	0	1216
				21	33	54.8	85	4	38.0	Asan	1263	964	789	426	123	21	2	3588
				21	34	4.5	85	4	44.9	Misc	4321	3242	2346	1582	1467	891	297	14146
		26	1	21	33	9.1	85	3	42.7	Sal	1358	1006	738	475	389	240	102	4308
				21	33	1.0	85	3	42.6	Pissal	442	281	172	52	34	0	0	981
				21	33	2.6	85	4	24.2	Asan	1011	749	583	367	101	21	2	2834
				21	33	7.5	85	4	20.4	Misc	3507	2645	1939	1265	1166	700	260	11482
		27	1	21	29	43.6	85	6	14.4	Sal	1411	1045	766	493	404	250	106	4475
				21	29	35.5	85	6	17.8	Pissal	459	292	178	54	35	0	0	1018
				21	29	33.9	85	6	52.5	Asan	1050	775	606	381	105	22	2	2941
				21	29	43.7	85	6	49.0	Misc	3641	2746	2014	1313	1211	727	270	11922
		32	1	21	34	2.9	85	4	3.4	Sal	1596	1245	902	487	463	296	118	5107
				21	33	54.8	85	3	58.2	Pissal	536	391	278	51	25	0	0	1283
				21	33	44.9	85	4	29.4	Asan	1356	932	785	431	127	16	1	3648
				21	33	54.8	85	4	38.0	Misc	4365	3268	2376	1564	1438	856	289	14156
		32	1	21	33	10.7	85	4	57.0	Sal	1672	1238	908	584	478	296	125	5501
				21	33	4.2	85	5	3.5	Pissal	544	346	211	64	42	0	0	1207
				21	33	28.7	85	5	36.3	Asan	1244	922	718	451	125	26	2	3488
				21	33	31.9	85	5	24.2	Misc	4316	3255	2387	1557	1435	862	321	14133
		100	1	21	35	22.4	85	5	1.7	Sal	4875	3912	2756	1564	1438	736	317	15598
				21	35	35.2	85	5	37.8	Pissal	1638	1278	863	123	62	0	0	3964
				21	35	3.2	85	5	56.7	Asan	4261	2645	2351	1257	326	34	3	10877
				21	34	59.0	85	5	24.1	Misc	13458	10263	7235	4653	4364	2168	879	43026
		73	1	21	31	4.0	85	5	37.8	Sal	3641	2838	2054	1123	1056	675	262	11649
				21	30	32.0	85	5	49.8	Pissal	1231	868	632	114	57	0	0	2903
				21	30	49.3	85	6	14.8	Asan	3095	2142	1723	956	247	31	2	8196
				21	31	14.7	85	5	59.2	Misc	9862	7425	5421	3562	3240	1789	342	31841
		0.1	1	21	30	31.2	85	5	6.1	Sal	9	30	5	0	0	0	0	44
										Pissal	1	2	0	0	0	0	0	3
										Asan	2	2	0	0	0	0	0	4
										Misc	13	14	3	3	1	0	0	34
		0.1	1	21	29	28	85	7	5	Sal	8	12	0	0	0	0	0	20
										Pissal	0	0	0	0	0	0	0	0
										Asan	3	4	0	0	0	0	0	7

Markaste

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									Misc	14	7	2	3	0	1	0	27
0.1	1	21	29	28	85	7	5		Sal	8	13	2	0	0	0	0	23
									Pasal	0	0	0	0	0	0	0	0
									Asas	2	4	1	0	0	0	0	7
									Misc	13	6	3	2	1	1	1	27
0.1	1	21	29	21.9	85	6	43.9		Sal	9	13	0	0	0	0	0	24
									Pasal	0	5	0	0	0	0	0	5
									Asas	4	3	1	0	0	0	0	8
									Misc	11	18	3	1	0	0	0	33
0.1	1	21	31	2.7	85	5	12.5		Sal	9	6	0	0	0	0	0	15
									Pasal	1	3	0	0	0	0	0	4
									Asas	2	0	0	0	0	0	0	2
									Misc	13	7	4	2	5	1	1	33
0.1	1	21	31	2.7	85	5	50.2		Sal	8	18	2	0	0	0	0	28
									Pasal	0	0	0	0	0	0	0	0
									Asas	3	2	0	0	0	0	0	5
									Misc	14	14	7	1	1	0	0	37
0.1	1	21	31	17.4	85	5	23.1		Sal	8	5	1	0	0	0	0	14
									Pasal	0	0	0	0	0	0	0	0
									Asas	2	4	0	0	0	0	0	6
									Misc	13	7	8	4	2	1	2	37
0.1	1	21	31	19.3	85	4	51.2		Sal	9	3	0	0	0	0	0	12
									Pasal	0	0	0	0	0	0	0	0
									Asas	4	5	3	1	0	0	0	13
									Misc	11	12	6	4	2	2	0	37
0.1	1	21	33	24.2	85	11	38.4		Sal	9	11	5	8	7	2	1	43
									Pasal	1	0	0	0	0	0	0	1
									Asas	2	6	8	4	2	0	0	22
									Misc	13	17	8	13	8	2	0	61
0.1	1	21	33	28.2	85	11	41.6		Sal	8	4	2	3	6	1	2	26
									Pasal	0	0	0	0	0	0	0	0
									Asas	3	4	3	10	2	0	0	22
									Misc	14	17	4	8	9	8	2	62
0.1	1	21	33	41.8	85	11	53.8		Sal	8	2	4	8	9	0	2	33
									Pasal	0	0	0	0	0	0	0	0
									Asas	2	6	3	8	6	0	0	25
									Misc	13	12	7	18	12	2	0	64
0.1	1	21	33	47.7	85	11	55.5		Sal	9	1	2	4	12	2	0	30
									Pasal	0	0	0	0	0	0	0	0
									Asas	4	0	1	2	1	0	0	8
									Misc	11	12	2	4	12	3	0	44
0.1	1	21	33	53.1	85	11	54.2		Sal	9	1	4	10	8	8	2	43
									Pasal	1	0	0	0	0	0	0	1
									Asas	2	0	5	2	4	2	0	15
									Misc	13	5	5	6	3	1	0	33
0.1	1	21	33	58.2	85	11	55.3		Sal	8	7	4	6	16	8	2	49
									Pasal	0	0	0	0	0	0	0	0
									Asas	3	2	5	7	9	5	0	31
									Misc	14	7	12	8	7	2	1	51
0.1	1	21	34	13.3	85	11	49.8		Sal	8	0	0	0	2	4	1	15
									Pasal	0	0	0	0	0	0	0	0
									Asas	2	0	2	4	3	0	0	11
									Misc	13	8	7	14	4	3	1	50
0.1	1	21	34	19.9	85	11	31.6		Sal	9	4	7	5	6	0	0	31
									Pasal	0	0	0	0	0	0	0	0
									Asas	4	8	7	6	0	0	0	25
									Misc	11	17	7	3	9	4	0	51
0.1	1	21	34	29.9	85	11	35.7		Sal	9	4	2	3	0	1	0	19
									Pasal	1	0	0	0	0	0	0	1
									Asas	2	3	2	0	0	0	0	7
									Misc	13	6	3	4	2	1	0	29
0.1	1	21	35	18.2	85	11	19.2		Sal	8	5	11	4	2	1	0	31

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								Pisau	0	4	1	0	0	0	0	5
								Arau	3	3	2	0	0	0	0	8
								Mix	14	14	8	4	0	0	0	40
0.1	1	21	35	20.6	85	11	13.3	Sil	8	6	7	8	3	2	1	35
								Pisau	0	0	0	0	0	0	0	0
								Arau	2	0	0	0	0	0	0	2
								Mix	13	3	0	0	0	0	0	16
0.1	1	21	35	20.7	85	11	4.9	Sil	9	3	4	5	2	0	1	24
								Pisau	0	4	0	0	0	0	0	4
								Arau	4	4	0	1	0	0	0	9
								Mix	11	4	3	11	0	0	0	29
0.1	1	21	35	20.6	85	10	59.9	Sil	9	6	5	8	5	0	3	36
								Pisau	1	0	0	0	0	0	0	1
								Arau	2	1	0	0	0	0	0	3
								Mix	13	7	0	0	0	0	0	20
0.1	1	21	35	20.6	85	10	50.2	Sil	8	12	8	7	3	4	0	42
								Pisau	0	0	0	0	0	0	0	0
								Arau	3	1	1	0	0	0	0	5
								Mix	14	5	4	6	1	1	0	31
0.1	1	21	35	17.5	85	10	35.5	Sil	8	3	11	4	2	3	0	31
								Pisau	0	0	0	0	0	0	0	0
								Arau	2	4	1	0	0	0	0	7
								Mix	13	9	4	5	1	1	0	33
0.1	1	21	35	37.8	85	8	30.3	Sil	9	27	7	6	2	3	3	57
								Pisau	0	0	0	0	0	0	0	0
								Arau	4	7	3	1	1	0	0	16
								Mix	11	8	4	1	1	0	0	25
0.1	1	21	35	41	85	8	19.9	Sil	9	12	9	13	1	1	0	45
								Pisau	1	0	0	0	0	0	0	1
								Arau	2	9	8	12	0	0	0	31
								Mix	13	0	0	0	0	0	0	13
0.1	1	21	35	38.4	85	7	17.9	Sil	8	6	4	3	0	0	0	21
								Pisau	0	0	0	0	0	0	0	0
								Arau	3	0	0	0	0	0	0	3
								Mix	14	16	4	0	0	0	0	34
0.1	1	21	35	37.3	85	6	51.2	Sil	8	4	6	2	6	7	2	35
								Pisau	0	0	0	0	0	0	0	0
								Arau	2	4	2	0	0	0	0	8
								Mix	13	8	4	1	0	0	0	26
0.1	1	21	35	35	85	6	22.9	Sil	9	6	2	2	2	2	0	23
								Pisau	0	0	0	0	0	0	0	0
								Arau	4	0	0	0	0	0	0	4
								Mix	11	12	6	2	0	1	0	32
0.1	1	21	35	53.4	85	5	50.4	Sil	9	1	0	5	7	4	2	28
								Pisau	1	0	0	0	0	0	0	1
								Arau	2	0	0	0	0	0	0	2
								Mix	13	3	1	0	0	0	0	17
0.1	1	21	35	27.4	85	5	27.7	Sil	8	0	0	4	6	4	1	23
								Pisau	0	0	0	0	0	0	0	0
								Arau	3	0	0	0	0	0	0	3
								Mix	14	2	1	2	0	1	0	20
0.1	1	21	35	29	85	5	0.9	Sil	8	3	0	0	0	1	1	13
								Pisau	0	0	0	0	0	0	0	0
								Arau	2	0	0	2	1	0	0	5
								Mix	13	3	2	2	1	0	0	21
0.1	1	21	35	25.5	85	4	12	Sil	9	0	0	4	1	2	2	18
								Pisau	0	0	0	0	0	0	0	0
								Arau	4	3	1	0	0	0	0	8
								Mix	11	3	1	2	0	0	0	17
0.1	1	21	35	21.7	85	4	50.5	Sil	9	0	0	0	0	3	3	15
								Pisau	1	0	0	0	0	0	0	1
								Arau	2	2	0	0	0	0	0	4

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									Misc	13	3	2	0	0	0	0	18
0.1	1	21	35	17.4	85	4	23.4	Sal	8	4	2	2	2	2	1	23
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	3	0	0	1	0	0	7
								Misc	14	7	2	1	1	0	0	25
0.1	1	21	35	14.4	85	4	10.2	Sal	8	4	3	9	1	3	0	28
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	1	0	0	0	0	3
								Misc	13	3	0	0	1	0	0	17
0.1	1	21	34	11.5	85	4	17.6	Sal	9	0	0	0	0	0	0	9
								Pasal	0	0	0	0	0	0	0	0
								Asan	4	2	0	0	0	0	0	6
								Misc	11	6	7	8	4	0	0	36
0.1	1	21	34	27.8	85	4	11.6	Sal	9	2	1	0	7	0	0	22
								Pasal	1	0	0	0	0	0	0	1
								Asan	2	3	4	2	2	0	0	13
								Misc	13	6	12	8	3	2	0	44
0.1	1	21	34	50.5	85	4	5.1	Sal	8	3	5	15	5	1	0	37
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	2	5	4	0	0	0	14
								Misc	14	7	9	4	3	2	0	39
0.1	1	21	33	37.6	85	3	55.5	Sal	8	1	0	0	2	1	0	12
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	1	0	1	6	3	0	13
								Misc	13	12	8	9	5	2	0	87
0.1	1	21	33	20.9	85	3	45.3	Sal	9	0	0	0	0	2	1	12
								Pasal	0	0	0	0	0	0	0	0
								Asan	4	4	3	4	1	1	0	17
								Misc	11	17	14	7	3	3	1	56
0.1	1	21	33	15.4	85	3	47.3	Sal	9	2	1	2	2	1	0	17
								Pasal	1	0	0	0	0	0	0	1
								Asan	2	4	7	3	2	4	0	22
								Misc	13	17	6	10	6	3	1	56
0.1	1	21	31	52.3	85	4	25	Sal	8	3	5	4	0	0	0	18
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	3	2	2	0	0	0	10
								Misc	14	7	4	3	2	0	0	30
0.1	1	21	3	57.2	85	4	14.3	Sal	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	2	1	0	0	0	0	5
								Miss	13	7	3	2	2	2	1	30
0.1	1	21	32	27.2	85	3	50.7	Sal	9	3	6	1	1	0	0	20
								Pasal	0	0	0	0	0	0	0	0
								Asan	4	3	3	2	0	0	0	12
								Misc	11	12	7	3	3	2	2	40
0.1	1	21	32	40.6	85	3	48.5	Sal	9	0	0	0	0	0	0	9
								Pasal	1	0	0	0	0	0	0	1
								Asan	2	5	4	2	0	0	0	13
								Misc	13	12	3	2	1	0	0	31
0.1	1	21	32	17.7	85	5	12.2	Sal	8	17	2	3	0	2	1	33
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	1	0	0	0	0	0	4
								Misc	14	6	2	0	0	0	0	22
0.1	1	21	32	0.1	85	5	0.1	Sal	8	21	0	0	2	2	3	36
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	13	0	0	0	0	0	1	14
0.1	1	21	31	40	85	4	55.5	Sal	9	23	0	0	2	1	1	36
								Pasal	0	0	0	0	0	0	0	0
								Asan	4	0	1	0	0	0	0	5
								Misc	11	2	2	0	0	2	1	18
0.1	1	21	32	37.2	85	11	33.2	Sal	9	4	0	0	0	0	0	13

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								Pimal	1	0	0	0	0	0	0	1
								Asan	2	12	6	2	1	0	0	23
								Misc	13	22	12	17	6	1	1	72
0.1	1	21	32	43.4	85	11	19.2	Sal	8	6	2	4	2	0	0	22
								Pimal	0	0	0	0	0	0	0	0
								Asan	3	3	8	6	4	7	4	35
								Misc	14	22	14	18	10	11	3	92
0.1	1	21	32	52.1	85	11	1.2	Sal	8	0	0	0	0	4	3	15
								Pimal	0	2	0	0	0	0	0	2
								Asan	2	7	4	2	3	1	1	20
								Misc	13	23	12	8	4	3	2	65
0.1	1	21	32	51.7	85	11	32.6	Sal	9	0	0	0	0	0	0	9
								Pimal	0	0	0	0	0	0	0	0
								Asan	4	6	1	2	0	2	1	16
								Misc	11	23	12	8	3	3	2	62
0.1	1	21	32	56.6	85	11	35.2	Sal	9	0	0	0	0	0	0	9
								Pimal	1	0	0	0	0	0	0	1
								Asan	2	8	2	2	4	8	0	26
								Misc	13	22	11	12	8	7	2	75
0.1	1	21	33	1.3	85	11	33.2	Sal	8	13	12	10	8	4	0	55
								Pimal	0	1	0	0	0	0	0	1
								Asan	3	8	9	11	6	0	0	37
								Misc	14	27	17	15	6	0	0	79
0.1	1	21	33	15.5	85	11	33.8	Sal	8	3	4	5	7	2	0	29
								Pimal	0	0	0	0	0	0	0	0
								Asan	2	5	3	6	6	0	0	22
								Misc	13	22	14	17	3	3	3	75
0.1	1	21	32	12.9	85	10	57.4	Sal	9	2	1	2	3	2	1	20
								Pimal	0	0	0	0	0	0	0	0
								Asan	4	2	0	0	0	1	0	7
								Misc	11	6	4	4	2	2	0	29
0.1	1	21	32	8.6	85	11	7.4	Sal	9	1	2	0	0	0	0	12
								Pimal	1	0	0	0	0	0	0	1
								Asan	2	4	2	1	0	0	0	9
								Misc	13	5	9	12	6	7	1	53
0.1	1	21	32	15.8	85	11	13.3	Sal	8	1	0	0	0	0	0	9
								Pimal	0	0	0	0	0	0	0	0
								Asan	3	1	2	1	1	1	0	9
								Misc	14	15	7	11	5	4	0	59
0.1	1	21	32	18.4	85	11	17.2	Sal	8	0	7	4	4	2	0	25
								Pimal	0	0	0	0	0	0	0	0
								Asan	2	6	1	3	7	4	0	23
								Misc	13	22	17	7	6	4	5	74
0.1	1	21	32	14.2	85	11	7.3	Sal	9	3	2	2	3	1	0	20
								Pimal	0	0	0	0	0	0	0	0
								Asan	4	2	1	0	1	2	0	10
								Misc	11	12	17	10	7	8	2	67
0.1	1	21	32	25.3	85	11	8.8	Sal	9	0	0	0	0	0	0	9
								Pimal	1	0	0	0	0	0	0	1
								Asan	2	7	4	8	3	2	0	26
								Misc	13	16	7	3	2	4	2	47
0.1	1	21	32	27.5	85	11	28.8	Sal	8	3	4	5	4	2	0	26
								Pimal	0	0	0	0	0	0	0	0
								Asan	3	1	3	0	2	2	0	11
								Misc	14	18	17	12	6	4	1	72
0.1	1	21	32	12.4	85	11	38.3	Sal	8	0	0	0	3	2	4	17
								Pimal	0	0	0	1	1	0	0	2
								Asan	2	0	0	0	0	0	0	2
								Misc	13	0	0	0	0	0	0	13
0.1	1	21	32	29.2	85	9	52.1	Sal	9	0	0	2	3	4	3	21
								Pimal	0	0	0	0	0	0	0	0
								Asan	4	0	0	0	0	0	0	4

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								Misc	11	0	0	1	1	0	0	13
0.1	1	21	32	59.2	85	9	10.4	Sal	9	0	0	2	2	3	1	17
								Pissl	1	0	0	0	0	0	0	1
								Assn	2	0	0	2	1	0	0	5
								Misc	13	0	0	0	0	1	3	17
0.1	1	21	32	51.3	85	10	24.4	Sal	8	6	0	0	0	0	0	14
								Pissl	0	0	0	0	0	0	0	0
								Assn	3	10	0	0	0	0	0	13
								Misc	14	17	0	1	1	0	0	33
0.1	1	21	32	56.3	85	10	42.3	Sal	8	13	3	0	0	0	0	24
								Pissl	0	0	0	0	0	0	0	0
								Assn	2	8	3	0	0	0	0	13
								Misc	13	14	12	4	1	0	0	44
0.1	1	21	32	35.4	85	10	1.3	Sal	9	3	2	2	3	0	0	19
								Pissl	0	0	0	0	0	0	0	0
								Assn	4	5	4	2	0	0	0	15
								Misc	11	4	2	2	0	0	0	19
0.1	1	21	32	23.4	85	11	5	Sal	9	0	0	0	1	0	0	10
								Pissl	1	0	0	0	0	0	0	1
								Assn	2	0	5	0	0	0	0	7
								Misc	13	0	2	0	1	0	1	17
0.1	1	21	29	52.2	85	8	3.8	Sal	8	3	2	0	0	2	0	15
								Pissl	0	0	0	0	0	0	0	0
								Assn	3	2	0	0	0	0	0	5
								Misc	14	1	0	0	0	1	0	16
0.1	1	21	30	9	85	7	56.9	Sal	8	14	0	0	1	2	0	25
								Pissl	0	0	0	0	0	0	0	0
								Assn	2	2	0	0	0	0	0	4
								Misc	13	3	0	0	0	0	1	17
0.1	1	21	30	49.7	85	8	18	Sal	9	4	0	3	2	2	0	20
								Pissl	0	0	0	0	0	0	0	0
								Assn	4	5	0	0	0	0	0	9
								Misc	11	3	0	0	3	0	0	17
0.1	1	21	30	56	85	8	19.6	Sal	9	3	0	4	8	0	1	25
								Pissl	1	0	0	0	0	0	0	1
								Assn	2	6	1	0	0	0	0	9
								Misc	13	4	0	2	0	0	0	19
0.1	1	21	30	56.2	85	8	27.9	Sal	8	0	1	3	0	1	0	13
								Pissl	0	0	0	0	0	0	0	0
								Assn	3	3	0	1	2	1	1	11
								Misc	14	6	2	2	1	0	1	28
0.1	1	21	30	58.6	85	8	33.2	Sal	8	6	2	6	4	0	0	26
								Pissl	0	0	0	0	0	0	0	0
								Assn	2	2	0	0	0	0	1	5
								Misc	13	8	2	0	3	0	1	27
0.1	1	21	31	0.1	85	8	38.8	Sal	9	0	0	2	3	1	2	17
								Pissl	0	0	0	0	0	0	0	0
								Assn	4	2	0	0	0	0	0	6
								Misc	11	2	0	0	2	0	1	16
0.1	1	21	31	9.8	85	8	37.2	Sal	9	0	0	4	1	2	1	17
								Pissl	1	0	0	0	0	0	0	1
								Assn	2	0	0	0	0	0	0	2
								Misc	13	0	2	2	0	2	0	19
0.1	1	21	31	18	85	8	32.4	Sal	8	0	0	3	2	2	1	16
								Pissl	0	0	0	0	0	0	0	0
								Assn	3	0	0	0	0	0	0	3
								Misc	14	1	0	2	2	2	1	22
0.1	1	21	31	24.3	85	8	35.1	Sal	8	9	2	5	2	1	2	29
								Pissl	0	0	0	0	0	0	0	0
								Assn	2	1	1	0	0	0	0	4
								Misc	13	4	1	4	0	1	0	23
0.1	1	21	31	33.5	85	8	31.1	Sal	9	1	0	5	7	1	1	24

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								Pistol	0	0	0	0	0	0	0	0
								Assn	4	0	0	1	2	0	0	7
								Misc	11	2	2	3	0	2	0	20
0.1	1	21	31	43.4	85	8	27.8	Sal	9	2	2	4	2	3	1	23
								Pistol	1	0	0	0	0	0	0	1
								Assn	2	1	2	1	3	1	1	11
								Misc	13	1	1	3	4	1	1	24
0.1	1	21	31	51.6	85	8	52.9	Sal	8	0	0	0	0	0	5	13
								Pistol	0	0	0	0	0	0	0	0
								Assn	3	0	0	0	0	0	0	3
								Misc	14	5	2	5	0	0	0	26
0.1	1	21	31	58.1	85	8		Sal	8	0	0	2	3	5	1	19
								Pistol	0	0	0	0	0	0	0	0
								Assn	2	0	2	2	1	0	0	7
								Misc	13	1	2	3	2	1	0	22
85	40 & 41	21	31	52.0	84	30	36.1	Sal	8631	8289	7718	6958	3688	149 7	435	37126
		21	31	45.6	84	30	53.3	Pistol	1737	1482	1380	1089	165	30	0	5883
		21	32	34.8	84	31	22.5	Assn	2701	2594	2243	1867	660	437	3	10505
		21	32	38.0	84	31	5.3	Misc	6226	6165	5913	5642	3732	127 1	837	29786
110	25	21	33	42.0	84	32	59.1	Sal	1116 9	1072 6	9988	9004	4773	182 0	563	48043
		21	33	43.6	84	33	16.4	Pistol	2247	1918	1786	1409	214	39	0	7613
		21	34	47.6	84	33	2.6	Assn	3496	3357	2903	2416	854	565	4	13595
		21	34	54.0	84	22	48.9	Misc	8058	7978	7653	7301	4830	164 5	108 3	38548
91	46 & 47	21	30	40.0	84	33	11.2	Sal	9240	8874	8263	7449	3948	150 6	466	39746
		21	30	33.6	84	33	28.4	Pistol	1859	1587	1478	1166	177	33	0	6300
		21	31	15.2	84	33	37.0	Assn	2892	2777	2401	1998	706	467	3	11244
		21	31	12.0	84	33	23.3	Misc	6666	6600	6331	6040	3996	136 1	896	31890
70	39	21	33	22.8	84	30	10.3	Sal	7108	6826	6356	5730	3037	113 8	359	30574
		21	32	33.2	84	30	15.4	Pistol	1430	1221	1137	897	136	25	0	4846
		21	33	14.8	84	30	55.0	Assn	2225	2136	1847	1537	543	369	2	8660
		21	33	32.4	84	30	58.4	Misc	5128	5077	4870	4646	3074	104 7	689	24531
85	4,7 & 8	21	37	38.0	84	31	15.8	Sal	8070	8345	6798	9586	3462	102 4	167	37452
		21	37	30.0	84	31	29.4	Pistol	1356	1421	1302	967	97	14	0	5157
		21	38	16.4	84	31	58.6	Assn	2832	2456	1989	1968	524	136	0	9905
		21	38	26.0	84	31	46.6	Misc	6345	6024	5842	5623	3698	125 4	643	29429
0.1	29	21	34	41.6	84	30	52.8	Sal	12	7	9	12	6	3	0	49
								Pistol	0	0	0	0	0	0	0	0
								Assn	4	5	2	3	2	4	0	20
								Misc	7	12	7	6	4	7	1	44
0.1	30	21	33	54.9	84	32	22.1	Sal	9	9	8	4	6	3	0	39
								Pistol	0	0	0	0	0	0	0	0
								Assn	5	7	6	6	3	0	0	27
								Misc	10	13	11	12	4	3	0	53
0.1	48	21	30	16.2	84	35	48.7	Sal	8	4	0	1	0	0	0	13
								Pistol	0	0	0	0	0	0	0	0
								Assn	0	0	0	0	0	0	0	0
								Misc	13	4	2	0	0	0	0	19
0.1	47	21	30	18.6	84	35	34	Sal	12	3	0	0	0	0	0	15
								Pistol	0	0	0	0	0	0	0	0
								Assn	0	0	0	0	0	0	0	0
								Misc	11	3	3	1	1	0	0	19
0.1	48	21	30	25	84	35	25	Sal	12	2	2	0	0	0	0	16
								Pistol	0	0	0	0	0	0	0	0
								Assn	4	0	0	0	0	0	0	4
								Misc	7	5	2	5	0	0	0	19
0.1	45	21	30	28.2	84	35	18.8	Sal	9	0	0	0	0	0	0	9

Dorgarh

Parvasani III

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									Plasul	0	0	0	0	0	0	0	0
									Asas	5	0	1	0	0	0	0	6
									Mise	10	5	2	3	1	0	0	21
0.1	45	21	30	28.4	84	35	7.3		Sal	8	3	0	1	0	0	0	12
									Plasul	0	0	0	0	0	0	0	0
									Asas	0	0	0	0	0	0	0	0
									Mise	13	3	2	3	1	1	0	23
0.1	45	21	30	32.8	84	35	1		Sal	12	8	2	0	0	0	0	22
									Plasul	0	0	0	0	0	0	0	0
									Asas	0	1	0	0	0	0	0	1
									Mise	11	2	2	2	1	2	0	20
0.1	30	21	30	16	84	35	39.6		Sal	12	6	3	1	0	0	0	22
									Plasul	0	0	0	0	0	0	0	0
									Asas	4	0	0	0	0	0	0	4
									Mise	7	4	2	0	0	0	0	13
0.1	46	21	30	42.9	84	34	58.7		Sal	9	3	2	1	1	2	0	18
									Plasul	0	0	0	0	0	0	0	0
									Asas	5	0	0	0	0	0	0	5
									Mise	10	0	0	0	0	0	0	10
0.1	46	21	30	47.3	84	34	48		Sal	8	6	4	1	0	0	0	19
									Plasul	0	0	0	0	0	0	0	0
									Asas	0	1	0	0	0	0	0	1
									Mise	13	5	1	0	0	1	0	20
0.1	46	21	30	48	84	34	26.7		Sal	12	8	1	0	0	0	0	21
									Plasul	0	0	0	0	0	0	0	0
									Asas	0	0	0	0	0	0	0	0
									Mise	11	6	1	2	1	0	0	21
0.1	46	21	30	31.6	84	34	4.6		Sal	12	5	0	1	0	0	0	18
									Plasul	0	0	0	0	0	0	0	0
									Asas	4	0	0	0	0	0	0	4
									Mise	7	0	0	0	0	0	0	7
0.1	37	21	32	40.2	84	29	54.2		Sal	9	6	2	8	2	0	0	27
									Plasul	0	0	0	0	0	0	0	0
									Asas	5	4	2	5	0	0	0	16
									Mise	10	5	4	3	4	0	0	26
0.1	2	21	32	56.7	84	30	1.5		Sal	8	3	2	6	12	8	4	43
									Plasul	0	1	0	0	0	0	0	1
									Asas	0	4	6	6	3	0	0	19
									Mise	13	10	4	5	6	2	0	40
0.1	38	21	33	6.4	84	30	19.7		Sal	12	0	0	0	4	3	1	20
									Plasul	0	0	0	0	0	0	1	1
									Asas	0	2	3	0	0	0	0	5
									Mise	11	6	2	3	2	4	1	29
0.1	34	21	34	30.5	84	30	16.6		Sal	12	0	0	0	0	0	0	12
									Plasul	0	0	1	0	0	0	0	1
									Asas	4	5	2	1	0	0	0	12
									Mise	7	3	3	3	0	0	0	16
0.1	38	21	34	37.1	84	29	55.3		Sal	9	0	0	0	0	0	0	9
									Plasul	0	0	0	0	0	0	0	0
									Asas	5	2	0	0	0	0	0	7
									Mise	10	5	3	2	0	0	0	20
0.1	38	21	34	43.3	84	29	37.3		Sal	8	4	3	1	0	0	0	16
									Plasul	0	0	0	0	0	0	0	0
									Asas	0	1	1	0	0	0	0	2
									Mise	13	3	1	1	0	0	0	18
0.1	37	21	32	36	84	29	45.8		Sal	12	17	19	4	0	0	0	52
									Plasul	0	0	0	0	0	0	0	0
									Asas	0	1	3	1	0	0	0	5
									Mise	11	15	2	3	2	1	0	34
0.1	37	21	32	6.2	84	30	12.2		Sal	12	3	7	14	1	2	0	39
									Plasul	0	0	0	0	0	0	0	0
									Asas	4	2	5	1	0	0	0	12

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0.1	41	21	31	42.3	84	31	0.8	Misc	7	14	9	3	1	0	0	34
								Sal	9	4	9	7	1	3	0	33
								Pisal	0	0	0	0	0	0	0	0
								Asan	5	4	2	0	0	0	0	11
0.1	41	21	31	22.9	84	31	18	Misc	10	5	5	5	0	0	0	25
								Sal	8	15	3	7	0	1	0	34
								Pisal	0	0	0	0	0	0	0	0
								Asan	0	2	0	0	0	0	0	2
0.1	43	21	30	54.8	84	33	9.4	Misc	13	13	3	2	2	0	0	33
								Sal	12	12	7	3	0	0	0	34
								Pisal	0	1	0	0	0	0	0	1
								Asan	0	6	1	0	0	0	0	7
0.1	25	21	30	55.3	84	32	52	Misc	11	12	6	4	0	0	0	33
								Sal	12	12	12	2	0	0	0	38
								Pisal	0	0	0	0	0	0	0	0
								Asan	4	14	5	8	2	0	0	33
0.1	40	21	31	0.6	84	32	51	Misc	7	10	6	9	0	0	0	32
								Sal	9	10	3	7	2	0	0	31
								Pisal	0	0	0	0	0	0	0	0
								Asan	5	6	5	3	4	0	0	23
0.1	53	21	30	29	84	37	0	Misc	10	10	3	4	2	3	1	33
								Sal	8	14	2	0	0	0	0	24
								Pisal	0	0	0	0	0	0	0	0
								Asan	0	8	0	0	0	0	0	8
0.1	52	21	30	16.9	84	37	34.5	Misc	13	7	4	1	5	0	0	30
								Sal	12	3	1	5	0	0	0	21
								Pisal	0	0	0	0	0	0	0	0
								Asan	0	1	0	0	0	0	0	1
0.1	52	21	30	30.8	84	37	54.6	Misc	11	5	0	7	0	0	9	32
								Sal	12	1	0	0	0	0	0	13
								Pisal	0	0	0	0	0	0	0	0
								Asan	4	2	0	1	0	0	0	7
0.1	7	21	39	1.9	84	30	55.1	Misc	7	5	8	7	6	1	5	39
								Sal	9	5	4	6	5	3	2	34
								Pisal	0	0	0	0	0	0	0	0
								Asan	5	0	0	0	0	0	0	5
0.1	51	21	32	32.8	84	37	0.2	Misc	10	4	3	0	0	0	0	17
								Sal	8	2	0	1	0	1	3	25
								Pisal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
0.1	49	21	32	5.2	84	37	54.6	Misc	13	3	0	1	0	0	0	17
								Sal	12	6	2	1	0	0	2	23
								Pisal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
0.1	46	21	31	40	84	34	40.4	Misc	11	1	0	2	0	1	0	15
								Sal	12	2	1	3	0	1	2	21
								Pisal	0	0	0	0	0	0	0	0
								Asan	4	0	0	0	0	0	0	4
0.1	46	21	31	28.3	84	34	53	Misc	7	3	2	1	0	2	1	16
								Sal	9	5	1	0	2	0	1	18
								Pisal	0	0	0	0	0	0	0	0
								Asan	5	0	0	0	0	0	0	5
0.1	46	21	31	28.1	84	34	35.5	Misc	10	2	0	1	0	0	1	14
								Sal	8	5	1	0	2	0	1	17
								Pisal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
0.1	46	21	31	19.1	84	33	48.9	Misc	13	2	0	1	0	0	1	17
								Sal	12	2	1	0	0	1	0	16
								Pisal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
0.1	44	21	31	11.8	84	33	45.4	Misc	11	1	3	0	0	1	1	17
								Sal	12	3	0	1	0	5	0	21

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									Fissil	0	0	0	0	0	0	0	0
									Asse	4	0	0	0	0	0	0	4
									Misc	7	1	3	0	1	0	1	13
0.1	39	21	33	59.5	84	31	85		Sol	9	5	3	5	1	1	1	25
									Fissil	0	0	0	0	0	0	0	0
									Asse	5	0	0	0	0	0	0	5
									Misc	10	7	3	2	0	0	0	22
0.1	39	21	33	4	84	30	45.2		Sol	8	2	2	0	0	0	0	12
									Fissil	0	0	0	0	0	0	0	0
									Asse	0	0	0	0	0	0	0	0
									Misc	13	7	3	3	2	1	0	29
0.1	43	21	32	3.8	84	32	31.9		Sol	12	0	0	0	0	0	0	12
									Fissil	0	0	0	0	0	0	0	0
									Asse	0	0	0	0	0	0	0	0
									Misc	11	0	0	0	0	0	0	11
0.1	43	21	32	1.4	84	32	15.8		Sol	12	0	0	0	0	0	0	12
									Fissil	0	0	0	0	0	0	0	0
									Asse	4	0	0	0	0	0	0	4
									Misc	7	0	0	0	0	0	0	7
0.1	40	21	32	18.2	84	31	56.3		Sol	9	0	0	0	4	0	0	13
									Fissil	0	0	0	0	0	0	0	0
									Asse	5	0	0	0	0	0	0	5
									Misc	10	0	0	0	3	0	0	13
0.1	44	21	31	24.9	84	33	15.3		Sol	8	1	2	1	0	0	0	12
									Fissil	0	0	0	0	0	0	0	0
									Asse	0	1	0	0	0	0	0	1
									Misc	13	4	0	0	1	0	0	18
0.1	44	21	31	33.1	84	33	15.9		Sol	12	3	0	5	1	0	0	21
									Fissil	0	0	0	0	0	0	0	0
									Asse	0	3	0	0	0	0	0	3
									Misc	11	4	4	2	0	0	0	21
0.1	43	21	31	38.8	84	33	13.8		Sol	12	5	3	0	1	1	0	22
									Fissil	0	0	0	0	0	0	0	0
									Asse	4	3	0	1	0	0	0	8
									Misc	7	6	2	3	0	0	0	18
0.1	43	21	31	49	84	33	3.3		Sol	9	4	0	0	3	0	0	16
									Fissil	0	0	0	0	0	0	0	0
									Asse	5	0	0	0	0	0	0	5
									Misc	10	5	1	1	0	0	0	17
0.1	43	21	31	53.8	84	32	51		Sol	8	3	3	2	0	0	0	16
									Fissil	0	0	0	0	0	0	0	0
									Asse	0	0	0	0	0	0	0	0
									Misc	13	4	0	1	2	0	0	20
0.1	42	21	31	55.2	84	32	47.3		Sol	12	4	0	1	4	3	0	24
									Fissil	0	0	0	0	0	0	0	0
									Asse	0	1	0	0	0	0	0	1
									Misc	11	2	0	1	2	2	0	18
0.1	43	21	32	0.9	84	32	49.8		Sol	12	0	3	2	1	0	0	18
									Fissil	0	0	0	0	0	0	0	0
									Asse	4	0	0	0	0	0	0	4
									Misc	7	0	3	1	1	0	1	13
0.1	22	21	34	32.4	84	38	21.7		Sol	9	2	2	2	4	1	3	23
									Fissil	0	0	0	0	0	0	0	0
									Asse	5	1	2	0	0	0	0	8
									Misc	10	4	3	1	0	0	0	18
0.1	21	21	35	11.2	84	37	14.0		Sol	8	5	5	4	2	0	0	24
									Fissil	0	0	0	0	0	0	0	0
									Asse	0	0	0	0	0	0	0	0
									Misc	13	6	3	1	0	0	0	23
0.1	20	21	35	52.9	84	37	0.7		Sol	12	3	3	2	5	2	2	29
									Fissil	0	0	0	0	0	0	0	0
									Asse	0	0	0	2	0	0	0	2

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								Misc	11	4	0	0	3	0	2	20
0.1	18	21	36	6.3	84	37	13.8	Sal	12	2	2	5	3	1	3	28
								Pissal	0	0	0	0	0	0	0	0
								Asses	4	0	0	0	0	0	0	4
								Misc	7	2	1	0	1	0	2	13
0.1	19	21	36	14.7	84	37	14	Sal	9	1	3	2	3	2	2	22
								Pissal	0	0	0	0	0	0	0	0
								Asses	5	1	0	0	0	0	0	6
								Misc	10	4	0	2	3	0	0	19
0.1	16	21	36	45.7	84	36	26.1	Sal	8	0	1	4	5	2	2	22
								Pissal	0	0	0	0	0	0	0	0
								Asses	0	0	0	0	0	0	0	0
								Misc	13	4	1	1	2	0	0	21
0.1	13	21	36	59.4	84	34	48.6	Sal	12	2	2	0	3	0	2	21
								Pissal	0	0	0	0	0	0	0	0
								Asses	0	0	1	0	2	0	0	3
								Misc	11	4	1	2	0	0	0	18
0.1	8	21	38	7.6	84	32	57.2	Sal	12	5	1	0	1	1	0	20
								Pissal	0	0	0	0	0	0	0	0
								Asses	4	3	1	0	0	0	0	8
								Misc	7	4	1	1	0	0	0	13
0.1	22	21	34	12	84	37	59.4	Sal	9	2	3	3	0	0	0	17
								Pissal	0	0	0	0	0	0	0	0
								Asses	5	0	0	1	0	0	0	6
								Misc	10	12	2	3	1	0	0	28
0.1	22	21	33	59	84	37	8.6	Sal	8	1	0	10	4	0	0	23
								Pissal	0	0	0	0	0	0	0	0
								Asses	0	0	0	1	0	0	0	1
								Misc	13	2	1	3	0	0	0	19
0.1	23	21	33	49	84	36	26.8	Sal	12	20	0	9	0	0	0	41
								Pissal	0	0	0	0	0	0	0	0
								Asses	0	0	0	1	0	0	0	1
								Misc	11	2	1	3	0	0	1	18
0.1	23	21	33	48.1	84	35	45.9	Sal	12	6	3	8	1	0	4	34
								Pissal	0	0	0	0	0	0	0	0
								Asses	4	3	2	0	0	0	0	9
								Misc	7	4	2	0	5	2	0	20
0.1	33	21	33	49.5	84	35	3.4	Sal	9	5	7	3	4	1	2	31
								Pissal	0	0	0	0	0	0	0	0
								Asses	5	2	0	1	0	0	0	8
								Misc	10	8	4	5	3	2	3	35
0.1	24	21	33	39.1	84	34	1.1	Sal	8	4	0	1	11	2	0	26
								Pissal	0	0	0	0	0	0	0	0
								Asses	0	1	2	0	0	0	0	3
								Misc	13	7	1	2	0	0	0	23
0.1	30	21	33	48.5	84	31	52.8	Sal	12	2	9	3	0	2	0	28
								Pissal	0	0	0	0	0	0	0	0
								Asses	0	1	3	0	0	0	0	4
								Misc	11	10	2	1	1	0	0	25
0.1	43	21	32	3.6	84	33	6	Sal	12	3	1	0	0	1	0	17
								Pissal	0	0	0	0	0	0	0	0
								Asses	4	1	0	0	0	0	0	5
								Misc	7	5	1	1	2	1	0	17
0.1	44	21	32	15	84	32	58.8	Sal	9	1	0	2	1	2	0	15
								Pissal	0	0	0	0	0	0	0	0
								Asses	5	1	0	0	0	0	0	6
								Misc	10	2	0	1	0	1	0	14
0.1	44	21	32	9.7	84	33	28.5	Sal	8	6	0	0	4	8	0	26
								Pissal	0	0	0	0	0	0	0	0
								Asses	0	0	0	0	0	0	0	0
								Misc	13	0	0	0	0	0	0	13
0.1	43	21	31	58.3	84	33	59.8	Sal	12	0	0	3	3	3	4	25

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										Pjasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	11	2	3	3	0	0	0	19
		0.1	44	21	31	54.5	84	33	59.5	Sel	12	0	0	6	3	2	1	24
										Pjasal	0	0	0	0	0	0	0	0
										Asan	4	0	1	2	2	1	2	12
		0.1	43	21	31	43.3	84	33	48.1	Misc	7	3	5	4	52	2	0	73
										Sel	9	1	2	4	3	0	0	19
										Pjasal	0	0	0	0	0	0	0	0
										Asan	5	0	0	1	0	0	0	6
										Misc	10	5	7	2	2	0	0	26
		132	1	21	20	59.2	84	49	21.8	Sel	2027	2820	2269	1399	1156	480	202	10153
				21	20	52.8	84	49	39.0	Pjasal	253	352	201	69	5	0	0	880
				21	21	36.0	84	50	43.0	Asan	1267	1762	1260	699	481	74	15	5558
				21	21	53.6	84	50	39.6	Misc	21797	30310	21482	11825	7994	3142	2027	98577
		0.1	7	21	21	3.9	84	50	43.4	Sel	7	8	6	0	0	0	0	21
										Pjasal	0	0	0	0	0	0	0	0
										Asan	2	12	8	3	2	0	0	27
										Misc	10	15	9	8	3	2	0	47
		0.1	7	21	21	9.1	84	50	39.4	Sel	6	6	2	0	0	0	0	14
										Pjasal	0	0	0	0	0	0	0	0
										Asan	3	4	3	3	1	2	0	16
										Misc	11	22	10	4	3	2	0	52
		0.1	7	21	21	49.4	84	50	37.5	Sel	8	0	0	0	0	0	0	8
										Pjasal	0	0	0	0	0	0	0	0
										Asan	2	5	3	2	1	0	0	13
										Misc	9	16	8	6	3	2	1	45
		0.1	7	21	20	39.4	84	50	39.6	Sel	5	0	0	0	0	0	0	5
										Pjasal	0	0	0	0	0	0	0	0
										Asan	2	7	4	3	2	1	0	19
										Misc	12	16	7	6	3	1	1	46
		0.1	7	21	21	16.1	84	50	37	Sel	7	0	0	0	0	0	0	7
										Pjasal	0	0	0	0	0	0	0	0
										Asan	2	3	3	2	2	1	0	13
										Misc	10	14	7	5	4	2	1	43
		0.1	7	21	20	56.2	84	50	47	Sel	6	0	0	0	0	0	0	6
										Pjasal	0	0	0	0	0	0	0	0
										Asan	3	6	4	3	2	1	0	19
										Misc	11	10	12	6	4	1	1	45
		0.1	6	21	21	36.2	84	50	36.8	Sel	8	0	0	0	0	0	0	8
										Pjasal	0	3	1	1	0	0	0	5
										Asan	2	3	3	4	2	1	0	15
										Misc	9	17	11	6	3	2	0	48
		0.1	6	21	21	17.2	84	50	32	Sel	5	0	0	0	0	0	0	5
										Pjasal	0	1	2	2	0	0	0	5
										Asan	2	3	3	2	2	1	0	13
										Misc	12	7	6	8	3	1	0	37
		0.1	9	21	21	29.9	84	50	28.8	Sel	7	0	0	0	0	0	0	7
										Pjasal	0	1	0	0	0	0	0	1
										Asan	2	3	3	2	1	0	0	11
										Misc	10	13	6	6	4	1	0	40
		0.1	9	21	21	18.9	84	50	29.2	Sel	6	0	0	0	0	0	0	6
										Pjasal	0	1	0	2	0	0	0	3
										Asan	3	3	3	2	1	0	0	12
										Misc	11	8	6	4	4	1	1	35
		0.1	6	21	21	23	84	50	24	Sel	8	1	1	2	0	0	0	12
										Pjasal	0	2	2	1	0	0	0	5
										Asan	2	3	3	2	2	1	0	13
										Misc	9	15	10	6	4	4	1	47
		0.1	9	21	21	26.9	84	50	20.6	Sel	5	3	3	2	1	0	0	14
										Pjasal	0	0	0	0	0	0	0	0
										Asan	2	3	3	2	1	1	0	12

Dongarh & Rasmal

Dogan RF

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0.1	6	21	21	47.1	84	50	19	Misc	12	13	6	4	3	2	1	41
								Sal	7	3	3	2	1	1	0	17
								Plasal	0	0	1	1	0	0	0	2
								Asss	2	5	4	3	2	1	0	17
0.1	7	21	21	38.4	84	50	15	Misc	10	12	7	5	4	2	1	41
								Sal	6	11	4	3	2	1	0	27
								Plasal	0	1	1	0	0	0	0	2
								Asss	3	3	3	2	1	1	0	13
0.1	4	21	20	42	84	51	0.5	Misc	11	16	7	6	6	2	0	48
								Sal	8	0	0	0	0	0	0	8
								Plasal	0	2	1	0	0	0	0	3
								Asss	2	8	7	0	0	0	0	17
0.1	4	21	20	42.7	84	50	57.3	Misc	9	32	18	9	4	2	0	74
								Sal	5	0	0	0	0	0	0	5
								Plasal	0	0	0	0	0	0	0	0
								Asss	2	7	3	3	0	0	0	15
0.1	6	21	21	1.7	84	50	54.4	Misc	12	28	19	13	13	43	0	128
								Sal	7	12	6	4	2	0	0	31
								Plasal	0	0	0	0	0	0	0	0
								Asss	2	12	12	3	2	0	0	31
0.1	5	21	20	47.8	84	50	52.8	Misc	10	29	22	13	4	7	7	92
								Sal	6	2	1	1	0	0	0	10
								Plasal	0	0	0	0	0	0	0	0
								Asss	3	3	7	5	2	0	0	20
0.1	5	21	20	59.6	84	50	52	Misc	11	27	17	10	8	3	0	75
								Sal	8	0	0	0	0	0	0	8
								Plasal	0	0	1	0	0	0	0	1
								Asss	2	18	9	3	0	0	0	32
0.1	5	21	20	59.8	84	50	46.7	Misc	9	33	27	15	7	2	0	91
								Sal	5	0	0	0	0	0	0	5
								Plasal	0	0	0	0	0	0	0	0
								Asss	2	13	8	10	3	0	0	36
0.1	5	21	21	6.9	84	50	46.7	Misc	12	27	17	12	6	4	4	82
								Sal	7	8	8	3	0	0	0	26
								Plasal	0	5	3	0	0	0	0	8
								Asss	2	3	5	2	0	0	0	12
0.1	4	21	20	21.7	84	51	8.8	Misc	10	29	13	13	7	4	4	80
								Sal	6	4	0	0	0	0	0	10
								Plasal	0	0	0	0	0	0	0	0
								Asss	3	5	1	0	0	0	0	9
0.1	4	21	20	24.7	84	51	7.3	Misc	11	32	12	4	8	1	2	70
								Sal	8	0	0	0	0	0	0	8
								Plasal	0	0	0	0	0	0	0	0
								Asss	2	2	0	0	0	0	0	4
0.1	4	21	20	25.4	84	51	3.8	Misc	9	40	5	2	7	2	2	67
								Sal	5	0	0	0	0	0	0	5
								Plasal	0	0	0	0	0	0	0	0
								Asss	2	13	6	0	0	0	0	21
0.1	5	21	20	26.5	84	50	59.5	Misc	12	43	13	9	11	0	1	89
								Sal	7	0	0	0	0	0	0	7
								Plasal	0	0	0	0	0	0	0	0
								Asss	2	8	0	0	0	0	0	10
0.1	6	21	20	46.3	84	50	58.5	Misc	10	48	14	13	6	0	1	92
								Sal	6	2	0	0	0	0	0	8
								Plasal	0	0	0	0	0	0	0	0
								Asss	3	3	2	0	0	0	0	8
0.1	4	21	20	30.6	84	50	57.6	Misc	11	33	22	18	12	7	4	107
								Sal	8	3	0	0	0	0	0	11
								Plasal	0	0	1	0	0	0	0	1
								Asss	2	4	3	2	2	0	0	13
0.1	4	21	20	35.5	84	51	1.4	Misc	9	34	14	13	9	0	2	81
								Sal	5	0	0	0	0	0	0	5

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										Pinsal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	12	43	18	8	5	0	0	86
		0.1	7	21	21	25.3	84	50	8.9	Sal	7	7	6	4	3	1	0	28
										Pinsal	0	1	0	0	0	0	0	1
										Asan	2	4	3	3	2	1	0	15
										Misc	10	12	7	6	3	1	0	39
		0.1	6	21	21	21.2	84	50	6.7	Sal	6	2	2	1	1	0	0	12
										Pinsal	0	0	0	0	0	0	0	0
										Asan	3	6	4	3	2	0	0	18
										Misc	11	17	8	6	4	1	0	47
		0.1	9	21	21	15.9	84	50	5.9	Sal	8	4	2	2	1	1	0	18
										Pinsal	0	0	0	0	0	0	0	0
										Asan	2	4	3	3	2	1	0	15
										Misc	9	17	13	9	4	2	1	55
		0.1	6	21	21	11.2	84	50	3	Sal	5	0	0	0	0	0	0	5
										Pinsal	0	0	0	0	0	0	0	0
										Asan	2	3	3	2	1	1	0	12
										Misc	12	16	12	7	4	2	0	53
		0.1	7	21	21	5.8	84	50	4.2	Sal	7	3	2	1	1	0	0	14
										Pinsal	0	0	0	0	0	0	0	0
										Asan	2	6	7	4	1	1	0	21
										Misc	10	16	7	8	4	1	0	46
		0.1	8	21	20	40.5	84	49	57.1	Sal	6	3	2	1	1	1	0	14
										Pinsal	0	0	0	0	0	0	0	0
										Asan	3	4	3	2	1	0	0	13
										Misc	11	13	6	8	4	1	0	43
		0.1	8	21	20	38	84	49	47	Sal	8	0	0	0	0	0	0	8
										Pinsal	0	0	0	0	0	0	0	0
										Asan	2	3	4	2	1	0	0	12
										Misc	9	12	6	8	4	3	0	42
Deepthi & Remmal	Ramchandevi RF	100	21 & 22	21	27	57.2	84	46	1.9	Sal	6930	8280	7136	5280	3332	1394	455	32807
				21	27	58.8	84	46	26.0	Pinsal	990	518	420	176	49	0	0	2153
				21	28	48.4	84	46	41.5	Asan	2970	3105	3568	2640	882	492	0	13857
				21	28	54.8	84	46	20.8	Misc	8910	8797	11176	9504	5537	2214	845	46983
		55	15 & 17	21	28	5.2	84	42	57.5	Sal	3811	4554	3925	2904	1832	767	250	18043
				21	27	57.2	84	43	13.0	Pinsal	544	341	245	97	26	0	0	1253
				21	28	35.6	84	43	30.2	Asan	1633	1821	2085	1452	709	203	0	7894
				21	28	38.8	84	43	14.7	Misc	4902	4669	6010	5227	2832	1285	465	25099
		0.1	3	21	25	8.2	84	48	9.2	Sal	10	0	0	0	0	0	0	10
										Pinsal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	9	12	14	3	0	0	0	38
		0.1	9	21	25	14.6	84	47	56.3	Sal	8	16	0	0	0	0	0	24
										Pinsal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	12	2	1	3	5	4	4	31
		0.1	9	21	25	37.4	84	47	19.3	Sal	8	19	3	0	0	0	0	30
										Pinsal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	10	13	4	3	2	0	0	32
		0.1	8	21	25	53.4	84	46	55.1	Sal	9	8	3	0	0	0	0	20
										Pinsal	0	0	0	0	0	0	0	0
										Asan	2	3	1	0	0	0	0	6
										Misc	10	14	14	4	6	3	0	51
		0.1	8	21	26	11.1	84	46	28.3	Sal	8	9	10	0	0	0	0	27
										Pinsal	0	0	0	0	0	0	0	0
										Asan	3	7	0	0	0	0	0	10
										Misc	9	15	4	5	0	0	0	33
		0.1	8	21	26	5.3	84	46	42.4	Sal	7	9	2	0	0	0	0	18

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									Plasul	0	0	0	0	0	0	0	0
									Asan	3	12	3	0	0	0	0	18
0.1	7	21	26	1.2	84	46	45.4		Misc	9	7	3	2	0	0	0	21
									Sal	10	3	6	2	0	0	0	21
									Plasul	0	2	0	0	0	0	0	2
									Asan	0	4	2	0	0	0	0	6
0.1	7	21	26	9.7	84	46	31.4		Misc	9	8	5	3	2	0	0	27
									Sal	8	6	1	0	0	0	0	15
									Plasul	0	0	0	0	0	0	0	0
									Asan	0	1	1	0	0	0	0	2
0.1	6	21	26	7.8	84	46	33.9		Misc	12	7	4	2	0	0	0	25
									Sal	8	6	2	0	1	0	0	17
									Plasul	0	0	0	0	0	0	0	0
									Asan	0	3	0	0	0	0	0	3
0.1	6	21	26	5.2	84	46	39.1		Misc	10	7	6	3	0	0	0	26
									Sal	9	3	2	0	0	0	0	14
									Plasul	0	0	0	0	0	0	0	0
									Asan	2	4	3	0	0	0	0	9
0.1	7	21	25	51.2	84	46	57.4		Misc	10	12	7	2	1	1	0	33
									Sal	8	6	3	1	0	0	0	18
									Plasul	0	0	0	0	0	0	0	0
									Asan	3	3	1	1	0	0	0	8
0.1	6	21	26	2.9	84	46	41.9		Misc	9	13	6	1	1	0	0	30
									Sal	7	7	2	1	0	0	0	17
									Plasul	0	0	0	0	0	0	0	0
									Asan	3	2	1	0	0	0	0	6
0.1	6	21	26	4.3	84	46	36.7		Misc	9	11	4	1	0	0	0	25
									Sal	10	5	1	0	0	0	0	16
									Plasul	0	0	0	0	0	0	0	0
									Asan	0	5	2	1	0	0	0	8
0.1	7	21	25	33.5	84	45	46.5		Misc	9	8	5	4	1	1	0	28
									Sal	8	8	6	4	3	1	0	30
									Plasul	0	0	0	0	0	0	0	0
									Asan	0	7	6	7	4	1	0	25
0.1	7	21	25	37	84	46	0.9		Misc	12	15	11	7	4	3	1	53
									Sal	8	9	7	6	3	3	0	36
									Plasul	0	0	0	0	0	0	0	0
									Asan	0	4	3	3	1	0	0	11
0.1	7	21	25	33.6	84	46	16.3		Misc	10	15	8	8	7	2	1	51
									Sal	9	11	9	7	4	3	0	43
									Plasul	0	0	0	0	0	0	0	0
									Asan	2	5	4	3	2	1	0	17
0.1	7	21	25	20.8	84	46	37.9		Misc	10	11	13	12	6	3	0	55
									Sal	8	3	2	2	1	0	0	16
									Plasul	0	0	0	0	0	0	0	0
									Asan	3	8	4	2	1	0	0	18
0.1	9	21	25	26	84	46	48.2		Misc	9	17	11	4	8	3	1	53
									Sal	7	4	3	3	2	1	0	20
									Plasul	0	0	0	0	0	0	0	0
									Asan	3	7	4	3	4	1	0	22
0.1	5	21	25	34.5	84	46	40.3		Misc	9	17	8	6	8	3	2	53
									Sal	10	4	4	3	2	1	0	24
									Plasul	0	0	0	0	0	0	0	0
									Asan	0	4	3	3	2	1	0	13
0.1	6	21	25	41.5	84	46	23.5		Misc	9	16	9	7	3	1	0	45
									Sal	8	14	8	7	2	1	0	40
									Plasul	0	0	0	0	0	0	0	0
									Asan	0	8	4	4	3	1	0	20
0.1	6	21	25	57.4	84	46	5.6		Misc	12	19	13	8	8	4	1	65
									Sal	8	9	8	4	7	1	0	37
									Plasul	0	0	0	0	0	0	0	0
									Asan	0	7	4	3	2	1	0	17

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									Misc	10	17	9	8	6	2	0	52
		0.1	12	21	26	1.3	84	45	41.1	Sal	9	9	6	7	2	1	0	34
										Pissal	0	0	0	0	0	0	0	0
										Asan	2	7	4	2	3	1	0	19
										Misc	10	15	12	7	4	2	0	50
		0.1	12	21	26	4.3	84	44	55.5	Sal	8	13	8	6	3	1	0	39
										Pissal	0	0	0	0	0	0	0	0
										Asan	3	7	3	2	1	1	0	17
										Misc	9	13	6	4	3	1	0	36
		0.1	11	21	26	18.3	84	44	17.5	Sal	7	12	7	4	2	1	0	33
										Pissal	0	0	0	0	0	0	0	0
										Asan	3	4	3	2	1	0	0	13
										Misc	9	17	9	7	4	2	0	48
		0.1	10	21	26	27.9	84	44	1.3	Sal	10	8	7	4	2	0	0	31
										Pissal	0	1	2	0	0	0	0	3
										Asan	0	3	3	2	1	0	0	9
										Misc	9	12	7	4	4	1	0	37
		0.1	10	21	26	29.7	84	43	55	Sal	8	12	8	4	3	0	0	35
										Pissal	0	0	0	0	0	0	0	0
										Asan	0	4	4	3	2	0	0	13
										Misc	12	13	8	7	4	1	0	45
		0.1	11	21	26	7.9	84	43	53.6	Sal	8	12	7	7	2	0	0	36
										Pissal	0	0	0	0	0	0	0	0
										Asan	0	7	4	3	2	0	0	16
										Misc	10	13	8	7	2	0	0	40
Deepak	Khajuria RF	60	14	21	40	20.8	84	31	17.4	Sal	4990	2602	2092	2879	2387	904	321	16175
				21	40	17.6	84	31	34.6	Pissal	221	115	93	62	26	0	0	517
				21	40	44.8	84	31	43.2	Asan	1996	1098	651	1001	689	177	9	5621
				21	40	49.6	84	31	26.8	Misc	3883	1969	1814	2318	2204	886	985	14059
		150	5,6 ,7 & 9	21	40	36.8	84	37	59.2	Sal	12475	2189	5231	7198	5968	2361	804	36186
				21	40	43.2	84	38	16.4	Pissal	554	96	232	140	66	0	0	1088
				21	41	56.8	84	37	52.3	Asan	4990	819	1627	2034	1724	393	35	11622
				21	41	45.6	84	37	33.4	Misc	9705	1736	4535	6277	5506	2263	948	30970
		0.1	8	21	40	11.2	84	36	27.8	Sal	9	19	15	9	12	9	4	77
										Pissal	0	0	0	0	0	0	0	0
										Asan	2	3	3	1	0	0	0	9
										Misc	8	13	9	4	3	2	2	41
		0.1	8	21	40	13.5	84	36	35.7	Sal	8	14	22	17	14	4	0	79
										Pissal	0	0	0	0	0	0	0	0
										Asan	3	7	4	4	0	0	0	18
										Misc	9	18	10	3	0	0	0	40
		0.1	7	21	40	23	84	37	23.6	Sal	7	28	18	23	9	13	0	98
										Pissal	0	0	0	0	0	0	0	0
										Asan	3	2	3	7	0	0	0	15
										Misc	9	10	14	13	8	0	0	54
		0.1	7	21	40	37.2	84	37	47.6	Sal	9	18	15	13	14	4	3	76
										Pissal	0	0	0	0	0	0	0	0
										Asan	2	9	4	3	1	0	0	19
										Misc	8	19	17	12	8	5	0	69
		0.1	6	21	40	54.7	84	37	53.7	Sal	8	14	9	13	6	7	4	61
										Pissal	1	2	1	0	0	0	0	4
										Asan	3	4	2	0	0	0	0	9
										Misc	9	23	14	9	4	9	9	77
		0.1	6	21	40	55.5	84	38	16.7	Sal	7	9	5	7	3	2	0	33
										Pissal	1	5	4	3	2	0	0	15
										Asan	3	4	2	7	3	0	0	19
										Misc	9	22	18	13	9	0	0	71
		0.1	8	21	40	5.2	84	36	13.2	Sal	9	12	8	4	6	1	0	40
										Pissal	0	0	0	0	0	0	0	0
										Asan	2	7	4	2	2	1	0	18
										Misc	8	14	8	7	4	2	2	45

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		0.1	8	21	40	3.3	84	35	40.2	Sal	8	6	7	9	12	2	0	44
										Plasd	1	1	2	3	0	0	0	7
										Asss	3	4	4	7	4	2	0	24
										Misc	9	12	7	5	4	2	1	40
		0.1	11	21	39	59.4	84	35	9.4	Sal	7	8	7	12	6	2	0	44
										Plasd	0	0	0	0	0	0	0	0
										Asss	3	4	3	8	6	0	0	24
										Misc	9	13	7	6	4	3	1	43
		0.1	11	21	39	59.1	84	34	52.5	Sal	9	4	7	8	3	2	0	33
										Plasd	0	0	0	0	0	0	0	0
										Asss	2	1	2	7	1	0	0	13
										Misc	8	7	4	6	3	1	0	29
		0.1	12	21	40	3.6	84	34	27.7	Sal	8	9	8	6	4	3	0	38
										Plasd	0	0	0	1	0	0	0	1
										Asss	3	4	3	7	2	1	0	20
										Misc	9	11	8	9	3	3	0	43
		0.1	12	21	40	58.9	84	34	51.2	Sal	7	4	7	6	4	2	0	30
										Plasd	0	0	0	0	0	0	0	0
										Asss	3	4	6	4	2	0	0	19
										Misc	9	9	8	4	1	0	0	31
		0.1	11	21	39	54.7	84	33	27.2	Sal	9	4	6	8	8	2	0	37
										Plasd	0	0	0	0	0	0	0	0
										Asss	2	3	0	0	0	0	0	5
										Misc	8	7	4	7	4	1	0	31
		0.1	14	21	40	38.7	84	31	12.9	Sal	8	10	3	4	2	2	0	29
										Plasd	1	1	0	0	0	0	0	2
										Asss	3	3	1	1	0	0	0	8
										Misc	9	15	4	5	3	0	0	36
		0.1	14	21	40	30.7	84	31	9.9	Sal	7	4	2	1	0	0	0	14
										Plasd	0	0	0	0	0	0	0	0
										Asss	3	1	1	0	0	0	0	5
										Misc	9	14	4	5	3	2	0	37
		0.1	14	21	40	48.5	84	31	10.1	Sal	9	5	3	0	0	0	0	17
										Plasd	0	0	0	0	0	0	0	0
										Asss	2	1	2	0	0	0	0	5
										Misc	8	12	10	4	2	2	0	38
		0.1	14	21	40	54.5	84	31	20.1	Sal	8	8	6	0	0	0	0	22
										Plasd	0	0	0	0	0	0	0	0
										Asss	3	1	0	0	0	0	0	4
										Misc	9	15	4	2	1	0	0	31
		0.1	14	21	40	28.1	84	31	59.8	Sal	7	4	2	0	0	0	0	13
										Plasd	0	0	0	0	0	0	0	0
										Asss	3	2	0	0	0	0	0	5
										Misc	9	12	4	2	1	1	0	29
		0.1	14	21	39	59.5	84	32	25.8	Sal	9	4	2	0	0	0	0	15
										Plasd	0	0	0	0	0	0	0	0
										Asss	2	1	0	0	0	0	0	3
										Misc	8	6	8	4	3	2	0	31
Deogarh & Nayagarh	Kanas RF	75	1	21	29	20.4	84	26	53.5	Sal	2790	2101	2311	1751	1357	394	135	10839
				21	29	9.2	84	27	10.7	Plasd	372	280	298	216	67	0	0	1233
				21	29	25.2	84	27	48.9	Asss	1302	983	1229	834	428	39	0	4815
				21	29	41.2	84	27	43.7	Misc	1413 6	1066 1	1153 7	8804	7148	219 2	765	55333
		85	1	21	21	29.6	84	35	30.9	Sal	3163	2534	2621	1965	1523	426	156	12178
				21	21	40.8	84	35	39.5	Plasd	412	312	332	236	43	0	0	1335
				21	22	17.6	84	34	56.2	Asss	1435	1202	1324	934	462	19	0	5376
				21	22	9.6	84	34	45.8	Misc	1603 2	1203 1	1302 5	9861	7985	245 8	745	62135
		80	1	21	26	24.8	84	27	7.2	Sal	2976	2241	2665	1865	1452	412	114	11725
				21	26	32.8	84	26	55.2	Plasd	368	235	326	237	68	0	0	1234
				21	25	49.6	84	26	10.5	Asss	1376	1034	1302	836	457	42	0	5047
				21	25	40.0	84	26	31.1	Misc	1503 4	1132 6	1203 5	9456	7536	185 4	723	57964

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100	1	21	22	35.6	84	37	0.4	Sel	3724	2815	3265	2351	1845	452	152	14604
		21	23	10.0	84	37	33.4	Pasal	389	285	356	246	85	0	0	1361
		21	22	41.2	84	39	47.2	Asas	1751	1267	1659	1047	549	46	0	6319
		21	22	27.2	84	37	12.4	Misc	18659	14123	15201	11678	8456	2163	784	71664
122	1	21	25	12.8	84	32	50.6	Sel	4543	3426	3985	2856	2351	546	185	17890
		21	25	30.4	84	33	28.5	Pasal	426	325	346	320	102	0	0	1519
		21	25	3.2	84	33	49.1	Asas	2136	1548	2056	1298	569	49	0	3656
		21	24	46.6	84	33	6.1	Misc	22895	17856	18652	14235	10345	2635	856	87436
0.1	1	21	25	33.8	84	29	23.2	Sel	5	0	0	0	0	0	0	5
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	0	0	0	0	0	0	2
								Misc	18	7	6	5	4	2	1	43
0.1	1	21	25	30	84	29	30.3	Sel	7	0	0	0	0	0	0	7
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	0	0	0	0	0	0	2
								Misc	16	15	5	4	3	3	1	47
0.1	1	21	25	23.8	84	31	19.1	Sel	6	0	0	0	0	0	0	6
								Pasal	0	0	0	0	0	0	0	0
								Asas	3	0	0	0	0	0	0	3
								Misc	15	13	9	8	4	0	0	49
0.1	1	21	26	20.5	84	34	47.9	Sel	8	6	3	0	0	0	0	17
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	3	0	0	0	0	0	5
								Misc	15	10	4	3	1	1	0	34
0.1	1	21	26	20.7	84	34	36.7	Sel	10	11	4	1	0	0	0	26
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	4	0	0	0	0	0	6
								Misc	11	15	8	5	3	2	0	44
0.1	1	21	26	18.4	84	33	59.5	Sel	5	0	0	0	0	0	0	5
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	4	3	0	0	0	0	9
								Misc	18	13	5	3	2	0	0	41
0.1	1	21	25	51.7	84	35	51	Sel	7	7	5	0	0	0	0	19
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	7	1	0	0	0	0	10
								Misc	16	12	7	4	1	0	0	40
0.1	1	21	25	37.7	84	33	36.9	Sel	6	4	0	0	0	0	0	10
								Pasal	0	0	0	0	0	0	0	0
								Asas	3	4	0	0	0	0	0	7
								Misc	15	7	5	4	4	3	1	39
0.1	1	21	25	26.6	84	33	37	Sel	8	6	0	0	0	0	0	14
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	6	2	0	0	0	0	10
								Misc	15	7	6	4	3	1	0	36
0.1	1	21	25	16	84	33	48.5	Sel	10	15	4	0	0	0	0	29
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	5	0	0	0	0	0	7
								Misc	11	7	6	2	0	0	2	28
0.1	1	21	26	8.6	84	34	59.3	Sel	5	14	13	8	9	4	1	54
								Pasal	0	1	1	1	0	0	0	3
								Asas	2	4	3	4	6	1	0	20
								Misc	18	13	16	13	13	3	2	80
0.1	1	21	26	2	84	35	15.6	Sel	7	12	7	8	4	3	1	42
								Pasal	0	1	1	0	0	0	0	2
								Asas	2	4	3	3	6	2	0	20
								Misc	16	12	11	8	14	6	3	70
0.1	1	21	25	44.4	84	35	25.4	Sel	6	8	4	6	4	3	1	32
								Pasal	0	0	0	0	0	0	0	0
								Asas	3	4	3	2	3	1	1	17
								Misc	15	15	12	8	9	3	1	63
0.1	1	21	25	17.5	84	35	10.7	Sel	8	4	3	7	2	1	0	25

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								Pimal	0	2	1	1	1	0	0	5
								Asm	2	3	3	2	2	1	0	13
0.1	1	21	25	42.5	84	35	4.6	Misc	15	15	13	8	4	3	2	60
								Sal	10	4	3	4	2	1	0	24
								Pimal	0	1	1	0	0	0	0	2
								Asm	2	4	3	2	1	0	0	12
0.1	1	21	25	56.9	84	35	45.8	Misc	11	15	13	13	11	4	2	69
								Sal	5	5	4	3	4	1	0	22
								Pimal	0	1	1	0	0	0	0	2
								Asm	2	3	2	2	2	1	0	12
0.1	1	21	25	18.4	84	35	32.5	Misc	18	15	13	17	8	3	1	75
								Sal	7	4	4	3	2	1	0	21
								Pimal	0	1	1	1	0	0	0	3
								Asm	2	3	2	2	2	0	0	11
0.1	1	21	28	29.8	84	29	35.1	Misc	16	15	13	8	3	3	2	60
								Sal	6	0	0	0	0	0	0	6
								Pimal	0	0	0	0	0	0	0	0
								Asm	3	4	2	0	0	0	0	9
0.1	1	21	28	22	84	29	38.5	Misc	15	22	13	18	4	3	0	75
								Sal	8	0	0	0	0	0	0	8
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	5	3	0	0	0	0	10
0.1	1	21	28	6.6	84	29	28.9	Misc	15	17	9	9	4	4	0	58
								Sal	10	2	2	0	2	0	0	16
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	5	3	0	0	0	0	10
0.1	1	21	27	58	84	29	16.7	Misc	11	23	13	8	5	3	4	67
								Sal	5	0	0	0	0	0	0	5
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	5	3	0	0	0	0	10
0.1	1	21	27	42.1	84	29	6.5	Misc	18	15	13	10	8	4	3	71
								Sal	7	0	0	0	0	0	0	7
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	0	3	0	0	0	0	5
0.1	1	21	27	16.6	84	28	51.4	Misc	16	18	10	8	4	4	3	63
								Sal	6	0	0	0	0	0	0	6
								Pimal	0	0	0	0	0	0	0	0
								Asm	3	10	5	2	3	0	0	23
0.1	1	21	25	44.5	84	28	54.6	Misc	15	15	13	9	3	0	0	55
								Sal	8	2	3	1	1	0	0	15
								Pimal	0	1	1	0	1	1	0	4
								Asm	2	2	2	1	1	0	0	8
								Misc	15	16	13	16	8	4	0	72
0.1	1	21	26	0.8	84	28	44	Sal	10	0	0	0	0	0	0	10
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	11	17	15	10	4	1	0	58
0.1	1	21	26	9.7	84	28	50.5	Sal	5	0	0	0	0	0	0	5
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	18	15	12	9	7	2	0	63
0.1	1	21	26	19.8	84	28	56.1	Sal	7	0	0	0	0	0	0	7
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	16	14	14	13	8	3	0	68
0.1	1	21	26	37.6	84	28	53.5	Sal	6	0	0	0	0	0	0	6
								Pimal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Misc	15	16	14	11	13	4	1	74
								Sal	138	12	13	10	14	13	4	204
1	1	21	19	50.5	85	13	9.8	Pimal	8	3	0	0	0	0	0	11
								Asm	21	8	11	2	2	0	0	44

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									Misc	50	10	15	6	1	0	0	82
		0.1	1	21	19	48.7	85	13	11	Sal	12	5	7	10	7	2	0	43
										Passl	0	0	0	0	0	0	0	0
										Asm	2	8	7	5	1	0	0	23
										Misc	6	15	11	13	7	2	0	54
		0.1	1	21	19	37.4	85	13	5.6	Sal	10	4	8	25	7	2	0	56
										Passl	0	0	0	0	0	0	0	0
										Asm	2	0	0	0	0	0	0	2
										Misc	9	0	0	0	0	0	0	9
		0.1	1	21	19	33.6	85	12	30.6	Sal	8	4	9	12	7	1	0	41
										Passl	0	0	0	0	0	0	0	0
										Asm	4	7	4	2	0	0	0	17
										Misc	9	10	18	14	19	2	0	72
		0.1	1	21	19	21.8	85	12	24.7	Sal	12	4	9	8	5	0	0	38
										Passl	0	0	0	0	0	0	0	0
										Asm	2	11	7	0	0	0	0	20
										Misc	6	15	13	12	8	0	0	54
		0.1	1	21	19	4.5	85	11	49.1	Sal	10	12	7	0	9	0	0	38
										Passl	0	0	0	0	0	0	0	0
										Asm	2	5	0	0	0	0	0	7
										Misc	9	13	5	11	2	0	0	40
		0.1	1	21	19	22.5	85	11	0.3	Sal	8	20	3	3	0	0	0	36
										Passl	0	0	0	0	0	0	0	0
										Asm	4	7	0	0	0	0	0	11
										Misc	9	16	6	3	0	0	0	34
		0.1	1	21	19	38.6	85	11	25.5	Sal	12	20	5	3	0	0	0	40
										Passl	0	0	0	0	0	0	0	0
										Asm	2	7	0	0	0	0	0	9
										Misc	6	16	6	3	0	0	0	31
		0.1	1	21	20	2.3	85	11	53.6	Sal	10	14	12	5	2	0	0	43
										Passl	0	0	0	0	0	0	0	0
										Asm	2	5	2	0	0	0	0	9
										Misc	9	16	12	14	4	0	0	55
		0.1	1	21	20	16.1	85	12	48.5	Sal	8	16	17	11	7	0	0	59
										Passl	0	0	0	0	0	0	0	0
										Asm	4	12	4	2	0	0	0	22
										Misc	9	18	13	14	2	0	0	56
		0.1	1	21	20	1.8	85	13	2	Sal	9	22	9	3	0	0	0	43
										Passl	0	4	0	0	0	0	0	4
										Asm	3	12	6	0	0	0	0	21
										Misc	9	14	11	4	0	0	0	38
Khimsar	Kolodiem RF	23	5	21	12	57.2	85	22	2.1	Sal	1842	840	1365	1445	700	433	93	6718
				21	13	3.6	85	21	38.7	Passl	92	48	22	8	0	0	0	170
				21	13	6.8	85	22	33.4	Asm	645	159	198	223	57	31	4	1317
				21	12	58.8	85	22	36.9	Misc	1377	713	533	480	480	480	105	4168
		25	3	21	13	59.6	85	19	45.8	Sal	1793	1198	562	1643	863	608	143	6810
				21	14	2.8	85	19	37.3	Passl	29	7	4	3	0	0	0	43
				21	14	33.2	85	19	39.0	Asm	638	197	153	48	4	0	3	1043
				21	14	31.6	85	19	49.3	Misc	1840	1704	1282	1233	643	473	183	7358
		25	1	21	15	20.8	85	18	33.4	Sal	1734	1762	547	1968	1008	758	144	7921
				21	15	25.6	85	18	25.0	Passl	16	3	4	0	0	0	0	23
				21	15	48.0	85	18	43.9	Asm	762	225	153	57	4	3	0	1204
				21	15	43.2	85	18	52.6	Misc	1788	2240	1720	960	645	120	0	7473
		0.1	1	21	16	0	85	17	26.7	Sal	7	3	2	3	4	4	1	24
										Passl	0	0	0	0	0	0	0	0
										Asm	1	1	1	1	0	0	0	4
										Misc	9	8	3	2	2	2	1	27
		0.1	1	21	16	16.2	85	17	36.9	Sal	5	0	2	3	2	4	1	17
										Passl	0	0	0	0	0	0	0	0
										Asm	0	0	0	0	0	0	0	0
										Misc	12	4	4	3	5	1	0	29
		0.1	1	21	16	20.6	85	17	48.3	Sal	6	0	4	3	4	3	0	20

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								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	0	0	0	0	0	0
								Misc	13	12	4	2	2	0	0	33
0.1	1	21	16	18.5	85	17	50	Sal	5	2	5	5	3	3	0	23
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	0	0	0	0	0	0
								Misc	11	4	3	1	0	0	0	19
0.1	1	21	15	59.9	85	17	21	Sal	7	2	3	5	5	2	0	24
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	0	0	0	0	0	0
								Misc	10	2	1	1	0	0	0	14
0.1	1	21	15	51.5	85	17	36.5	Sal	8	5	2	4	4	3	0	26
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	0	0	0	0	0	0
								Misc	11	4	2	2	1	0	0	20
0.1	5	21	12	46.6	85	22	1	Sal	8	7	7	4	3	3	0	32
								Pinnul	0	0	0	0	0	0	0	0
								Anm	4	7	4	6	4	1	0	26
								Misc	6	17	11	9	8	3	1	55
0.1	6	21	12	40.5	85	22	6.7	Sal	7	0	0	7	7	6	3	30
								Pinnul	0	0	0	0	0	0	0	0
								Anm	1	0	1	1	2	0	0	5
								Misc	9	15	12	7	9	4	1	57
0.1	6	21	11	49.4	85	22	28.7	Sal	5	2	1	3	3	2	0	16
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	1	0	2	2	1	0	6
								Misc	12	16	12	7	4	2	2	55
0.1	6	21	11	27.1	85	22	35.5	Sal	6	0	1	3	4	3	0	17
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	0	2	3	0	0	5
								Misc	13	13	7	6	4	3	0	46
0.1	6	21	11	20.1	85	22	43.7	Sal	5	0	0	1	1	0	0	7
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	2	3	1	0	0	6
								Misc	11	10	7	8	8	3	1	48
0.1	6	21	11	9.1	85	22	50.4	Sal	7	0	1	2	3	1	0	14
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	1	1	1	0	0	3
								Misc	10	13	12	6	7	3	1	52
0.1	6	21	11	3.6	85	23	5.5	Sal	8	0	0	1	2	1	0	12
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	1	1	1	0	0	3
								Misc	11	12	7	7	4	3	2	46
0.1	4	21	15	44	85	21	59.4	Sal	8	0	0	8	8	2	0	26
								Pinnul	0	0	0	0	0	0	0	0
								Anm	4	0	7	2	3	0	0	16
								Misc	6	0	1	4	4	2	0	17
0.1	4	21	14	11.3	85	21	42.3	Sal	7	0	0	3	7	12	3	32
								Pinnul	0	0	0	0	0	0	0	0
								Anm	1	0	0	0	4	1	0	6
								Misc	9	0	0	4	3	3	3	22
0.1	4	21	14	33.6	85	21	11.5	Sal	5	4	6	7	8	3	2	35
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	0	4	2	2	1	9
								Misc	12	3	5	7	3	4	2	36
0.1	3	21	14	42.3	85	20	58	Sal	6	0	0	0	1	2	1	10
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	1	3	2	2	1	9
								Misc	13	6	1	2	3	3	1	29
0.1	3	21	14	10.1	85	20	48.5	Sal	3	0	1	1	2	1	0	10
								Pinnul	0	0	0	0	0	0	0	0
								Anm	0	0	1	2	3	2	0	8

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									Misc	11	0	3	7	4	3	1	29
		0.1	3	21	14	3.1	85	20	21.1	Sol	7	0	0	1	2	1	0	11
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	1	3	2	1	0	0	7
										Misc	10	5	3	4	3	1	0	26
		0.1	3	21	13	51.7	85	19	2.6	Sol	8	2	2	3	7	2	1	25
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	4	3	2	6	2	0	17
										Misc	11	7	4	4	3	1	0	30
		0.1	2	21	15	1.6	85	19	1.5	Sol	8	7	4	4	9	8	6	46
										Pissd	0	0	0	0	0	0	0	0
										Asss	4	4	6	5	3	1	0	23
										Misc	6	18	10	8	3	3	0	48
		0.1	2	21	14	53.5	85	18	46.3	Sol	7	0	4	9	7	4	3	34
										Pissd	0	0	0	0	0	0	0	0
										Asss	1	0	0	5	2	2	0	10
										Misc	9	2	2	4	5	3	2	27
		0.1	3	21	14	31.1	85	18	35.4	Sol	5	0	7	10	14	8	7	51
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	0	3	4	2	2	0	11
										Misc	12	4	5	8	10	4	3	46
		0.1	2	21	14	44.6	85	18	20.8	Sol	6	4	7	12	7	4	4	44
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	3	4	7	3	0	0	17
										Misc	13	9	8	4	5	4	2	45
		0.1	2	21	14	40.8	85	18	43.4	Sol	5	3	4	4	2	1	0	19
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	2	3	3	1	0	0	9
										Misc	11	12	9	12	4	5	3	56
		0.1	5	21	13	2.5	85	22	17.5	Sol	7	9	5	6	3	0	0	30
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	4	5	4	3	2	0	18
										Misc	10	23	14	12	5	4	7	75
		0.1	5	21	13	1.3	85	22	30.5	Sol	8	12	10	9	4	0	0	43
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	4	3	5	2	0	0	14
										Misc	11	20	18	12	8	4	4	77
		0.1	5	21	12	2.5	85	22	43.7	Sol	8	0	2	3	2	2	0	17
										Pissd	0	0	0	0	0	0	0	0
										Asss	4	0	0	0	0	0	0	4
										Misc	6	19	8	19	3	3	5	63
		0.1	6	21	11	53.4	85	22	50.3	Sol	7	0	0	0	2	0	0	9
										Pissd	0	0	0	0	0	0	0	0
										Asss	1	0	0	0	0	0	0	1
										Misc	9	28	18	17	8	3	3	86
		0.1	6	21	11	50.4	85	22	45.5	Sol	5	3	4	2	0	0	0	14
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	0	0	0	0	0	0	0
										Misc	12	14	9	8	6	4	3	56
		0.1	1	21	15	16.2	85	18	18.7	Sol	6	0	0	0	0	0	0	6
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	3	5	3	0	1	0	12
										Misc	13	12	9	4	4	2	3	47
		0.1	2	21	15	9.8	85	18	31.6	Sol	5	2	3	0	3	7	7	27
										Pissd	0	0	0	0	0	0	0	0
										Asss	0	3	4	2	4	1	0	14
										Misc	11	2	1	7	7	4	4	36
Pallahara	Tamkria RF	1	1	21	29	10.8	85	14	23.5	Sol	67	27	35	44	33	29	36	271
										Pissd	0	0	0	0	0	0	0	0
										Asss	39	11	8	15	2	0	0	75
										Misc	86	51	46	31	27	33	20	294
		1	1	21	29	20.4	85	14	33.8	Sol	56	28	44	51	37	38	18	272

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								Pinnul	0	0	0	0	0	0	0	0
								Anan	38	15	8	6	3	0	0	70
1	1	21	29	4.4	85	14	48.7	Misc	103	45	27	41	36	29	21	302
								Sal	62	38	37	21	45	27	19	249
								Pinnul	0	0	0	0	0	0	0	0
								Anan	27	6	4	5	0	1	0	43
1	1	21	28	48.4	85	14	25.2	Misc	127	38	42	49	27	41	35	359
								Sal	95	44	48	37	55	29	34	342
								Pinnul	0	0	0	0	0	0	0	0
								Anan	43	11	7	9	5	1		76
1	1	21	28	35.6	85	14	20.0	Misc	67	38	42	49	27	41	45	309
								Sal	57	39	35	44	42	28	23	268
								Pinnul	12	3	2	0	0	0	0	17
								Anan	36	15	9	7	3	0	0	70
1	1	21	28	13.2	85	14	25.2	Misc	97	41	38	47	55	33	31	342
								Sal	76	44	38	70	47	30	25	330
								Pinnul	7	6	4	1	0	0	0	18
								Anan	38	8	7	5	1	0	0	59
1	1	21	28	37.2	85	14	23.5	Misc	73	39	46	52	38	34	25	307
								Sal	78	47	36	41	32	37	29	300
								Pinnul	14	5	6	3	0	0	0	28
								Anan	37	20	8	8	2	1	0	76
1	1	21	28	46.8	85	14	56.2	Misc	63	55	32	48	37	29	30	294
								Sal	81	57	49	31	28	33	37	316
								Pinnul	0							0
								Anan	36	15	12	9	1			73
1	1	21	28	13.2	85	14	38.6	Misc	78	48	53	51	36	32	37	335
								Sal	76	50	21	48	58	8	12	273
								Pinnul	16	6	2					24
								Anan	13	5	3	8	7			36
1	1	21	28	24.4	85	14	35.5	Misc	87	48	40	67	9	25	2	278
								Sal	68	47	18	53	63	19	15	283
								Pinnul	6	1	3					10
								Anan	18	8	3	2	5			36
1	1	21	28	26.0	85	14	25.2	Misc	102	45	37	60	12	20	4	280
								Sal	77	53	25	38	53	23	20	289
								Pinnul	0	0	0	0	0	0	0	0
								Anan	34	10	3	1	0	0	0	50
1	1	21	28	35.6	85	14	52.7	Misc	83	39	34	55	7	18	1	237
								Sal	64	37	18	52	64	12	18	265
								Pinnul	14	3	2	0	0	0	0	19
								Anan	33	9	5	3	0	0	0	50
1	1	21	28	50.0	85	14	42.4	Misc	81	47	39	61	12	21	3	264
								Sal	72	35	28	37	31	9	17	229
								Pinnul	0	0	0	0	0	0	0	0
								Anan	19	5	7	2	1	0	0	34
1	1	21	28	14.0	85	14	52.7	Misc	106	33	29	21	17	15	11	232
								Sal	69	35	31	48	32	30	23	268
								Pinnul	0	0	0	0	0	0	0	0
								Anan	23	8	5	3	0	0	0	39
1	1	21	29	4.4	85	15	6.9	Misc	98	29	51	43	28	25	18	292
								Sal	89	49	35	51	57	41	36	358
								Pinnul	0	0	0	0	0	0	0	0
								Anan	5	2	5	3	0	0	0	15
1	1	21	29	18.8	85	15	5.1	Misc	99	38	27	33	18	29	15	259
								Sal	59	21	40	65	41	33	39	298
								Pinnul	0	0	0	0	0	0	0	0
								Anan	29	9	8	5	2	0	0	53
1	1	21	29	50.0	85	15	1.7	Misc	117	27	38	41	39	28	18	308
								Sal	87	51	18	45	57	19	14	291
								Pinnul	14	4	2	0	0	0	0	20
								Anan	31	18	3	6	0	0	0	58

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									Misc	62	49	38	63	8	23	3	246
		1	1	21	28	2.8	85	14	52.7	Sal	85	40	12	36	64	22	28	287
										Pinnal	0		0	0	0	0	0	0
										Anim	10	3	7	0	2	0	0	22
										Misc	96	40	35	60	6	18	4	259
		1	1	21	29	15.6	85	14	21.8	Sal	79	52	24	37	58	24	25	299
										Pinnal	5	1	1					7
										Anim	23	8		3				34
										Misc	97	42	36	61	5	3	2	246
		1	1	21	29	42.0	85	14	11.5	Sal	68	41	23	49	63	20	27	291
										Pinnal	9	3	2	0	0	0	0	14
										Anim	34	10	2	4	0	0	0	50
										Misc	79	43	39	65	8	23	3	260
		0.1	1	21	29	9.8	85	14	14.6	Sal	10	1	0	1	1	1	1	15
										Pinnal	0	0	0	0	0	0	0	0
										Anim	4	0	0	0	0	0	0	4
										Misc	6	11	8	5	3	1	0	34
		0.1	1	21	29	3	85	14	17.8	Sal	9	3	0	2	1	1	1	17
										Pinnal	0	0	0	0	0	0	0	0
										Anim	3	0	0	0	0	0	0	3
										Misc	8	14	16	3	1	0	0	42
		0.1	1	21	28	56.7	85	14	23.8	Sal	7	2	2	0	1	0	0	12
										Pinnal	1	1	1	1	2	0	0	6
										Anim	5	0	0	0	0	0	0	5
										Misc	6	24	13	10	1	1	0	55
		0.1	1	21	28	43.6	85	14	25.4	Sal	11	0	3	6	3	1	4	28
										Pinnal	0	0	0	0	0	0	0	0
										Anim	2	0	0	3	0	0	0	5
										Misc	6	25	12	5	0	0	0	48
		0.1	1	21	28	40.4	85	14	30.7	Sal	5	1	6	8	5	3	2	30
										Pinnal	0	0	0	0	0	0	0	0
										Anim	2	2	4	1	0	0	0	9
										Misc	12	13	10	3	3	1	1	43
		0.1	1	21	28	29.5	85	14	29.1	Sal	8	3	4	10	5	2	3	35
										Pinnal	0	0	0	0	0	0	0	0
										Anim	4	1	2	0	1	0	0	8
										Misc	8	9	4	3	0	1	0	25
Pallahara	Malanchira RP	1	2	21	28	32.4	85	11	17.4	Sal	120	80	12	14	7	6	18	257
										Pinnal	0	0	0	0	0	0	0	0
										Anim	6	10	2	0	0	0	0	18
										Misc	52	18	0	12	0	8	12	102
		1	1	21	28	22.6	85	11	13.7	Sal	119	70	0	0	0	0	12	201
										Pinnal	0	0	0	0	0	0	0	0
										Anim	0	0	0	0	0	0	0	0
										Misc	59	12			30	10	20	131
		1	1	21	28	30.7	85	11	0.5	Sal	122	160	120	12	50	30	50	544
										Pinnal	0	0	0	0	0	0	0	0
										Anim	0	0	0	0	0	0	0	0
										Misc	56	40	20	10	0	0	10	136
		1	1	21	28	54.3	85	11	56.7	Sal	121	50	40	30	28	20	54	343
										Pinnal	0	0	0	0	0	0	0	0
										Anim	30	60	0	10	4	0	0	104
										Misc	28	90	12	20	2	0	0	152
		1	2	21	29	26.0	85	11	26.4	Sal	112	30	9	7	0	30	40	228
										Pinnal	0	0	0	0	0	0	0	0
										Anim	12	6	4	0	10	16	0	48
										Misc	55	5	3	10	12	12	0	97
		1	2	21	28	27.6	85	11	36.3	Sal	98	90	0	2	0	12	14	216
										Pinnal	0	0	0	0	0	0	0	0
										Anim	7	6	0	4	0	1	0	18
										Misc	73	12	6	9	28	14	16	158
		1	2	21	28	42.0	85	11	39.7	Sal	118	120	18	10	48	24	26	364

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								Pimal	0	0	0	0	0	0	0	0
								Asan	9	12	2	3	2	0	0	28
1	1	21	28	24.4	85	10	49.9	Misc	51	48	18	14	0	0	9	140
								Sal	117	46	40	32	30	20	26	311
								Pimal	0	0	0	0	0	0	0	0
								Asan	5	12	6	3	2	0	0	28
1	1	21	28	21.2	85	10	39.5	Misc	56	48	18	14	0	0	5	141
								Sal	115	76	2	0	0	12	20	225
								Pimal	0	0	0	0	0	0	0	0
								Asan	12	18	6	4	0	0	0	40
1	1	21	28	35.6	85	10	41.2	Misc	50	20		30		10	12	122
								Sal	98	50	42	33	30	20	60	333
								Pimal	0	0	0	0	0	0	0	0
								Asan	22	40	12	8	0	2	0	84
1	1	21	28	46.8	85	10	25.8	Misc	59	70	18	12	0	0	3	162
								Sal	119	86	4	0	0	2	1	212
								Pimal	0	0	0	0	0	0	0	0
								Asan	9	8	6	0	4	0	0	27
1	2	21	29	1.2	85	10	37.8	Misc	50	14	0	0	36	12	15	127
								Sal	123	80	46	20	34	23	28	354
								Pimal	0	0	0	0	0	0	0	0
								Asan	18	30	0	12	0	0	0	60
1	2	21	29	9.2	85	10	44.7	Misc	32	40	8	20	0	8	10	118
								Sal	98	90	18	0	0	24	22	252
								Pimal	0	0	0	0	0	0	0	0
								Asan	17	12	5	0	2	0	0	36
1	2	21	29	22.0	85	10	41.3	Misc	65	28	12	0	6	0	8	119
								Sal	96	110	22	18	0	19	24	339
								Pimal	0	0	0	0	0	0	0	0
								Asan	12	6	10	6	0	0	0	34
1	1	21	28	48.4	85	10	37.8	Misc	72	34	10	19	0	4	8	147
								Sal	114	140	20	24	50	20	48	416
								Pimal	0	0	0	0	0	0	0	0
								Asan	12	6	5	4	2	0	0	29
1	2	21	28	43.6	85	10	6.9	Misc	53	40	24	10	0	6	10	143
								Sal	112	50	38	32	37	14	32	315
								Pimal	0	0	0	0	0	0	0	0
								Asan	14	30	2	8	0	0	0	54
1	3	21	28	10.6	85	13	33.1	Misc	48	87	19	24	0	0	6	184
								Sal	98	60	30	20	0	0	20	228
								Pimal	0	0	0	0	0	0	0	0
								Asan	6	4	6	0	0	0	0	16
1	3	21	28	9.3	85	13	40.1	Misc	76	70	10	30	32	9	19	246
								Sal	94	2	27	38	26	33	21	241
								Pimal	0	0	0	0	0	0	0	0
								Asan	7	10	7	0	0	0	0	24
1	3	21	28	43.6	85	13	33.3	Misc	70	28	0	32	0	0	0	130
								Sal	92	18	14	16	65	17	60	282
								Pimal	0	0	0	0	0	0	0	0
								Asan	8	6	3	0	2	0	0	19
1	3	21	28	37.4	85	13	40.2	Misc	72	12	21	0	0	0	2	107
								Sal	90	42	48	53	37	28	18	316
								Pimal	0	1	2	0	0	0	0	3
								Asan	12	22	14	27	7	8	0	90
1	4	21	28	38.8	85	13	5.5	Misc	75	22	27	18	32	2	0	176
								Sal	120	20	32	10		6	4	192
								Pimal	0	0	0	0	0	0	0	0
								Asan	3	4	7	0	1	0	0	15
1	4	21	28	58.0	85	13	21.0	Misc	56	45	60	32	27	4	9	233
								Sal	102	24	35	14	8	9	12	204
								Pimal	0	0	0	0	0	0	0	0
								Asan	9	6	5	2	0	0	0	22

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								Misc	60	48	57	28	25	5	3	226
1	4	21	28	35.6	85	13	35.3	Sal	98	4	29	42	58	14	48	293
								Plasal	0	0	0	0	0	0	0	0
								Asan	12	8	2	3	1	0	0	26
								Misc	68	12	28	2	0	0	4	114
1	3	21	28	45.2	85	13	0.9	Sal	94	16	18	12	48	15	54	257
								Plasal	1	1	3	0	0	0	0	5
								Asan	14	10	2	0	1	0	0	27
								Misc	69	13	22	2	0	0	1	107
1	3	21	29	6.0	85	12	50.6	Sal	98	20	18	21	74	25	53	309
								Plasal	0	0	0	0	0	0	0	0
								Asan	17	2	1	3	0	0	0	23
								Misc	65	23	17	0	2	0	0	107
1	3	21	29	28.4	85	12	47.2	Sal	96	23	21	14	52	28	61	295
								Plasal	0	0	0	0	0	0	0	0
								Asan	12	5	0	1	0	0	0	18
								Misc	72	14	16	2	0	0	1	105
1	4	21	29	2.8	85	12	33.4	Sal	114	22	27	32	48	29	48	320
								Plasal	0	0	0	0	0	0	0	0
								Asan	12	8	2	3	1	0	0	26
								Misc	53	12	17	0	5	0	2	89
1	4	21	29	18.8	85	12	35.1	Sal	112	18	22	25	64	30	47	318
								Plasal	0	1	0	0	0	0	0	1
								Asan	14	10	0	2	0	0	0	26
								Misc	48	8	14	7	0	1	2	80
0.1	4	21	28	38.3	85	13	47.5	Sal	8	0	10	1	3	1	8	31
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	10	0	1	5	3	0	3	22
0.1	4	21	28	43.8	85	13	40.2	Sal	9	1	7	1	2	0	3	23
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	2	3	0	0	0	0	6
								Misc	9	0	0	0	4	3	1	17
0.1	4	21	28	43	85	13	32.8	Sal	10	2	4	6	4	7	3	36
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	7	1	1	0	0	0	0	9
0.1	3	21	28	42.8	85	13	30.5	Sal	8	3	2	5	4	5	4	31
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	7	2	0	0	0	0	0	9
0.1	3	21	28	53.8	85	13	19	Sal	9	3	2	11	4	7	5	41
								Plasal	1	0	0	0	0	0	0	1
								Asan	2	1	2	0	0	0	0	5
								Misc	7	2	0	1	0	0	0	10
0.1	3	21	28	55.1	85	13	13.1	Sal	8	3	5	7	5	5	4	37
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	2	2	1	0	0	0	5
								Misc	10	3	0	2	0	1	0	16
0.1	4	21	29	0.3	85	13	10.3	Sal	9	3	5	10	6	7	3	43
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	2	0	1	1	0	0	5
								Misc	9	2	1	2	0	0	0	14
0.1	4	21	28	11.9	85	14	0.8	Sal	10	2	1	1	1	2	8	25
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	7	3	0	0	0	0	0	10
0.1	3	21	27	52.7	85	13	44.7	Sal	8	3	5	2	0	1	2	21
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	1	0	0	0	0	0	3
								Misc	7	5	1	0	1	0	0	14
0.1	3	21	28	7.8	85	13	30.9	Sal	9	4	2	1	1	2	0	19

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									Pinnal	1	0	0	0	0	0	0	1
									Anan	2	2	0	1	0	0	0	5
									Misc	7	3	2	1	2	1	2	18
		0.1	4	21	28	8.2	85	13	18.9	Sal	8	8	5	0	0	0	4	25
										Pinnal	0	0	0	0	0	0	0	0
										Anan	0	1	1	1	0	0	0	3
										Misc	10	6	2	21	0	0	0	39
		0.1	3	21	28	29.7	85	13	81	Sal	9	10	4	1	0	0	1	25
										Pinnal	0	0	0	0	0	0	0	0
										Anan	1	3	0	0	0	0	0	4
										Misc	9	4	2	3	0	1	1	20
		0.1	2	21	28	35.9	85	12	40.6	Sal	10	0	0	0	0	0	0	10
										Pinnal	0	0	0	0	0	0	0	0
										Anan	2	0	0	0	0	0	0	2
										Misc	7	0	0	0	0	0	0	7
		0.1	2	21	28	30.1	85	12	28.6	Sal	8	11	3	1	2	1	3	29
										Pinnal	0	0	0	0	0	0	0	0
										Anan	2	1	0	0	0	0	0	3
										Misc	7	3	3	0	0	1	0	16
		0.1	4	21	28	38.3	85	13	47.5	Sal	9	0	10	1	3	1	8	32
										Pinnal	1	0	0	0	0	0	0	1
										Anan	2	0	0	0	0	0	0	2
										Misc	7	0	1	5	3	0	3	19
		0.1	4	21	28	43.8	85	13	40.2	Sal	8	1	5	1	2	0	3	20
										Pinnal	0	0	0	0	0	0	0	0
										Anan	0	0	0	0	0	0	0	0
										Misc	10	0	2	3	0	0	0	15
		0.1	3	21	28	43	85	13	32.8	Sal	9	0	0	0	4	3	1	17
										Pinnal	0	0	0	0	0	0	0	0
										Anan	1	0	0	0	0	0	0	1
										Misc	9	1	1	0	0	0	0	11
		0.1	3	21	28	42.8	85	13	30.5	Sal	10	3	2	5	4	5	4	33
										Pinnal	0	0	0	0	0	0	0	0
										Anan	2	0	0	0	0	0	0	2
										Misc	7	2	0	0	0	0	0	9
		0.1	4	21	28	53.8	85	13	19	Sal	8	3	2	11	4	7	5	40
										Pinnal	0	0	0	0	0	0	0	0
										Anan	2	1	2	0	0	0	0	5
										Misc	7	2	0	1	0	0	0	10
		0.1	4	21	28	55.1	85	13	13.1	Sal	9	3	5	7	5	5	4	38
										Pinnal	1	0	0	0	0	0	0	1
										Anan	2	2	2	1	0	0	0	7
										Misc	7	3	0	2	0	1	0	13
		0.1	4	21	29	0.3	85	13	10.3	Sal	8	3	5	10	6	7	3	42
										Pinnal	0	0	0	0	0	0	0	0
										Anan	0	3	0	1	1	0	0	5
										Misc	10	2	1	2	0	0	0	15
Tarkata	Mandavila RF	25	4	21	39	7.8	84	53	59.9	Sal	1455	1315	1074	1094	1138	393	0	6469
				21	39	15.9	84	53	56.5	Pinnal	70	62	18	1	0	0	0	151
				21	39	14.3	84	53	21.9	Anan	290	278	263	165	71	50	0	1117
				21	39	9.4	84	53	25.3	Misc	3035	1333	1276	1249	1663	859	1029	10444
		25	6	21	38	56.4	84	50	58.8	Sal	1422	1819	1520	1408	1388	1118	623	9298
				21	38	58.0	84	50	50.2	Pinnal	87	79	30	1				197
				21	39	28.9	84	50	51.9	Anan	253	229	162	165	145	95		1049
				21	39	27.4	84	51	2.3	Misc	2788	1290	1368	1229	1059	530		8264
		25	7	21	39	4.5	84	49	34.5	Sal	1392	1050	1075	1020	820	900	525	6782
				21	39	6.2	84	49	44.9	Pinnal	46	43	11	1				101
				21	39	35.5	84	49	43.2	Anan	95	75	63	112	73	15	1	434
				21	39	37.1	84	49	31.1	Misc	3037	1110	810	720	675	650	555	7557
		25	8	21	38	43.4	84	49	34.6	Sal	1475	825	703	652	240	154	145	4194
				21	38	51.5	84	49	36.3	Pinnal	93	87	24					204

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		21	38	56.4	84	49	3.4	Asm	89	83	32	66	14	4		328
		21	38	46.6	84	49	1.7	Misc	2873	737	765	625	608	304	165	6077
25	9	21	38	17.3	84	49	39.7	Sal	1295	1290	1117	990	843	778	660	6973
		21	38	25.4	84	49	38.0	Pimal	56	35	16	4	0	0	0	111
		21	38	30.3	84	49	6.9	Asm	372	300	278	87	14	0	0	1051
		21	38	18.9	84	49	1.7	Misc	2830	1324	1289	1225	1015	960	480	9123
0.1	2	21	39	48.6	84	54	13.5	Sal	7	8	9	12	8	7	4	55
								Pimal	0	2	0	0	0	0	0	2
								Asm	3	3	2	0	0	0	0	8
								Misc	10	9	7	11	5	4	0	46
0.1	2	21	39	45.6	84	54	14.8	Sal	8	7	5	8	4	5	1	38
								Pimal	0	1	1	1	0	0	0	3
								Asm	2	5	4	3	1	0	0	15
								Misc	9	10	8	6	7	2	0	42
0.1	2	21	39	35.5	84	54	19.8	Sal	9	7	4	8	4	4	3	39
								Pimal	0	1	2	1	0	0	0	4
								Asm	1	5	7	3	2	0	0	18
								Misc	10	15	7	7	4	5	5	53
0.1	4	21	39	43.6	84	54	19.6	Sal	7	5	7	8	6	4	3	40
								Pimal	0	0	1	0	0	0	0	1
								Asm	3	3	2	1	0	0	0	9
								Misc	9	8	10	14	6	3	0	50
0.1	4	21	39	33.7	84	54	17.6	Sal	11	6	7	7	7	5	6	49
								Pimal	0	1	2	0	0	0	0	3
								Asm	2	2	3	3	1	0	0	11
								Misc	6	12	9	9	7	7	4	54
0.1	2	21	39	40.9	84	54	24.7	Sal	8	2	3	5	6	5	2	31
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	4	4	2	0	0	0	12
								Misc	12	12	8	5	4	2	0	43
0.1	4	21	39	28.9	84	54	25.1	Sal	9	5	3	6	3	4	2	32
								Pimal	0	0	0	0	0	0	0	0
								Asm	1	2	3	3	0	0	0	9
								Misc	10	6	6	7	4	6	3	42
0.1	2	21	39	37.9	84	54	26.2	Sal	7	0	2	1	1	0	0	11
								Pimal	0	0	1	0	0	0	0	1
								Asm	3	0	0	0	0	0	0	3
								Misc	10	24	14	12	2	0	0	62
0.1	4	21	39	35.5	84	54	28.4	Sal	7	12	18	2	0	0	0	39
								Pimal	0	0	0	0	0	0	0	0
								Asm	3	4	5	4	0	0	0	16
								Misc	10	19	8	12	2	2	1	54
0.1	2	21	38	54.9	84	55	27.4	Sal	8	6	4	4	6	7	4	39
								Pimal	0	0	0	0	0	0	0	0
								Asm	2	6	3	4	0	0	0	15
								Misc	9	12	12	8	7	6	3	57
0.1	2	21	39	20.5	84	54	46.4	Sal	9	17	8	3	0	0	0	37
								Pimal	0	0	0	0	0	0	0	0
								Asm	1	13	9	7	2	0	0	32
								Misc	10	17	14	5	0	0	0	46
0.1	2	21	39	20.4	84	54	50.4	Sal	7	18	4	0	0	0	0	29
								Pimal	0	1	0	0	0	0	0	1
								Asm	3	17	7	0	0	0	0	27
								Misc	9	0	22	13	3	3	0	50
0.1	2	21	39	19.6	84	54	56.6	Sal	11	13	8	3	0	0	0	35
								Pimal	0	4	0	0	0	0	0	4
								Asm	2	17	12	1	1	0	0	33
								Misc	6	22	12	8	3	2	0	53
0.1	2	21	39	14.1	84	54	53.6	Sal	8	19	12	3	2	0	0	44
								Pimal	0	5	2	0	0	0	0	7
								Asm	2	8	11	3	0	0	0	24
								Misc	12	19	9	4	2	1	1	48

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0.1	3	21	39	13.6	84	54	48.8	Sal	9	8	12	3	2	0	0	34
								Plasal	0	0	2	1	0	0	0	3
								Asas	1	18	9	4	2	1	1	36
								Miss	10	17	12	7	3	2	0	51
0.1	3	21	39	12.3	84	54	42.4	Sal	7	19	7	6	4	1	0	44
								Plasal	0	2	3	0	0	0	0	5
								Asas	3	12	7	3	2	0	0	27
								Miss	10	17	12	4	4	2	0	49
0.1	2	21	39	12.5	84	54	30.3	Sal	7	9	7	4	2	1	0	30
								Plasal	0	0	0	0	0	0	0	0
								Asas	3	11	9	4	3	1	0	31
								Miss	10	22	12	6	3	2	1	56
0.1	2	21	39	11.3	84	54	25.1	Sal	8	7	4	4	2	0	0	25
								Plasal	0	1	1	0	0	0	0	2
								Asas	2	13	8	5	4	1	0	33
								Miss	9	18	12	4	3	2	0	48
0.1	4	21	39	19.2	84	54	2.2	Sal	9	7	4	2	2	1	0	25
								Plasal	0	0	0	0	0	0	0	0
								Asas	1	8	6	4	3	0	0	22
								Miss	10	11	7	3	3	0	0	34
0.1	4	21	39	13.2	84	54	6.7	Sal	7	7	4	4	2	1	1	26
								Plasal	0	0	0	0	0	0	0	0
								Asas	3	9	4	7	3	1	0	27
								Miss	9	18	13	4	4	3	0	51
0.1	4	21	39	13.2	84	54	50.5	Sal	11	12	7	6	4	3	0	43
								Plasal	0	1	2	0	0	0	0	3
								Asas	2	9	6	4	3	0	0	24
								Miss	6	17	8	4	4	1	1	41
0.1	4	21	39	6.8	84	54	26.6	Sal	8	12	9	5	3	2	0	39
								Plasal	0	0	0	0	0	0	0	0
								Asas	2	9	9	3	0	0	0	23
								Miss	12	18	12	7	2	1	1	53
0.1	4	21	39	33.6	84	54	24.2	Sal	9	7	4	3	2	3	2	30
								Plasal	0	1	1	1	0	0	0	3
								Asas	1	6	2	2	2	1	1	15
								Miss	10	11	4	3	2	1	0	31
0.1	4	21	39	31	84	54	31.6	Sal	7	9	4	2	3	1	2	28
								Plasal	0	0	1	0	0	0	0	1
								Asas	3	6	3	3	1	2	0	18
								Miss	10	10	3	3	3	2	1	32
0.1	4	21	39	21	84	54	53.6	Sal	7	7	3	2	3	2	0	24
								Plasal	0	0	1	0	0	0	0	1
								Asas	3	3	2	1	1	0	0	10
								Miss	10	13	4	4	2	2	1	36
0.1	4	21	39	27.4	84	54	32.9	Sal	8	7	2	2	3	1	0	23
								Plasal	0	0	0	0	0	0	0	0
								Asas	2	4	3	2	1	1	0	13
								Miss	9	18	5	3	2	1	1	39
0.1	4	21	39	24	84	54	35.4	Sal	9	6	3	2	1	1	1	23
								Plasal	0	0	0	0	0	0	0	0
								Asas	1	4	3	2	1	1	0	12
								Miss	10	15	4	4	3	2	2	40
0.1	2	21	39	22.9	84	54	37.3	Sal	7	6	2	3	2	1	1	22
								Plasal	0	0	0	0	0	0	0	0
								Asas	3	5	3	3	2	1	0	17
								Miss	9	12	6	4	2	3	3	39
0.1	2	21	39	21.3	84	54	40	Sal	11	9	3	2	1	1	1	28
								Plasal	0	0	1	0	0	0	0	1
								Asas	2	4	2	2	1	1	0	12
								Miss	6	12	4	3	5	1	1	32
0.1	2	21	39	19.9	84	54	36.4	Sal	8	8	6	3	3	2	1	31
								Plasal	0	0	0	0	0	0	0	0

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									Asm	2	4	3	2	1	1	0	13
									Misc	12	13	7	4	3	2	1	45
		0.1	2	21	39	19.9	84	54	36.3	Sal	9	11	4	3	2	3	1	33
										Pinsal	0	0	0	1	1	0	0	2
										Asm	1	4	2	2	2	0	0	11
										Misc	10	10	5	4	3	1	1	34
		0.1	2	21	39	20.1	84	54	43	Sal	7	9	5	3	2	0	0	26
										Pinsal	0	1	0	0	0	0	0	1
										Asm	3	3	2	1	1	1	0	11
										Misc	10	11	3	2	3	1	1	31
		0.1	2	21	39	5.7	84	54	12.2	Sal	9	8	3	4	2	2	3	31
										Pinsal	1	1	0	2	0	0	0	4
										Asm	2	4	2	1	2	1	0	12
										Misc	7	13	6	4	3	2	1	36
Pallabara	Old pairi RF	25	1	21	31	3.5	85	16	3.7	Sal	2870	257	278	198	70	59	72	3804
				21	31	0.8	85	16	13.9	Pinsal	2	2	0	0	0	0	0	4
				21	31	32.8	85	16	17.4	Asm	52	7	47	5	2	1	1	115
				21	31	35.5	85	16	7.4	Misc	2201	830	554	492	37	26	33	4153
		37.5	1	21	35	35.2	85	15	19.9	Sal	4151	2575	2468	2455	428	356	176	8438
				21	35	43.2	85	15	16.7	Pinsal	23	18	4	3	0	0	0	48
				21	35	27.2	85	14	23.5	Asm	205	163	79	45	0	0	0	492
				21	35	19.3	85	14	27.6	Misc	3309	1965	1894	1168	620	353	147	9456
		25	1	21	35	55.2	85	13	57.2	Sal	2858	2183	1860	1234	450	213	87	8883
				21	35	23.0	85	13	52.0	Pinsal	36	27	2	0	0	0	0	65
				21	35	19.2	85	13	42.4	Asm	132	102	58	39	34	5	0	370
				21	35	53.1	85	14	6.6	Misc	2099	720	564	486	127	83	48	4127
		25	1	21	35	55.2	85	13	57.2	Sal	2805	2169	1680	638	309	125	32	7749
				21	35	23.0	85	13	52.0	Pinsal	12	9	3	0	0	0	0	24
				21	35	25.7	85	13	40.0	Asm	117	99	44	6	1	0	0	267
				21	35	56.9	85	13	48.0	Misc	2193	1590	1410	559	160	78	34	6024
		25	1	21	36	6.4	85	11	49.4	Sal	2795	2179	1465	240	147	52	0	6878
				21	36	11.7	85	11	57.0	Pinsal	18	13	4	0	0	0	0	35
				21	35	44.0	85	12	15.1	Asm	142	84	28	0	0	0	0	254
				21	35	38.0	85	12	6.9	Misc	2175	1860	700	328	106	27	51	5247
		25	1	21	34	6.0	85	12	42.3	Sal	2798	2915	3108	2202	363	153	0	11539
				21	34	13.5	85	12	44.9	Pinsal	21	14	0	0	0	0	0	35
				21	34	12.4	85	13	18.5	Asm	52	39	76	43	11	0	0	221
				21	34	1.2	85	13	17.8	Misc	2256	688	925	778	67	52	63	4829
		25	1	21	30	59.2	85	16	14.4	Sal	2875	1995	2640	919	360	118	76	6108
				21	31	52.3	85	16	17.0	Pinsal	27	18	0	0	0	0	0	18
				21	31	30.5	85	16	29.4	Asm	55	30	454	0	0	0	0	484
				21	30	57.6	85	16	27.7	Misc	2170	1358	775	304	47	30	55	2569
		25	1	21	33	23.6	85	15	56.0	Sal	2842	1980	1208	990	283	142	88	7533
				21	33	21.2	85	15	24.0	Pinsal	17	13	1	0	0	0	0	31
				21	33	13.2	85	15	22.7	Asm	59	44	97	100	0	0	0	300
				21	33	14.8	85	15	57.2	Misc	2210	1050	639	378	61	33	46	4417
		25	1	21	33	28.0	85	13	0.1	Sal	2814	2134	1709	1326	343	122	73	8521
				21	33	30.8	85	13	9.2	Pinsal	23	18	0	2	0	0	0	43
				21	33	59.9	85	12	54.0	Asm	46	37	100	0	0	0	0	183
				21	33	56.4	85	12	46.4	Misc	2253	1153	928	329	67	27	49	4806
		25	1	21	32	33.2	85	16	51.6	Sal	2854	1650	1590	525	358	108	47	7132
				21	32	21.4	85	16	50.7	Pinsal	23	17	5	0	0	0	0	45
				21	32	24.4	85	16	16.3	Asm	64	53	690	0	0	0	0	807
				21	32	34.8	85	16	15.6	Misc	2190	1075	694	253	65	27	46	4350
		25	1	21	33	13.2	85	15	22.7	Sal	2871	2234	1645	680	318	273	167	8388
				21	33	3.2	85	15	25.8	Pinsal	27	22	11	0	0	0	0	60
				21	33	7.4	85	16	0.7	Asm	12	8	3	2	3	1	0	29
				21	33	14.8	85	15	57.2	Misc	2225	1020	765	325	137	74	53	4599
		25	1	21	33	18.8	85	17	0.4	Sal	2798	2376	1545	1166	285	142	88	8401
				21	33	39.1	85	16	32.9	Pinsal	17	13	1	0	0	0	0	31
				21	33	32.0	85	16	27.7	Asm	67	44	102	0	0	0	0	213
				21	33	13.2	85	16	54.9	Misc	2223	843	432	313	61	48	46	3966

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0.1	1	21	39	37.8	84	54	28.7	Sal	9	1	5	1	1	2	3	22
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	2	1	0	0	0	5
								Misc	10	8	9	5	1	1	1	35
0.1	1	21	39	48.6	84	54	34.2	Sal	8	5	6	1	6	0	3	29
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	12	4	3	0	0	0	1	20
0.1	1	21	39	57.9	84	54	58.7	Sal	9	3	6	1	4	1	8	32
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	10	0	1	4	1	0	0	16
0.1	1	21	33	49.7	85	12	41.9	Sal	8	4	15	14	4	3	2	50
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	2	0	0	0	0	0	5
								Misc	9	6	3	2	0	1	0	21
0.1	1	21	34	50.7	85	12	0.8	Sal	7	5	13	11	0	1	4	41
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	12	2	5	2	0	0	0	21
0.1	1	21	35	24.9	85	11	8.4	Sal	9	8	13	5	1	2	0	38
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	1	1	0	0	0	0	4
								Misc	10	13	2	1	0	0	0	26
0.1	1	21	36	1.2	85	14	14.3	Sal	8	1	14	10	0	0	0	33
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	12	7	6	0	0	0	0	25
0.1	1	21	34	32.2	85	15	27.8	Sal	9	17	10	11	3	0	0	50
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	10	6	4	0	0	0	0	20
0.1	1	21	34	35.2	85	15	24.7	Sal	8	27	19	11	0	0	0	65
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	0	0	0	0	0	0	3
								Misc	9	0	0	0	0	0	0	9
0.1	1	21	32	47.2	85	17	20	Sal	7	8	7	8	8	4	0	42
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	12	4	6	8	2	0	0	32
0.1	1	21	32	30	85	17	11.3	Sal	9	2	6	9	5	3	2	36
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	10	1	3	4	0	0	0	18
0.1	1	21	36	3.3	85	15	15	Sal	8	3	1	3	1	0	0	16
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	12	40	19	8	3	1	1	84
0.1	1	21	36	11.9	85	14	55.5	Sal	9	7	9	13	3	4	7	52
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	1	0	0	0	0	0	3
								Misc	10	13	7	0	0	0	0	30
0.1	1	21	36	2.8	85	14	41.4	Sal	8	17	16	7	4	3	1	56
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	0	0	0	0	0	0	3
								Misc	9	12	6	0	0	0	0	27
0.1	1	21	33	49.7	85	12	41.9	Sal	7	2	0	0	1	0	0	10
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	5	7	5	5	1	0	23
								Misc	12	7	16	6	8	2	0	51
0.1	1	21	34	50.7	85	12	0.8	Sal	9	8	1	9	4	9	0	40
								Pasal	0	0	0	0	0	0	0	0

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								Asse	2	0	0	0	0	0	0	2
								Miss	10	12	3	4	0	0	0	29
0.1	1	21	35	24.9	85	11	8.4	Sal	8	29	15	5	3	0	0	66
								Passi	0	0	0	0	0	0	0	0
								Asse	0	0	0	0	0	0	0	0
								Misc	12	14	5	2	0	0	0	33
0.1	1	21	36	1.2	85	14	14.3	Sal	9	5	7	3	7	2	1	34
								Passi	0	0	0	0	0	0	0	0
								Asse	2	0	0	0	0	0	0	2
								Miss	10	7	2	1	0	0	0	20
0.1	1	21	36	22.1	85	13	31.7	Sal	8	8	7	12	7	4	2	48
								Passi	0	0	0	0	0	0	0	0
								Asse	3	1	2	0	0	0	0	6
								Misc	9	7	4	6	0	0	0	26
0.1	1	21	36	33.5	85	13	18.9	Sal	7	11	9	16	15	0	0	58
								Passi	0	0	0	0	0	0	0	0
								Asse	0	0	0	0	0	0	0	0
								Miss	12	6	5	7	0	0	0	30
0.1	1	21	36	38.5	85	13	11.4	Sal	9	12	15	14	5	5	5	65
								Passi	0	0	0	0	0	0	0	0
								Asse	2	0	0	0	0	0	0	2
								Misc	10	6	7	0	0	0	0	23
0.1	1	21	32	47.2	85	17	20	Sal	8	1	3	3	1	0	1	17
								Passi	0	0	0	0	0	0	0	0
								Asse	0	2	4	1	0	0	1	8
								Misc	12	22	12	0	1	0	1	48
0.1	1	21	32	30	85	17	11.3	Sal	9	2	3	4	0	0	1	19
								Passi	0	0	0	0	0	0	0	0
								Asse	2	1	3	1	0	0	0	7
								Misc	10	21	7	0	2	0	1	41
0.1	1	21	32	24	85	17	11.4	Sal	8	3	5	2	0	0	2	20
								Passi	0	0	0	0	0	0	0	0
								Asse	3	1	2	3	0	1	0	10
								Misc	9	16	8	2	1	0	1	37
0.1	1	21	32	18.4	85	17	14.5	Sal	7	1	2	3	1	1	0	15
								Passi	0	0	0	0	0	0	0	0
								Asse	0	4	0	2	1	0	0	7
								Misc	12	12	5	1	0	1	1	32
0.1	1	21	32	9.6	85	17	16.5	Sal	9	1	2	3	1	0	1	17
								Passi	0	0	0	0	0	0	0	0
								Asse	2	4	3	1	0	0	0	10
								Misc	10	12	2	3	0	1	1	29
0.1	1	21	31	59.6	85	17	24.3	Sal	8	3	2	1	0	1	0	15
								Passi	0	0	0	0	0	0	0	0
								Asse	0	3	1	2	0	0	0	6
								Misc	12	15	2	3	0	1	1	34
0.1	1	21	31	53.4	85	17	26.2	Sal	9	1	2	1	0	1	1	15
								Passi	0	0	0	0	0	0	0	0
								Asse	2	2	3	0	0	0	1	8
								Miss	10	13	4	2	0	2	1	32
0.1	1	21	31	48.6	85	17	24.5	Sal	8	3	2	2	1	0	2	18
								Passi	0	0	0	0	0	0	0	0
								Asse	3	6	1	0	3	0	1	14
								Miss	9	17	3	5	0	1	2	37
0.1	1	21	31	29.8	85	17	21.4	Sal	7	2	1	3	0	1	1	15
								Passi	0	0	0	0	0	0	0	0
								Asse	0	3	1	2	0	1	0	7
								Miss	12	18	7	3	1	0	1	42
0.1	1	21	31	34.2	85	17	20.3	Sal	9	8	3	3	1	0	1	25
								Passi	0	0	0	0	0	0	0	0
								Asse	2	0	0	0	0	0	0	2
								Misc	10	3	1	0	0	0	0	14

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0.1	1	21	31	28.2	85	17	21.4	Sal	8	2	4	5	3	2	4	28
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	1	0	5	0	2	0	8
								Misc	12	0	0	0	0	0	0	12
0.1	1	21	31	18.9	85	17	23.9	Sal	9	3	5	3	0	4	2	26
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	10	1	0	3	0	0	1	15
0.1	1	21	31	15.3	85	17	25.3	Sal	8	3	5	2	2	1	2	23
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	0	0	0	0	0	0	3
								Misc	9	0	0	0	0	0	0	9
0.1	1	21	31	10.9	85	17	19.3	Sal	7	3	8	0	2	3	1	24
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	12	0	0	0	0	0	0	12
0.1	1	21	30	57.2	85	16	40.4	Sal	9	4	7	4	1	2	1	28
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	10	13	0	0	2	1	0	26
0.1	1	21	30	39.1	85	16	53.7	Sal	8	4	5	0	0	1	1	19
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	2	0	1	2	0	0	5
								Misc	12	0	2	0	0	0	0	14
0.1	1	21	30	15.3	85	16	21.4	Sal	9	3	5	3	1	2	1	24
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	2	0	1	0	0	5
								Misc	10	3	6	0	0	0	0	13
0.1	1	21	31	26.9	85	13	0.6	Sal	8	18	9	16	0	1	0	52
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	1	2	0	0	0	0	6
								Misc	9	23	11	2	0	1	0	46
0.1	1	21	31	37.2	85	13	24.5	Sal	7	3	2	8	0	4	0	24
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	1	0	0	0	0	0	1
								Misc	12	5	8	3	0	0	0	28
0.1	1	21	31	2.3	85	12	46.6	Sal	9	0	0	0	0	0	0	9
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	1	1	0	0	4
								Misc	10	0	0	0	0	0	0	10
0.1	1	21	30	55	85	12	50.4	Sal	8	3	0	2	0	0	0	13
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	2	1	0	0	3
								Misc	12	4	1	1	1	0	2	21
0.1	1	21	31	55.3	85	14	9.8	Sal	9	2	5	2	41	2	0	61
								Pasal	0	0	1	0	0	0	0	1
								Asan	2	0	0	0	0	0	0	2
								Misc	10	5	1	2	1	0	0	19
0.1	1	21	31	57.6	85	14	9.4	Sal	8	3	3	2	2	2	0	22
								Pasal	0	0	0	0	0	0	0	0
								Asan	3	0	1	1	0	0	0	5
								Misc	9	3	2	1	0	0	0	15
0.1	1	21	32	2.4	85	14	6.8	Sal	7	5	0	0	0	0	5	17
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	1	1	0	2
								Misc	12	10	4	0	0	0	0	26
0.1	1	21	32	7.2	85	14	4.7	Sal	9	0	0	0	0	0	0	9
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	10	10	3	1	0	0	0	24
0.1	1	21	32	11.3	85	13	38.1	Sal	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0

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									Asm	0	1	0	0	0	0	0	1
									Misc	12	5	1	2	3	0	0	23
0.1	1	21	32	15.9	85	13	55.1	Sal	9	5	6	2	4	0	0	26
								Pistol	0	1	0	0	0	0	0	1
								Asm	2	4	0	0	0	0	0	6
								Misc	10	5	1	3	1	3	1	24
0.1	1							Sal	8	0	2	0	0	0	0	10
								Pistol	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Misc	9	3	0	5	0	1	0	18
0.1	1	21	31	12	85	14	17.7	Sal	7	3	2	0	1	0	0	13
								Pistol	0	0	0	0	0	0	0	0
								Asm	0	0	0	0	0	0	0	0
								Misc	12	6	3	2	0	0	0	23
0.1	1	21	31	14.9	85	14	17.4	Sal	9	2	0	2	0	0	0	13
								Pistol	0	0	0	0	0	0	0	0
								Asm	2	0	0	1	0	0	0	3
								Misc	10	1	0	2	1	0	0	14
0.1	1	21	31	22.6	85	14	16.8	Sal	8	0	1	1	0	0	0	10
								Pistol	0	0	0	0	0	0	0	0
								Asm	0	0	0	0	0	0	0	0
								Misc	12	4	2	1	0	0	0	19
0.1	1	21	31	26.8	85	14	15.7	Sal	9	1	2	3	1	0	0	16
								Pistol	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	10	0	2	2	0	0	0	14
0.1	1	21	31	32.4	85	14	12.5	Sal	8	0	1	3	2	0	0	14
								Pistol	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Misc	9	3	2	0	0	0	0	14
0.1	1	21	31	38.5	85	14	4.7	Sal	7	0	1	0	3	1	1	13
								Pistol	0	0	0	0	0	0	0	0
								Asm	0	0	0	0	0	0	0	0
								Misc	12	2	3	0	1	0	0	18
0.1	1	21	31	46.1	85	14	6.9	Sal	9	13	2	5	3	5	3	40
								Pistol	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	10	7	5	5	0	0	0	27
0.1	1	21	32	13	85	13	52.5	Sal	8	0	0	0	0	2	0	10
								Pistol	0	0	0	0	0	0	0	0
								Asm	0	0	0	0	0	0	0	0
								Misc	12	5	4	0	0	0	0	21
0.1	1	21	32	16.3	85	13	49.2	Sal	9	0	0	0	1	2	0	12
								Pistol	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	10	3	0	2	0	1	0	16
0.1	1	21	32	22.3	85	13	47.4	Sal	8	2	0	0	0	1	1	12
								Pistol	0	0	0	0	0	0	0	0
								Asm	3	0	0	1	2	0	1	7
								Misc	9	0	3	2	0	0	1	15
0.1	1	21	32	30.7	85	13	47.6	Sal	7	0	0	0	0	0	0	7
								Pistol	0	0	0	0	0	0	0	0
								Asm	0	1	0	0	0	0	0	1
								Misc	12	10	0	3	0	0	0	25
0.1	1	21	32	38.1	85	13	51.6	Sal	9	0	0	0	0	0	0	9
								Pistol	0	0	0	0	0	0	0	0
								Asm	2	0	0	0	0	0	0	2
								Misc	10	3	0	0	5	0	2	20
0.1	1	21	32	49.5	85	13	55.4	Sal	8	2	5	0	5	3	8	31
								Pistol	0	0	0	0	0	0	0	0
								Asm	0	0	0	0	0	0	0	0
								Misc	12	0	3	0	0	0	0	15

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0.1	1	21	32	53.6	85	13	56.3	Sil	9	0	0	3	0	0	0	12
								Pisml	0	0	0	0	3	0	1	4
								Amn	2	0	0	0	0	1	0	3
								Misc	10	5	2	5	1	0	0	23
0.1	1	21	31	21.7	85	14	10.7	Sil	8	0	5	2	3	0	0	18
								Pisml	0	0	0	0	0	0	0	0
								Amn	3	0	0	1	0	0	0	4
								Misc	9	0	1	3	0	0	0	13
0.1	1	21	31	32.9	85	14	8.1	Sil	7	0	1	3	1	0	1	13
								Pisml	0	0	0	0	0	0	0	0
								Amn	0	0	0	1	0	0	0	1
								Misc	12	1	2	1	1	0	0	17
0.1	1	21	31	45.4	85	14	56.8	Sil	9	0	2	0	5	2	7	25
								Pisml	0	0	0	0	0	0	0	0
								Amn	2	0	0	0	0	0	0	2
								Misc	10	1	0	3	0	0	0	14
0.1	1	21	31	52.1	85	14	1.5	Sil	8	0	0	4	0	2	3	17
								Pisml	0	0	0	0	0	0	0	0
								Amn	0	0	0	0	0	0	0	0
								Misc	12	0	0	0	0	0	0	12
0.1	1	21	31	2.2	85	14	1.3	Sil	9	2	0	0	0	2	1	14
								Pisml	0	0	0	0	0	0	0	0
								Amn	2	0	0	0	0	0	0	2
								Misc	10	0	8	1	0	0	0	19
0.1	1	21	31	3.4	85	14	0.2	Sil	8	10	0	0	0	0	5	23
								Pisml	0	0	0	0	0	0	0	0
								Amn	3	0	0	0	0	0	0	3
								Misc	9	5	1	0	0	0	0	15
0.1	1	21	31	7.7	85	14	59.2	Sil	7	2	0	0	1	0	0	10
								Pisml	0	0	0	0	0	0	0	0
								Amn	0	0	0	0	0	0	0	0
								Misc	12	0	3	0	0	0	6	21
0.1	1	21	31	5.9	85	15	26.2	Sil	9	0	0	0	0	3	4	16
								Pisml	0	0	0	0	0	0	0	0
								Amn	2	0	0	0	0	0	0	2
								Misc	10	2	0	0	1	0	0	13
0.1	1	21	31	7	85	15	46.1	Sil	8	0	0	1	5	4	2	20
								Pisml	0	0	0	0	0	0	0	0
								Amn	0	0	0	0	0	0	0	0
								Misc	12	0	0	1	0	2	1	16
0.1	1	21	31	1.2	85	15	1.1	Sil	9	0	0	0	10	5	7	31
								Pisml	0	0	0	0	0	0	0	0
								Amn	2	0	0	0	0	0	0	2
								Misc	10	0	0	0	0	0	0	10
0.1	1	21	31	0.1	85	15	5.5	Sil	8	0	0	0	0	0	0	8
								Pisml	0	0	0	0	0	0	0	0
								Amn	3	0	0	0	0	0	0	3
								Misc	9	1	0	0	0	2	8	20
0.1	1	21	30	54.7	85	15	17.5	Sil	7	3	4	4	2	5	3	28
								Pisml	0	0	0	0	0	0	0	0
								Amn	0	0	0	0	0	0	0	0
								Misc	12	2	0	2	3	0	0	19
0.1	1	21	30	51.3	85	15	26.1	Sil	9	6	6	4	3	0	0	28
								Pisml	0	0	0	0	0	0	0	0
								Amn	2	0	0	0	0	0	0	2
								Misc	10	0	1	0	0	0	0	11
0.1	1	21	31	3.7	85	14	23.6	Sil	8	0	0	8	4	0	3	23
								Pisml	0	0	0	0	0	0	0	0
								Amn	0	0	0	0	0	0	6	0
								Misc	12	5	1	1	0	0	0	19
0.1	1	21	31	6	85	14	27.1	Sil	9	0	0	0	0	0	0	9
								Pisml	0	0	0	0	0	0	0	0

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									Anan	2	0	0	0	0	0	0	2
									Misc	10	1	0	0	0	0	0	11
		0.1	1	21	31	13	85	14	37.9	Sal	8	1	3	2	0	1	0	15
										Pinnl	0	0	0	0	0	0	0	0
										Anan	3	0	0	0	0	0	0	3
										Misc	9	2	2	1	0	1	2	17
		0.1	1	21	31	14.9	85	14	49.7	Sal	7	1	0	2	3	1	0	14
										Pinnl	0	0	0	0	0	0	0	0
										Anan	0	0	0	0	0	0	0	0
										Misc	12	0	2	0	3	0	4	21
		0.1	1	21	31	10.2	85	14	55.7	Sal	9	0	0	2	0	1	0	12
										Pinnl	0	0	0	0	0	0	0	0
										Anan	2	0	0	0	0	0	0	2
										Misc	10	0	3	0	0	2	0	15
		0.1	1	21	31	7.2	85	14	56.6	Sal	8	0	0	3	2	0	1	14
										Pinnl	0	0	0	0	0	0	0	0
										Anan	3	0	0	0	0	0	0	3
										Misc	9	0	0	2	2	0	0	13
		0.1	1	21	31	6.9	85	14	17	Sal	7	0	0	0	0	2	3	12
										Pinnl	0	0	0	0	0	0	0	0
										Anan	0	0	0	0	0	0	0	0
										Misc	12	0	0	1	3	0	2	18
Burkote	Bathilla RF	25	12	21	33	51.5	84	54	43.2	Sal	1092	1175	825	819	697	384	132	5324
				21	33	53.1	84	54	54.0	Pinnl	109	92	37	0	0	0	0	238
				21	34	29.0	84	54	48.4	Anan	527	505	228	149	69	0	0	1478
				21	34	25.7	84	54	38.0	Misc	2822	774	667	623	473	414	240	6013
		25	9 & 10	21	34	19.2	84	52	59.4	Sal	1088	985	824	633	608	520	269	4927
				21	34	20.8	84	52	52.5	Pinnl	52	43	0	0	0	0	0	95
				21	34	53.4	84	52	54.2	Anan	107	98	58	39	8	0	0	310
				21	34	53.1	84	52	4.6	Misc	3707	820	730	665	394	343	280	6539
		25	4	21	37	51.2	84	49	55.3	Sal	1070	1085	955	911	735	638	208	5602
				21	37	57.7	84	49	48.4	Pinnl	127	119	37	13	0	0	0	296
				21	37	34.9	84	49	20.7	Anan	237	225	225	203	52	7	3	952
				21	37	30.0	84	49	27.6	Misc	3120	1080	1033	877	764	263	192	7329
		25	17 & 19	21	33	41.7	84	57	50.7	Sal	1107	993	880	654	643	318	0	4755
				21	33	36.8	84	57	59.4	Pinnl	105	89	78	21	7	2	0	302
				21	34	2.9	84	58	21.9	Anan	167	143	67	40	15	10	2	444
				21	34	11.6	84	58	13.3	Misc	3170	1175	1120	980	715	660	265	8085
		25	36	21	37	54.4	84	53	40.9	Sal	1117	1325	1285	928	704	560	460	6839
				21	37	56.0	84	53	34.0	Pinnl	63	50	23	0	0	0	0	136
				21	37	25.0	84	53	23.6	Anan	263	245	175	71	0	0	0	754
				21	37	23.4	84	53	35.7	Misc	2105	2174	1930	1706	1059	860	518	11352
		25	45 & 46	21	36	36.2	84	48	21.9	Sal	1102	1725	1645	1618	1075	850	384	8399
				21	36	37.8	84	48	13.3	Pinnl	47	43	13	2				105
				21	37	10.4	84	48	15.0	Anan	227	215	210	38	10	2		702
				21	37	12.0	84	48	23.6	Misc	3174	1975	1930	1644	1167	725	460	11075
		25	31 & 32	21	36	21.5	84	53	14.9	Sal	1092	1650	1590	525	358	215	140	5570
				21	36	18.2	84	53	23.6	Pinnl	0							0
				21	36	44.3	84	53	37.5	Anan	65	53	690					808
				21	36	47.6	84	53	30.6	Misc	3302	1075	694	253	155	120	96	5785
		25	14 & 15	21	33	20.5	84	56	43.8	Sal	1087	1819	1520	1275	1024	765	360	7850
				21	33	20.5	84	56	52.2	Pinnl	87	59	30	1				177
				21	33	54.7	84	56	50.7	Anan	245	229	162	70	24	8		738
				21	33	53.2	84	56	42.0	Misc	3147	1290	1365	1229	1059	530	359	8979
		25	40 & 41	21	36	28.9	84	50	29.4	Sal	1089	1345	1024	898	475	375	335	5541
				21	36	29.6	84	50	38.0	Pinnl	29	25	16	12	0	0	0	82
				21	37	7.1	84	50	21.1	Anan	137	138	73	21	13	0	0	372
				21	36	57.4	84	50	22.5	Misc	3295	901	425	313	61	48	46	5089
		39	9	21	33	59.0	84	53	56.5	Sal	1775	1980	1208	990	543	360	220	7076
				21	33	59.8	84	54	5.2	Pinnl	17	13	1	0	0	0	0	31
				21	34	32.2	84	54	6.9	Anan	172	143	67	40	15	10	2	449
				21	34	30.6	84	53	53.0	Misc	5134	1170	1160	980	715	660	265	10084

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25	27 & 28	21	36	49.2	84	57	9.7	Sal	1094	1320	1045	928	560	375	335	5657
		21	36	54.1	84	57	1.1	Plasal	29	25	16	12	0	0	0	82
		21	36	19.9	84	56	45.5	Asan	137	128	73	21	13	0	0	372
		21	36	18.2	84	56	54.2	Misc	3290	843	432	313	61	48	46	5033
25	31 & 32	21	35	45.6	84	54	43.2	Sal	1185	840	1365	1445	700	433	93	6061
		21	35	44.0	84	54	53.0	Plasal	0	0	0	0	0	0	0	0
		21	36	10.1	84	55	12.1	Asan	87	57	21	4	0	0	0	179
		21	36	14.8	84	55	1.6	Misc	3278	715	533	480	480	480	105	6069
25	35 & 37	21	37	59.3	84	52	47.3	Sal	1150	1050	1075	1020	820	525	340	5980
		21	38	4.2	84	52	42.1	Plasal	57	43	11	1	0	0	0	112
		21	37	33.3	84	52	18.4	Asan	127	112	73	15	8	0	0	335
		21	37	28.3	84	52	25.3	Misc	3215	1110	810	720	675	180	120	6830
25	30	21	37	16.9	84	55	12.1	Sal	1130	825	703	652	240	154	145	3849
		21	37	13.6	84	55	5.2	Plasal	45	34	8	0	0	0	0	87
		21	36	49.2	84	55	24.2	Asan	97	83	72	66	14	4	0	336
		21	36	50.8	84	55	32.9	Misc	3279	737	765	625	608	304	165	6483
25	38 & 39	21	37	52.8	84	51	24.8	Sal	1117	1550	1390	525	358	215	140	5295
		21	37	52.0	84	51	16.1	Plasal	83	70	26	0	0	0	0	179
		21	37	20.2	84	51	14.4	Asan	92	78	60	45	41	14	0	330
		21	37	18.6	84	51	28.2	Misc	3258	1075	694	253	155	120	96	5651
0.1	12	21	34	7.1	84	55	47.1	Sal	9	0	0	0	0	0	0	9
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	10	6	1	3	3	6	3	32
0.1	12	21	34	1	84	55	48.3	Sal	8	0	0	0	0	0	0	8
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	0	1	0	1	1	0	3
								Misc	12	11	2	3	2	4	4	38
0.1	12	21	34	12	84	55	49.4	Sal	9	0	0	1	1	1	0	12
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	1	1	2	1	1	0	8
								Misc	10	12	1	2	3	3	1	32
0.1	6	21	33	47.1	84	55	50.5	Sal	8	3	1	1	1	1	0	15
								Plasal	0	0	0	0	0	0	0	0
								Asan	3	0	0	0	0	0	0	3
								Misc	9	15	3	3	4	3	2	39
0.1	15	21	34	6.6	84	55	53.7	Sal	7	2	0	0	0	1	0	10
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	6	3	0	3	2	1	15
								Misc	12	11	6	4	3	4	3	43
0.1	14	21	33	55.6	84	55	55.7	Sal	9	5	2	0	1	1	1	19
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	3	1	3	1	1	0	11
								Misc	10	10	3	3	3	4	2	35
0.1	15	21	33	36.6	84	55	53.6	Sal	8	3	0	1	1	0	1	14
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	6	1	2	2	1	0	12
								Misc	12	15	7	4	3	2	3	46
0.1	15	21	34	6.9	84	55	59.3	Sal	9	4	1	0	0	0	0	14
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	6	0	1	1	1	0	11
								Misc	10	14	6	2	3	2	2	39
0.1	14	21	33	55.9	84	56	6.3	Sal	8	0	0	0	0	0	0	8
								Plasal	0	0	0	0	0	0	0	0
								Asan	3	3	1	2	1	1	0	11
								Misc	9	16	4	3	2	2	3	39
0.1	14	21	33	51.9	84	56	6.3	Sal	7	4	0	1	1	0	0	13
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	3	2	1	1	1	0	8
								Misc	12	17	8	3	2	1	0	43
0.1	15	21	34	4.8	84	56	5.1	Sal	9	7	2	3	1	3	1	26
								Plasal	0	0	0	0	0	0	0	0

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								Asm	2	6	1	2	2	2	0	15
								Misc	10	15	4	3	3	1	2	38
0.1	14	21	33	40.4	84	56	6.1	Sal	8	6	3	2	1	3	0	23
								Pasal	0	0	0	0	0	0	0	0
								Asm	0	3	2	1	1	0	0	7
								Misc	12	15	5	3	2	2	1	40
0.1	14	21	33	51.2	84	56	4.7	Sal	9	4	1	2	3	4	1	24
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	3	2	1	1	0	0	9
								Misc	10	18	4	3	3	1	0	39
0.1	14	21	33	54.8	84	56	4.2	Sal	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Misc	9	14	3	2	2	2	0	32
0.1	13	21	34	11	84	55	19.7	Sal	7	11	2	0	0	0	0	20
								Pasal	0	0	0	0	0	0	0	0
								Asm	0	3	0	0	0	0	0	3
								Misc	12	19	14	9	7	3	2	66
0.1	13	21	34	1	84	55	18.7	Sal	9	4	3	3	0	0	0	19
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	8	6	3	0	0	0	19
								Misc	10	15	11	4	5	3	1	49
0.1	12	21	33	56	84	55	16.7	Sal	8	12	8	4	2	0	0	34
								Pasal	0	0	0	0	0	0	0	0
								Asm	0	11	6	7	4	2	0	30
								Misc	12	18	13	12	6	4	4	69
0.1	13	21	34	16	84	55	16.7	Sal	9	8	4	4	2	0	0	27
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	7	6	7	2	0	1	25
								Misc	10	19	13	9	4	4	2	61
0.1	13	21	34	5.2	84	55	27	Sal	8	4	2	2	1	1	0	18
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	3	2	2	0	0	0	10
								Misc	9	17	11	6	12	6	3	64
0.1	12	21	33	57.2	84	55	7	Sal	7	4	4	3	1	1	0	20
								Pasal	0	0	0	0	0	0	0	0
								Asm	0	8	6	2	0	0	0	16
								Misc	12	18	12	9	6	2	2	61
0.1	6	21	33	57.1	84	55	10	Sal	9	10	8	3	1	2	1	34
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	5	5	3	1	0	0	14
								Misc	10	20	17	9	7	4	0	67
0.1	6	21	33	54.1	84	55	19.1	Sal	8	8	9	3	2	0	0	30
								Pasal	0	0	0	0	0	0	0	0
								Asm	0	9	8	6	3	0	0	26
								Misc	12	15	14	17	4	2	4	68
0.1	5	21	33	56.3	84	55	10.3	Sal	9	4	5	3	2	0	0	23
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	7	4	4	3	2	0	22
								Misc	10	18	9	11	10	4	2	64
0.1	14	21	34	6.3	84	55	32.3	Sal	8	2	0	0	0	0	0	10
								Pasal	0	0	0	0	0	0	0	0
								Asm	3	0	0	0	0	0	0	3
								Misc	9	12	17	19	8	2	1	68
0.1	13	21	34	0.3	84	55	32.3	Sal	7	2	3	2	0	0	0	14
								Pasal	0	0	0	0	0	0	0	0
								Asm	0	2	4	4	0	0	0	10
								Misc	12	14	13	14	4	4	0	61
0.1	14	21	34	8.3	84	55	31.3	Sal	9	9	10	7	2	0	1	38
								Pasal	0	0	0	0	0	0	0	0
								Asm	2	8	6	4	3	1	0	24
								Misc	10	12	7	4	3	2	3	41

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0.1	12	21	34	7.9	84	55	41.3	Sal	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0
								Asas	0	8	0	4	2	3	2	11
								Misc	12	27	18	13	7	6	4	87
0.1	6	21	33	42.7	84	55	44.6	Sal	9	3	8	7	3	0	0	30
								Pasal	0	0	0	0	0	0	0	0
								Asas	3	3	7	7	4	1	0	24
								Misc	10	18	9	11	3	2	0	53
0.1	15	21	34	26.5	84	55	21.5	Sal	8	5	4	3	2	1	2	25
								Pasal	0	0	0	0	0	0	0	0
								Asas	3	6	4	3	0	0	0	16
								Misc	9	8	10	9	5	4	3	48
0.1	16	21	34	33.5	84	55	29.7	Sal	7	4	6	6	5	4	2	34
								Pasal	0	0	0	0	0	0	0	0
								Asas	0	6	4	0	0	0	0	10
								Misc	12	17	8	8	7	4	2	58
0.1	16	21	34	12.1	84	55	15.2	Sal	9	8	4	3	2	1	0	27
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	8	6	3	0	0	1	20
								Misc	10	18	13	8	6	4	3	62
0.1	12	21	34	2.1	84	55	8.3	Sal	8	8	3	5	4	4	3	35
								Pasal	0	0	0	0	0	0	0	0
								Asas	0	4	0	0	0	0	0	4
								Misc	12	13	12	12	8	7	1	65
0.1	13	21	34	17.1	84	55	16.2	Sal	9	7	6	7	5	3	0	37
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	6	5	3	3	0	0	19
								Misc	10	21	7	13	6	4	4	65
0.1	15	21	34	2.5	84	56	10.7	Sal	8	12	6	4	3	2	1	36
								Pasal	0	0	0	0	0	0	0	0
								Asas	3	6	4	2	5	2	0	28
								Misc	9	16	10	4	3	2	2	46
0.1	15	21	34	0.8	84	56	15.6	Sal	7	12	7	3	2	2	1	34
								Pasal	0	2	0	0	0	0	0	2
								Asas	0	3	3	3	2	1	0	12
								Misc	12	17	6	4	3	2	1	45
0.1	15	21	34	4	84	56	21.3	Sal	9	12	6	4	2	2	1	36
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	7	4	3	2	1	0	19
								Misc	10	11	7	4	3	2	1	38
0.1	20	21	34	3	84	56	28.3	Sal	8	1	0	1	0	1	0	11
								Pasal	0	0	0	0	0	0	0	0
								Asas	0	0	0	0	0	0	0	0
								Misc	12	11	5	3	2	2	1	36
0.1	5	21	33	55.1	84	56	31.9	Sal	9	1	0	1	0	1	0	12
								Pasal	0	1	0	0	0	0	0	1
								Asas	2	2	1	2	1	1	0	9
								Misc	10	12	3	4	2	2	1	34
0.1	5	21	33	45.1	84	56	31.5	Sal	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0
								Asas	3	3	2	2	1	1	0	12
								Misc	9	12	5	3	2	3	1	35
0.1	5	21	33	38.1	84	56	26.5	Sal	7	0	0	0	0	0	0	7
								Pasal	0	0	0	0	0	0	0	0
								Asas	0	2	2	3	4	3	0	14
								Misc	12	11	6	3	4	4	0	40
0.1	46	21	36	53.7	84	48	53.9	Sal	9	7	2	3	2	1	0	24
								Pasal	0	0	0	0	0	0	0	0
								Asas	2	8	2	2	2	1	0	17
								Misc	10	11	4	3	3	2	1	34
0.1	41	21	36	48.4	84	49	8.8	Sal	8	11	4	2	1	1	0	27
								Pasal	0	0	0	0	0	0	0	0

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									Asan	0	6	4	3	1	1	0	15
									Misc	12	13	4	2	3	3	1	38
0.1	46	21	37	10.4	84	48	58.8		Sal	9	0	0	0	0	0	0	9
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	3	2	1	1	0	0	9
									Misc	10	15	6	4	4	1	1	41
0.1	45	21	37	4.5	84	48	36.6		Sal	8	0	0	0	0	0	0	8
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	3	1	2	1	1	0	11
									Misc	9	15	3	2	3	2	1	35
0.1	42	21	36	49.6	84	49	13.4		Sal	7	7	4	3	1	1	0	23
									Pasal	0	0	0	0	0	0	0	0
									Asan	0	5	2	2	1	1	0	11
									Misc	12	12	2	3	3	1	2	35
0.1	42	21	36	49	84	49	9.4		Sal	9	11	3	3	2	1	0	29
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	7	3	2	1	1	0	16
									Misc	10	15	6	4	4	1	2	42
0.1	43	21	37	18.4	84	49	44.2		Sal	8	7	2	2	2	1	0	22
									Pasal	0	0	0	0	0	0	0	0
									Asan	0	4	3	2	2	2	0	13
									Misc	12	18	3	2	3	2	1	41
0.1	42	21	36	48.2	84	49	18.9		Sal	9	3	2	1	1	0	0	16
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	6	2	2	1	1	0	34
									Misc	10	12	7	5	3	2	1	40
0.1	42	21	36	48.8	84	49	17.8		Sal	8	6	1	0	0	0	0	15
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	4	3	2	1	1	0	14
									Misc	9	15	3	4	3	1	0	35
0.1	41	21	36	49.5	84	49	14.7		Sal	7	5	3	1	1	1	0	18
									Pasal	0	0	0	0	0	0	0	0
									Asan	0	4	4	3	2	1	1	15
									Misc	12	0	0	0	0	0	0	12
0.1	41	21	36	38.9	84	49	17.9		Sal	9	4	1	1	1	1	0	17
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	3	2	1	1	0	0	9
									Misc	10	13	4	3	2	2	1	35
0.1	41	21	36	48.3	84	49	21.3		Sal	8	3	2	2	2	1	0	18
									Pasal	0	0	0	0	0	0	0	0
									Asan	0	1	1	2	1	2	0	7
									Misc	12	11	5	3	3	2	1	37
0.1	41	21	36	38.5	84	49	21.2		Sal	9	5	3	2	1	1	0	21
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	6	3	1	1	1	0	14
									Misc	10	13	3	3	2	2	1	34
0.1	41	21	36	26.5	84	49	29		Sal	8	4	3	2	1	1	0	19
									Pasal	0	0	0	0	0	0	0	0
									Asan	3	4	3	2	2	1	0	15
									Misc	9	12	7	5	4	2	1	40
0.1	9	21	34	8.1	84	54	35.9		Sal	7	13	12	8	6	4	2	52
									Pasal	0	0	0	0	0	0	0	0
									Asan	0	8	5	4	3	2	0	22
									Misc	12	9	8	6	3	3	3	44
0.1	10	21	34	14.5	84	54	36.6		Sal	9	0	0	0	0	0	0	9
									Pasal	0	0	0	0	0	0	0	0
									Asan	2	5	2	0	0	0	0	9
									Misc	10	15	9	6	4	4	2	50
0.1	12	21	34	19.3	84	54	32.7		Sal	8	12	6	3	2	2	0	33
									Pasal	0	0	0	0	0	0	0	0
									Asan	0	7	1	0	0	0	0	8
									Misc	12	15	8	9	6	5	3	58

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0.1	9	21	34	22.7	84	54	48.2	Sal	9	0	0	0	0	0	0	9
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	6	2	0	0	0	0	10
								Misc	10	14	5	6	3	2	1	41
0.1	12	21	34	32.9	84	54	49.3	Sal	8	7	3	3	3	3	3	30
								Plasal	0	0	0	0	0	0	0	0
								Asan	3	7	6	3	2	2	1	24
								Misc	9	17	7	4	3	3	2	45
0.1	12	21	34	44.9	84	54	45.2	Sal	7	8	7	4	7	4	3	42
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	7	3	4	3	2	0	19
								Misc	12	13	8	7	5	3	4	52
0.1	12	21	34	23.8	84	54	36.9	Sal	9	3	0	0	0	0	0	12
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	6	8	3	0	0	0	19
								Misc	10	22	8	5	4	3	3	55
0.1	13	21	34	25.6	84	55	7	Sal	8	3	6	6	3	2	1	29
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	6	3	2	0	0	0	11
								Misc	12	8	7	7	5	4	2	45
0.1	12	21	33	59.7	84	54	52.3	Sal	9	4	5	6	4	4	2	34
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	5	3	3	2	0	0	15
								Misc	10	9	7	8	6	5	3	48
0.1	12	21	34	23.6	84	55	3.8	Sal	8	5	7	5	4	3	2	34
								Plasal	0	0	0	0	0	0	0	0
								Asan	3	4	3	3	0	0	0	13
								Misc	9	13	9	7	8	5	4	55
0.1	13	21	34	44.2	84	55	24.2	Sal	7	5	3	4	4	3	2	28
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	3	3	3	0	0	0	9
								Misc	12	7	8	7	6	4	3	47
0.1	11	21	34	30.2	84	55	14.2	Sal	9	4	3	3	3	2	2	26
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	3	2	1	1	0	0	9
								Misc	10	13	10	8	8	4	4	57
0.1	13	21	34	16.2	84	55	10.5	Sal	8	0	0	0	0	0	0	8
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	3	2	0	0	0	0	5
								Misc	12	20	12	9	6	4	2	65
0.1	13	21	34	6.1	84	55	10.6	Sal	9	3	4	4	3	3	2	28
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	4	3	0	0	0	0	9
								Misc	10	13	7	7	4	4	2	47
0.1	41	21	36	46.5	84	49	20	Sal	8	12	0	7	4	2	3	36
								Plasal	0	0	0	0	0	0	0	0
								Asan	3	6	4	3	2	0	0	18
								Misc	9	13	8	14	3	4	2	53
0.1	41	21	36	48.5	84	49	17.1	Sal	7	4	5	3	2	0	0	21
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	6	4	4	3	2	0	19
								Misc	12	13	9	5	3	1	0	43
0.1	41	21	36	46.5	84	49	25	Sal	9	4	7	6	2	2	0	30
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	4	3	2	1	0	0	12
								Misc	10	14	9	4	4	3	0	44
0.1	41	21	36	46.5	84	49	11	Sal	8	3	4	2	3	1	0	21
								Plasal	0	0	0	0	0	0	0	0
								Asan	0	13	4	4	1	0	0	22
								Misc	12	12	4	6	3	2	0	39
0.1	41	21	36	37.2	84	49	32.5	Sal	9	5	7	5	3	0	0	29
								Plasal	0	0	0	0	0	0	0	0

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									Asm	2	10	4	3	0	0	0	19
									Misc	10	8	4	4	3	0	0	29
41	41	21	36	37.3	84	49	52.6		Sal	8	4	5	3	2	1	0	23
									Pasal	0	0	0	0	0	0	0	0
									Asm	3	4	3	2	1	0	0	13
									Misc	9	7	4	3	2	1	0	26
0.1	41	21	36	37.8	84	49	59.7		Sal	7	3	2	3	0	0	0	15
									Pasal	0	0	0	0	0	0	0	0
									Asm	0	4	3	2	1	0	0	10
									Misc	12	7	4	4	2	1	0	30
0.1	41	21	36	38.1	84	49	36.7		Sal	0	0	0	0	0	0	0	0
									Pasal	0	0	0	0	0	0	0	0
									Asm	2	4	2	1	0	0	0	9
									Misc	10	12	6	5	3	1	2	39
0.1	40	21	36	58.1	84	49	36.8		Sal	8	0	0	0	0	0	0	8
									Pasal	0	0	0	0	0	0	0	0
									Asm	0	2	1	1	0	0	0	4
									Misc	12	15	9	4	3	3	1	47
0.1	42	21	37	5.1	84	49	34.6		Sal	9	2	3	3	0	0	0	17
									Pasal	0	0	0	0	0	0	0	0
									Asm	2	6	3	3	2	0	0	16
									Misc	10	12	4	3	0	0	2	32
0.1	42	21	37	15.5	84	49	32.4		Sal	8	3	2	2	2	0	0	17
									Pasal	0	0	0	0	0	0	0	0
									Asm	3	2	3	1	1	0	0	10
									Misc	9	13	8	4	2	1	4	41
0.1	42	21	36	38.7	84	49	38.3		Sal	7	4	4	2	0	0	0	17
									Pasal	0	0	0	0	0	0	0	0
									Asm	0	4	2	3	0	0	0	9
									Misc	12	13	5	5	4	2	3	44
0.1	42	21	37	18.7	84	49	32.2		Sal	9	4	3	4	2	1	0	23
									Pasal	0	0	0	0	0	0	0	0
									Asm	2	5	2	1	1	0	0	9
									Misc	10	10	5	4	3	0	3	35
0.1	42	21	37	8.5	84	49	31		Sal	8	10	10	5	3	3	0	39
									Pasal	0	0	0	0	0	0	0	0
									Asm	3	7	4	5	4	2	0	25
									Misc	9	12	8	3	3	2	0	37
0.1	46	21	36	35.8	84	48	44.2		Sal	7	12	10	4	0	0	0	33
									Pasal	0	0	0	0	0	0	0	0
									Asm	0	8	2	0	0	0	0	10
									Misc	12	12	8	0	0	0	0	32
0.1	46	21	36	40.8	84	48	49.9		Sal	8	0	0	0	0	0	0	8
									Pasal	0	0	0	0	0	0	0	0
									Asm	0	3	0	0	0	0	0	3
									Misc	12	13	3	2	2	4	5	41
0.1	46	21	36	43.7	84	48	41.9		Sal	9	2	2	0	3	0	1	17
									Pasal	0	0	0	0	0	0	0	0
									Asm	2	3	2	0	0	0	0	7
									Misc	10	11	7	3	2	3	2	38
0.1	46	21	36	45.8	84	48	54.6		Sal	8	5	3	0	0	0	1	17
									Pasal	0	0	0	0	0	0	0	0
									Asm	3	4	5	3	0	0	0	15
									Misc	9	12	7	6	2	3	6	45
0.1	46	21	36	49.5	84	48	49.0		Sal	7	3	2	0	1	0	1	14
									Pasal	0	0	0	0	0	0	0	0
									Asm	0	3	2	1	0	0	0	6
									Misc	12	13	7	7	2	3	2	46
0.1	46	21	36	59.5	84	48	49.9		Sal	9	0	3	3	0	0	1	22
									Pasal	0	0	0	0	0	0	0	0
									Asm	2	6	4	0	0	0	0	12
									Misc	10	9	8	7	4	5	4	47

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		0.1	45	21	37	8.5	84	48	43.9	Sal	8	7	6	4	4	2	5	34
										Pasal	0	0	0	0	0	0	0	0
										Asas	3	4	4	2	0	0	0	13
										Misc	9	12	10	5	3	3	2	44
		0.1	43	21	36	50.6	84	48	54	Sal	7	6	6	3	0	0	1	23
										Pasal	0	0	0	0	0	0	0	0
										Asas	0	8	6	5	1	0	1	21
										Misc	12	10	8	6	4	2	2	44
		0.1	44	21	37	54.6	84	48	54.2	Sal	9	9	8	5	5	4	3	43
										Pasal	0	0	0	0	0	0	0	0
										Asas	2	6	5	3	3	0	0	19
										Misc	10	13	9	5	7	5	4	53
		0.1	44	21	37	5.6	84	48	58	Sal	8	8	7	4	5	3	2	37
										Pasal	0	0	0	0	0	0	0	0
										Asas	3	7	5	3	0	0	0	18
										Misc	9	16	11	6	6	4	3	55
		0.1	43	21	36	50.2	84	49	0.6	Sal	7	18	5	1	0	0	0	31
										Pasal	0	0	0	0	0	0	0	0
										Asas	0	7	5	0	0	1	0	13
										Misc	12	14	8	6	4	2	1	47
		0.1	43	21	37	19.6	84	48	55.6	Sal	9	7	7	4	3	2	2	34
										Pasal	0	0	0	0	0	0	0	0
										Asas	2	7	3	2	1	0	0	15
										Misc	10	11	8	8	2	3	3	45
		0.1	39	21	36	43.7	84	49	3.9	Sal	8	6	12	0	1	0	0	27
										Pasal	0	0	0	0	0	0	0	0
										Asas	0	6	4	2	1	0	0	13
										Misc	12	12	6	5	4	4	2	45
		0.1	42	21	37	3.7	84	49	13.9	Sal	9	8	6	5	4	3	2	37
										Pasal	0	0	0	0	0	0	0	0
										Asas	2	6	2	3	2	0	0	15
										Misc	10	13	8	4	2	2	2	41
		0.1	6	21	33	49.4	84	55	43.3	Sal	8	2	7	7	3	1	0	28
										Pasal	0	0	0	0	0	0	0	0
										Asas	3	2	4	3	2	0	0	14
										Misc	9	12	10	7	7	4	2	51
		0.1	6	21	33	34.7	84	55	45	Sal	7	4	5	3	3	2	0	24
										Pasal	0	0	0	0	0	0	0	0
										Asas	0	3	4	3	4	2	0	16
										Misc	12	19	13	10	4	0	0	58
		0.1	12	21	34	11.9	84	55	39.2	Sal	9	8	6	4	3	1	0	31
										Pasal	0	0	1	1	0	0	0	2
										Asas	2	8	7	2	3	0	0	22
										Misc	10	17	9	6	4	3	2	51
Hankone	Pangadi RU	25	6	21	38	1.0	85	0	57.0	Sal	1169	2134	1709	1325	443	222	83	7085
				21	37	54.5	85	0	58.2	Pasal	87	59	30	1	0	0	0	157
				21	37	57.7	85	1	36.9	Asas	267	240	160	70	30	8	0	775
				21	38	5.8	85	1	35.2	Misc	3172	1153	928	329	67	27	49	5725
		47.5	7	21	38	43.4	85	0	43.3	Sal	2221	2575	2460	2459	425	355	196	10682
				21	38	53.1	85	0	41.5	Pasal	23	18	4	3	0	0	0	48
				21	39	4.5	85	1	36.9	Asas	207	163	79	45	28	0	0	522
				21	38	53.1	85	1	38.6	Misc	6430	1965	1894	1168	620	353	147	12577
		25	2	21	34	38.8	85	1	43.5	Sal	1165	2234	1645	880	318	273	167	6682
				21	34	30.6	85	1	45.8	Pasal	53	47	24	3	0	0	0	127
				21	34	32.3	85	2	21.9	Asas	83	75	75	32	13	4	0	282
				21	34	40.4	85	2	25.3	Misc	3374	1020	765	325	137	74	53	5748
		0.1	2	21	34	17	85	2	10.5	Sal	8	1	3	1	4	2	2	21
										Pasal	0	0	0	0	0	0	0	0
										Asas	2	3	3	2	6	4	0	20
										Misc	7	19	12	6	4	3	3	54
		0.1	2	21	34	15	85	2	9.9	Sal	9	0	0	0	0	0	12	21
										Pasal	1	0	0	0	8	2	0	11

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								Anan	2	4	8	7	0	0	0	
								Misc	7	23	17	12	22	9	2	21
0.1	2	21	35	0.7	85	2	10	Sal	8	8	7	11	2	1	1	92
								Pinal	0	0	0	1	0	0	0	38
								Anan	0	3	5	4	2	0	0	1
								Misc	10	18	12	17	7	4	2	14
0.1	2	21	34	11.3	85	2	6.9	Sal	9	0	0	0	0	0	0	70
								Pinal	0	0	0	0	0	0	0	9
								Anan	1	0	0	0	0	0	0	0
								Misc	9	0	0	0	0	0	0	1
0.1	2	21	34	55.9	85	2	6.7	Sal	10	7	12	8	4	2	2	9
								Pinal	0	0	2	1	0	0	0	65
								Anan	2	12	7	13	8	1	0	3
								Misc	7	23	9	18	4	3	2	43
0.1	2	21	34	7.9	85	2	7.4	Sal	8	3	2	3	3	1	0	66
								Pinal	0	0	1	1	0	0	0	20
								Anan	2	3	4	3	4	1	0	2
								Misc	7	19	13	11	8	5	2	37
0.1	2	21	34	18	85	2	3.8	Sal	9	4	3	4	2	1	1	55
								Pinal	1	0	0	0	0	0	0	24
								Anan	2	4	8	4	3	1	0	1
								Misc	7	12	8	7	3	2	2	22
0.1	1	21	34	2.7	85	2	7.7	Sal	9	6	9	11	8	4	0	41
								Pinal	0	0	0	0	0	0	0	47
								Anan	1	4	3	4	3	1	0	0
								Misc	9	16	9	6	7	2	0	16
0.1	1	21	33	58.6	85	2	7.2	Sal	10	17	9	3	1	0	2	40
								Pinal	0	2	3	2	0	0	0	42
								Anan	2	8	3	2	1	0	0	7
								Misc	7	17	8	9	3	2	0	16
0.1	1	21	33	53.5	85	2	8.4	Sal	8	7	2	3	2	1	3	46
								Pinal	0	0	2	0	0	0	0	25
								Anan	2	6	3	4	6	2	0	2
								Misc	7	12	7	8	3	3	2	23
0.1	1	21	33	50.2	85	2	10.1	Sal	9	5	2	3	2	1	0	42
								Pinal	1	0	1	2	0	0	0	22
								Anan	2	5	1	2	3	0	0	4
								Misc	7	11	3	3	4	3	1	13
0.1	1	21	33	48.8	85	2	10.5	Sal	8	11	3	1	2	2	1	32
								Pinal	0	2	0	0	0	0	0	28
								Anan	0	6	0	0	0	0	0	2
								Misc	10	7	5	3	3	2	1	6
0.1	1	21	33	18.3	85	2	13.5	Sal	9	8	4	12	1	0	0	31
								Pinal	0	0	1	0	0	0	0	34
								Anan	1	3	1	8	4	0	0	1
								Misc	9	10	2	4	2	3	2	13
0.1	1	21	33	43	85	2	10.7	Sal	10	8	4	2	1	1	0	33
								Pinal	0	2	3	0	0	0	0	26
								Anan	2	6	0	1	1	0	0	5
								Misc	7	11	3	2	3	3	0	10
0.1	1	21	33	23	85	2	40.7	Sal	8	6	4	2	2	1	0	29
								Pinal	0	1	1	2	0	0	0	25
								Anan	2	3	1	2	1	1	0	4
								Misc	7	13	6	3	2	2	1	18
0.1	1	21	33	36.6	85	2	8.7	Sal	9	7	3	2	1	0	0	34
								Pinal	1	1	1	2	0	0	0	22
								Anan	2	3	2	0	1	1	0	5
								Misc	7	11	10	3	2	2	1	9
0.1	2	21	33	31.3	85	2	12.6	Sal	8	13	6	4	1	3	1	38
								Pinal	0	2	1	0	0	0	0	3
								Anan	0	4	2	0	0	0	0	6
								Misc	10	12	4	4	2	2	1	35

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0.1	2	21	33	22.9	85	2	18.6	Sal	9	8	3	2	3	1	0	26
								Pawal	0	0	0	0	0	0	0	0
								Awan	1	4	1	1	1	0	0	8
								Mixu	9	10	7	3	2	1	0	32
0.1	3	21	34	34	85	2	34.5	Sal	10	2	0	0	1	1	2	16
								Pawal	0	0	0	0	0	0	0	0
								Awan	2	0	0	0	1	0	0	3
								Mixu	7	6	5	8	7	4	2	39
0.1	3	21	34	44.2	85	2	34.6	Sal	8	7	6	6	3	4	3	37
								Pawal	0	0	0	0	0	0	0	0
								Awan	2	4	3	2	2	0	0	13
								Mixu	7	8	6	3	1	2	3	30
0.1	2	21	34	39.9	85	2	37.2	Sal	9	2	0	2	1	0	0	14
								Pawal	1	0	0	0	0	0	0	1
								Awan	2	3	0	0	0	0	0	5
								Mixu	7	9	6	6	4	3	1	36
0.1	2	21	34	42.3	85	2	23.1	Sal	9	6	3	3	1	0	3	25
								Pawal	0	0	0	0	0	0	0	0
								Awan	1	3	1	2	1	0	3	11
								Mixu	9	12	7	8	3	2	0	41
0.1	2	21	34	35	85	2	17.7	Sal	10	0	0	0	0	0	0	10
								Pawal	0	0	0	0	1	0	0	1
								Awan	2	0	0	0	0	0	0	2
								Mixu	7	12	3	11	2	2	0	37
0.1	2	21	34	36.4	85	2	14.5	Sal	8	3	2	3	2	0	0	18
								Pawal	0	0	0	0	0	0	0	0
								Awan	2	3	2	2	0	0	0	9
								Mixu	7	9	3	8	4	4	2	37
0.1	2	21	34	27.2	85	2	17.9	Sal	9	3	3	0	3	0	0	18
								Pawal	1	0	0	0	0	0	0	1
								Awan	2	3	1	2	1	0	0	9
								Mixu	7	6	0	8	6	8	0	35
0.1	2	21	35	4.2	85	2	7.9	Sal	8	4	3	3	3	2	2	25
								Pawal	0	1	0	0	0	0	0	1
								Awan	0	5	3	2	1	1	0	12
								Mixu	10	12	9	3	4	2	1	41
0.1	2	21	34	25.6	85	2	15.9	Sal	9	6	1	2	0	1	2	21
								Pawal	0	0	0	0	0	0	0	0
								Awan	1	4	3	1	0	0	0	9
								Mixu	9	9	9	6	2	1	1	37
0.1	2	21	34	16.4	85	2	10.5	Sal	10	8	1	2	2	1	0	24
								Pawal	0	0	1	0	0	0	0	1
								Awan	2	3	2	1	0	0	0	8
								Mixu	7	13	7	4	3	4	2	40
0.1	2	21	34	21.8	85	2	17.1	Sal	8	0	0	0	0	0	0	8
								Pawal	0	0	1	0	0	0	0	1
								Awan	2	3	1	0	0	0	0	6
								Mixu	7	12	11	8	5	3	2	48
0.1	2	21	34	1.8	85	2	10.1	Sal	9	3	0	2	1	1	1	17
								Pawal	1	2	1	0	0	0	0	4
								Awan	2	4	3	2	1	0	0	12
								Mixu	7	11	0	6	3	3	2	41
0.1	2	21	34	19	85	2	12.5	Sal	8	0	0	3	4	2	2	19
								Pawal	0	0	1	0	0	0	0	1
								Awan	0	2	4	2	0	0	0	8
								Mixu	10	9	6	8	11	8	4	56
0.1	2	21	34	15.6	85	2	4.8	Sal	9	6	0	0	3	2	3	23
								Pawal	0	0	1	0	0	0	0	1
								Awan	1	6	3	2	2	1	0	15
								Mixu	9	12	12	8	3	2	1	47

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B-II 1% Tree Enumeration of RWC Area

Total Other (RWC & Pr. WC) area is 12581.035 ha & 1% area is 125.81 ha.

Name of the Range	Block	Area in ha	Comp.	GPS Reading						Species	Pole	Girth Class in CM						
				Latitude			Longitude					30 to < 60	60 to < 90	90 to < 120	120 to < 135	135 to < 150	150 to above	Total
				D	M	S	D	M	S									
Palkhera	New Pauri	12	1	21	37	54.8	85	14	0.3	Sal	1460	2140	2320	548	288	184	77	7057
				21	38	0.1	85	14	2.3	Plasal	23	15	7	2	0	0	0	47
				21	37	46.0	85	13	44.8	Asan	68	34	17	5	0	0	0	124
				21	37	41.2	85	13	51.2	Misc	825	527	276	163	125	106	32	2254
		0.1	1	21	37	20.6	85	14	47.1	Sal	9	15	5	6	2	0	0	37
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	1	0	0	0	0	0	2
										Misc	11	8	6	1	0	0	0	26
		0.1	1	21	37	32.9	85	14	36.5	Sal	8	5	6	3	0	0	0	22
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	10	4	4	1	0	0	0	19
		0.1	1	21	37	46.4	85	14	22.9	Sal	10	6	0	0	0	0	0	16
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	1	0	0	0	0	0	3
										Misc	8	5	2	2	0	0	0	17
		0.1	1	21	37	52.4	85	14	20.2	Sal	9	10	3	4	3	0	1	30
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	11	12	4	0	0	0	0	27
		0.1	1	21	37	57.6	85	14	15.1	Sal	8	8	0	3	0	0	0	19
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	3	0	0	0	0	0	5
										Misc	10	17	2	4	0	0	0	33
		0.1	1	21	38	12.9	85	14	23.1	Sal	10	7	1	0	0	0	0	18
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	2	0	0	0	0	4
										Misc	8	1	1	0	0	1	0	11
		0.1	1	21	38	13.6	85	14	25.6	Sal	9	7	0	0	0	2	0	18
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	11	2	0	0	7	2	0	22
		0.1	1	21	38	16.2	85	14	1.8	Sal	8	2	2	4	0	0	0	16
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	3	0	0	0	5
										Misc	10	0	0	0	12	0	0	22
		0.1	1	21	38	20.7	85	14	34	Sal	10	1	2	4	5	0	0	22
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2

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0.1	1	21	38	26	85	14	38.1	Misc	8	2	0	5	2	0	0	17
								Sal	10	0	0	10	0	0	0	20
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
0.1	1	21	39	10.1	85	13	7.6	Misc	8	0	7	0	0	8	0	23
								Sal	5	7	8	3	0	0	0	27
								Plasal	1	0	0	0	0	0	0	1
								Asan	3	0	0	0	0	0	0	3
0.1	1	21	39	23.6	85	12	57.6	Misc	8	3	0	0	0	0	0	13
								Sal	11	3	3	3	0	0	0	20
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
0.1	1	21	39	24.7	85	12	56.2	Misc	7	2	5	0	0	0	0	14
								Sal	8	7	3	3	0	0	0	21
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	3	0	0	0	0	0	5
0.1	1	21	38	55.3	85	13	15.6	Misc	10	0	5	0	0	0	0	15
								Sal	9	5	3	0	0	0	0	17
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	0	0	0	0	0	0	1
0.1	1	21	38	58.7	85	13	14.6	Misc	11	5	0	0	0	0	0	16
								Sal	8	7	0	2	1	0	0	18
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	0	1	0	0	0	0	3
								Misc	10	3	0	0	0	0	0	13
4.5	1	21	12	6.4	84	53	54.3	Sal	179	133	58	32	6	0	0	409
		21	12	3.0	84	53	57.7	Plasal	8	2	0	0	0	0	0	10
		21	12	12.8	84	54	8.0	Asan	64	28	0	0	0	0	0	92
		21	12	14.4	84	54	4.6	Misc	554	595	675	200	64	52	7	2147
0.1	1	21	12	24.5	84	53	33.3	Sal	5	6	0	0	0	0	0	11
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	4	0	0	0	0	0	5
								Misc	9	6	5	1	2	1	1	25
0.1	1	21	12	19.3	84	53	31.9	Sal	8	4	0	0	0	0	0	12
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	6	4	0	0	0	0	12
								Misc	12	13	6	3	3	2	2	41
0.1	1	21	12	17.2	84	53	35	Sal	9	5	0	0	0	0	0	14
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	4	0	0	0	0	0	5
								Misc	11	12	9	6	7	3	2	50
0.1	1	21	12	10.3	84	53	50.7	Sal	7	10	8	1	0	0	0	26
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	4	0	0	0	0	0	6
								Misc	18	14	12	9	4	2	1	55
0.1	1	21	12	19.4	84	53	55.3	Sal	8	8	0	0	0	0	0	16
								Plasal	0	0	0	0	0	0	0	0

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										Asan	2	8	0	0	0	0	0	30
										Misc	8	13	12	12	4	3	2	54
		0.1	1	21	32	19.6	84	54	0.3	Sal	7	4	0	0	0	0	0	11
										Piasal	0	1	0	0	0	0	0	1
										Asan	1	8	4	0	0	0	0	13
										Misc	10	15	12	8	5	4	3	57
Deogarh	Tellisium PHF	2.8	1	21	38	22.8	84	34	25.2	Sal	338	343	260	191	72	15	8	1227
										Piasal	0	0	0	0	0	0	0	0
										Asan	35	40	27	15	5	0	0	122
										Misc	131	130	97	102	60	10	7	537
		0.1	1	21	38	1	84	34	34.4	Sal	8	5	0	0	0	0	0	13
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	2	0	0	0	0	0	4
										Misc	8	7	2	3	0	0	0	20
		0.1	1	21	38	10.6	84	34	28.3	Sal	7	3	1	0	0	0	0	11
										Piasal	0	0	0	0	0	0	0	0
										Asan	1	1	0	0	0	0	0	2
										Misc	10	12	4	4	2	0	0	32
		0.1	1	21	38	31.7	84	34	13	Sal	8	6	2	1	0	0	0	17
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	1	1	0	0	0	0	4
										Misc	8	8	5	2	1	1	1	26
		0.1	1	21	37	38.4	84	35	19.7	Sal	7	3	2	0	0	0	0	12
										Piasal	0	0	0	0	0	0	0	0
										Asan	1	5	3	1	0	0	0	11
										Misc	10	28	17	12	5	2	0	74
Deogarh	Kalbarh PHF	1.6	1	21	28	34.0	84	40	13.2	Sal	328	187	70	32	3	3	1	624
										Piasal	0	0	0	0	0	0	0	0
										Asan	36	30	14	0	0	0	0	80
										Misc	321	131	43	27	2	5	1	530
		0.1	1	21	28	59.4	84	49	18.3	Sal	8	14	8	7	6	1	0	44
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	4	3	3	2	0	0	14
										Misc	12	16	13	9	8	3	0	61
		0.1	1	21	28	40.5	84	49	20.3	Sal	9	13	8	9	4	2	0	45
										Piasal	0	0	0	0	0	0	0	0
										Asan	1	6	4	3	2	1	0	17
										Misc	11	15	9	11	4	0	0	50
		0.1	1	21	29	10.4	84	49	16.3	Sal	7	8	3	3	2	0	0	23
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	4	4	3	3	1	0	17
										Misc	13	12	6	4	3	2	0	40
Deogarh	Bangalimunda PHF	0.1	1	21	28	0.4	84	30	46.4	Sal	14	46	18	12	3	0	0	93
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	4	0	0	0	0	0	6
										Misc	4	22	6	0	0	0	0	32
		0.1	1	21	28	34.7	84	33	58.5	Sal	9	0	0	0	0	0	0	9

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										Piasal	0	0	0	0	0	0	0	0
										Asan	3	0	0	0	0	0	0	3
										Misc	8	8	6	3	0	0	0	25
		0.1	1	21	28	30.8	84	31	9.5	Sal	11	2	2	1	0	0	0	16
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	7	24	1	2	1	3	0	38
		0.1	1	21	28	3	84	31	32.4	Sal	8	0	0	0	0	0	0	8
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	10	6	3	0	0	1	0	20
				21	26	29.6	84	32	36.8	Sal	106	46	37	24	1	0	0	214
		0.68	1							Piasal	0	0	0	0	0	0	0	0
										Asan	15	5	2	0	0	0	0	22
										Misc	20	8	10	6	1	0	0	45
		0.1	1	21	25	56.4	84	52	15.7	Sal	10	7	6	4	3	0	0	32
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	1	1	1	0	0	0	5
										Misc	9	11	7	4	3	0	0	34
		0.1	1	21	25	42.9	84	52	16.5	Sal	9	8	6	3	2	0	0	28
										Piasal	0	0	0	0	0	0	0	0
										Asan	1	4	3	2	1	0	0	11
										Misc	11	13	7	4	2	0	0	37
				21	16	12.0	84	35	48.2	Sal	694	489	482	358	253	33	20	2329
				21	16	20.0	84	35	49.9	Piasal	8	10	12	7	5	0	0	42
		8.2	1	21	16	20.1	84	35	36.2	Asan	242	145	157	95	88	6	0	733
				21	16	12.0	84	35	34.4	Misc	571	397	472	270	244	34	29	2317
		0.1	1	21	16	18.3	84	34	40.6	Sal	8	6	3	1	1	0	0	19
										Piasal	0	0	0	0	0	0	0	0
										Asan	3	0	0	0	0	0	0	3
										Misc	9	6	3	3	2	1	0	24
		0.1	1	21	16	15.2	84	34	46	Sal	7	9	6	4	3	1	0	30
										Piasal	0	0	0	0	0	0	0	0
										Asan	3	3	2	3	3	0	0	14
										Misc	10	13	7	4	3	2	0	39
		0.1	1	21	16	15.3	84	34	53.7	Sal	8	4	3	2	1	0	0	18
										Piasal	0	0	0	0	0	0	0	0
										Asan	3	3	1	1	0	0	0	8
										Misc	9	15	7	4	3	1	0	39
		0.1	1	21	16	11.3	84	34	59.7	Sal	7	6	4	3	3	1	0	24
										Piasal	0	0	0	0	0	0	0	0
										Asan	3	3	3	4	1	1	0	15
										Misc	10	13	6	4	1	1	0	35
		0.1	1	21	16	1.3	84	35	6.7	Sal	8	7	4	3	2	1	0	25
										Piasal	0	0	0	0	0	0	0	0
										Asan	3	4	3	3	1	0	0	14
										Misc	9	15	6	7	3	1	0	41

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		0.1	1	21	15	55.4	84	35	5.8	Sal	7	7	4	3	2	1	0	24
										Plasal	0	0	0	0	0	0	0	0
										Asan	3	4	3	3	1	0	0	14
										Misc	10	16	8	6	4	1	0	45
		0.1	1	21	17	5.9	84	36	23	Sal	8	24	7	0	0	0	0	39
										Plasal	0	0	0	0	0	0	0	0
										Asan	3	5	2	0	0	0	0	10
										Misc	9	17	3	1	0	0	0	30
		0.1	1	21	17	3	84	36	22.9	Sal	7	28	4	1	0	0	0	40
										Plasal	0	0	0	0	0	0	0	0
										Asan	3	8	3	0	0	0	0	14
										Misc	10	15	3	1	0	0	0	29
		0.1	1	21	17	3.3	84	36	19.6	Sal	8	31	6	0	0	0	0	45
										Plasal	0	0	0	0	0	0	0	0
										Asan	3	9	2	0	0	0	0	14
										Misc	9	14	4	1	0	0	0	28
		0.1	1	21	16	59.8	84	36	19.6	Sal	7	23	7	0	0	0	0	37
										Plasal	0	0	0	0	0	0	0	0
										Asan	3	6	0	0	0	0	0	9
										Misc	10	18	5	1	0	0	0	34
		0.1	1	21	16	58.3	84	36	15.6	Sal	8	18	2	1	0	0	0	29
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	4	2	0	0	0	0	8
										Misc	10	13	2	1	1	0	0	27
Kharmar	Chuigomukla RF	0.1	1	21	11	56.1	85	19	12.7	Sal	14	3	3	1	1	0	#REF!	#REF!
										Plasal	0	0	0	0		0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	5	2	1	1	0	0	0	9
Pallahara	Nilgarh A RF	1.5	1	21	24	37.6	85	12	43.0	Sal	55	118	9			3	2	187
				21	24	55.6	85	11	6.2	Plasal	0	0	0	0	0	0	0	0
										Asan	8	2						10
										Misc	21	24		4		2		51
		0.1	1	21	24	50.3	85	11	2.5	Sal	4	0	0	0	0	0	0	4
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	2	0	0	0	0	0	0	2
		0.1	1	21	24	51.2	85	11	13	Sal	5	76	2	1	0	0	0	84
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	1	7	0	0	0	0	0	8
Pallahara	Nilgarh B RF	0.5	1	21	25	49.6	85	12	20.1	Sal	42	0	0	0	0	0	3	45
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	3	0	0	0	0	0	0	3
		0.1	1	21	25	51.9	85	12	41.8	Sal	3	5	0	0	0	0	0	8
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0

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										Misc	2	7	4	1	0	0	0	14
Pallahara	Timi PAF	4	1	21	29	10.5	85	13	51.7	Sal	230	13	7	12	18	4		284
				21	29	10	85	13	50.5	Plasal	0	0	0	0	0	0	0	0
				21	28	16.4	85	13	53.9	Asan	10	0	0	0	0	0	0	10
				21	29	16	85	14	2	Misc	140	16	12	6	4	3	2	185
		0.1	1	21	30	17.1	85	13	55.3	Sal	2	0	0	0	0	0	0	2
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	7	3	2	2	3	1	0	18
		0.1	1	21	30	6.5	85	14	36.7	Sal	3	4	0	0	0	0	0	7
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	6	3	0	0	0	0	0	9
		0.1	1	21	30	8	85	14	44.1	Sal	2	1	0	0	0	0	0	3
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	5	2	0	0	0	0	0	7
		0.1	1	21	30	7.5	85	14	59.5	Sal	3	2	1	0	0	1	1	8
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	6	1	0	2	0	0	0	9
		0.1	1	21	30	4.8	85	14	54.8	Sal	4	2	0	0	0	0	0	6
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	5	2	1	0	0	1	0	9
Pallahara	Atchanta PAF	1.4	1	21	30	30.4	85	16	41.1	Sal	180	23	314	71	43	30	4	674
				21	30	30.2	85	16	44	Plasal	0	0	0	0	0	0	0	0
				21	30	34.4	85	16	40.6	Asan	12	15	12	2	0	0	0	41
				21	30	35.2	85	16	37.1	Misc	46	15	117	23	6	0	0	207
		0.1	1	21	30	37.3	85	16	23.9	Sal	8	4	2	4	4	0	0	22
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	1	0	0	0	3
										Misc	8	3	0	1	1	0	0	13
		0.1	1	21	30	41.3	85	16	57.3	Sal	9	0	0	0	3	0	7	19
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	7	0	0	0	0	0	0	7
Pallahara	Bhalubali PAF	1	1	21	27	54.8	85	9	59.6	Sal	185	180	100	40	9	3	0	517
										Plasal	0	0	0	0	0	0	0	0
										Asan	12	5	3	0	0	0	0	20
										Misc	37	80	35	10	5	0	0	167
		0.1	1	21	39	25.1	85	29	42.3	Sal	12	10	6	4	3	2	5	42
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	3	1	0	0	1	0	7
										Misc	8	0	2	1	0	0	0	11
		0.1	1	21	39	35.3	85	29	16.1	Sal	10	8	2	2	6	1	5	34
										Plasal	0	0	0	0	0	0	0	0

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										Asan	1	0	2	1	0	0	0	4
										Misc	11	8	2	2	0	0	0	23
Pollahara	Sarbede PRF	1.5	1	21	28	31.2	85	18	17.4	Sal	183	77	31	12	33	20	11	371
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	23	3	1	5	0	0	2	34
		0.1	1	21	28	4.9	85	18	46.7	Sal	9	0	0	1	1	3	8	22
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	11	0	0	2	0	0	0	13
		0.1	1	21	28	36.8	85	18	53.8	Sal	8	0	1	3	5	0	2	19
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	10	1	3	0	0	0	0	14
		0.1	1	21	28	6.9	85	18	3.1	Sal	10	0	0	2	5	4	6	27
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	8	0	0	0	0	0	0	8
		0.1	1	21	28	55.9	85	18	17.2	Sal	9	1	8	7	3	4	0	32
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	11	1	2	1	1	0	0	16
		0.1	1	21	28	52.6	85	18	41	Sal	8	5	6	1	0	2	0	22
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	10	2	0	1	1	0	0	14
Pollahara	Kalharan PRF	0.5	1	21	29	29.7	85	16	16.9	Sal	135	42	43	18	16	16	4	274
										Plasal	0	0	0	0	0	0	0	0
										Asan	17	8	2	0	0	0	0	27
										Misc	46	28	12	11	5	4		104
		0.1	1	21	29	22.2	85	16	26.5	Sal	8	0	0	4	3	1	4	20
										Plasal	0	0	0	0	0	0	0	0
										Sal	2	0	0	0	0	0	0	2
										Misc	9	2	2	3	1	0	0	17
		0.1	1	21	28	45.2	85	16	29.6	Sal	10	1	0	3	3	1	2	20
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	8	5	2	0	0	0	0	15
Barkote	Talabahali PRF	0.5	1	21	34	3.8	85	3	1.1	Sal	171	283	58	7	0	0	0	519
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	34	12	7	2	1	4	3	63
		0.1	1	21	33	51	85	2	57.8	Sal	10	22	12	0	0	0	0	44
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	6	2	0	0	0	0	10
										Misc	7	6	6	0	0	0	0	19
		0.1	1	21	33	54.6	85	2	56.3	Sal	8	0	0	0	0	0	0	8

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									Pasal	0	0	0	0	0	0	0	0
									Asan	2	4	3	0	0	0	0	9
									Misc	7	9	6	0	1	0	0	23
	1	1	21	14	13.3	85	8	3.7	Sal	121	8	4	3	0	0	0	136
									Plasal	0	0	0	0	0	0	0	0
									Asan	0	0	0	0	0	0	0	0
									Misc	54	7	11	5	3	2		82
	0.1	1	21	14	24.3	85	7	25.4	Sal	7	25	5	1	0	0	0	40
									Plasal	0	0	0	0	0	0	0	0
									Asan	2	8	7	0	0	0	0	17
									Misc	8	15	11	10	5	2	0	51
	0.1	1	21	14	19.7	85	7	57.5	Sal	8	12	9	3	0	0	0	32
									Plasal	0	0	0	0	0	0	0	0
									Asan	3	12	4	0	0	0	0	19
									Misc	7	14	13	8	5	3	0	50
	0.1	1	21	13	55.5	85	7	43.3	Sal	6	7	8	0	0	0	0	21
									Plasal	0	0	0	0	0	0	0	0
									Asan	1	5	4	0	0	0	0	10
									Misc	10	15	10	13	4	1	0	53
	0.1	1	21	14	15.8	85	6	39.2	Sal	5	0	0	0	0	0	0	5
									Plasal	0	0	0	0	0	0	0	0
									Asan	1	11	6	0	0	0	0	18
									Misc	12	12	13	5	0	0	0	42
	0.1	1	21	14	20.4	85	0.6	54	Sal	6	34	20	7	2	0	0	69
									Plasal	0	7	9	0	0	0	0	16
									Asan	3	37	17	7	0	0	0	64
									Misc	9	42	36	0	0	0	0	87
	0.5	1	21	12	25.9	85	16	21.4	Sal	74	98	6	0	0	0	0	178
									Plasal	0	0	0	0	0	0	0	0
									Asan	33	23	6	0	0	0	0	62
									Misc	88	163	6	3	2	0	0	262
	0.1	1	21	12	27.6	85	16	29.6	Sal	9	22	0	0	0	0	0	31
									Plasal	0	0	0	0	0	0	0	0
									Asan	1	3	0	0	0	0	0	4
									Misc	8	5	1	0	0	0	0	14
	0.1	1	21	12	28.7	85	16	16.0	Sal	8	1	0	0	0	0	0	9
									Plasal	0	0	0	0	0	0	0	0
									Asan	0	1	0	0	0	0	0	1
									Misc	10	11	7	15	3	0	0	45
	0.1	1	21	12	25.3	85	16	22.2	Sal	8	5	12	2	0	0	0	27
									Plasal	0	0	0	0	0	0	0	0
									Asan	2	0	0	0	0	0	0	2
									Misc	9	1	2	0	0	0	0	12
	4	1	21	11	5.3	85	21	37.6	Sal	137	193	48	18	11	4	0	411
									Plasal	0	0	0	0	0	0	0	0
									Asan	28	31	22	2	0	0	0	103
									Misc	65	91	24	9	4	2	3	200

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		0.1	1	21	10	51.8	85	21	45	Sal	12	16	4	0	1	3	1	37
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	2	2	0	0	0	0	5
										Misc	10	4	3	0	0	0	1	18
		0.1	1	21	10	53.2	85	21	47.4	Sal	10	0	11	3	0	5	1	27
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	4	0	0	0	0	0	6
										Misc	12	4	2	0	0	0	0	18
		0.1	1	21	10	56.4	85	21	50.2	Sal	0	8	9	1	2	7	2	38
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	4	3	0	0	0	0	9
										Misc	12	9	4	1	0	0	0	26
		0.1	1	21	11	0.5	85	21	51.1	Sal	8	13	8	2	1	8	2	42
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	3	4	2	0	0	0	11
										Misc	12	9	7	3	1	0	0	32
Khamar	Injidi PRF	1	1	21	11	35.8	85	18	3.9	Sal	95	453	53	7	2	2		612
										Plasal	0	0	0	0	0	0	0	0
										Asan	6	13	0	0	0	0	0	19
										Misc	69	42	13	2	0	0	0	126
		0.1	1	21	11	34.3	85	18	6.5	Sal	7	58	17	8	0	0	0	85
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	8	8	0	0	0	0	0	16
		0.1	1	21	11	37.3	85	18	3.2	Sal	8	37	13	6	0	0	0	64
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	6	7	5	0	0	0	0	18
Khamar	Badawida PRF	1.5	1	21	18	6.2	85	11	31.1	Sal	61	21	5	0	0	0	0	87
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	54	12	9	2	0	0	0	77
		0.1	1	21	18	37.8	85	11	41.3	Sal	6	12	0	0	0	0	0	18
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	2	0	0	0	0	0	4
										Misc	10	2	3	0	0	0	0	15
		0.1	1	21	18	14.6	85	11	47.6	Sal	12	0	2	1	0	0	0	15
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	2	0	0	0	0	0	4
										Misc	7	3	1	5	0	0	0	16
		0.1	1	21	18	12.6	85	11	20.3	Sal	10	0	0	0	0	0	0	10
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	10	3	3	5	2	0	0	23
Khamar	Kalamjuanga cultivars	1.5	1	21	20	58.4	85	12	37.2	Sal	196	123	138	122	74	37	8	698
										Plasal	12	4	2	0	0	0	0	18
										Asan	21	4	3	2	0	0	0	30

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								Misc	91	73	67	33	2	1		267
0.1	2	21	21	8.6	85	12	85.8	Sal	11	10	5	4	2	0	0	32
								Plasal	0	0	0	0	0	0	0	0
								Asan	5	0	0	0	0	0	0	5
								Misc	9	0	6	0	0	0	0	15
0.1	3	21	20	23.5	85	12	2.3	Sal	9	3	5	1	1	0	0	19
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	3	0	0	0	0	0	5
								Misc	10	5	3	0	0	0	0	18
1	1	21	12	47.8	85	19	31.5	Sal	97	43	7	8	12	9	3	179
								Plasal	0	0	0	0	0	0	0	0
								Asan	23	15	3	0	0	0	0	41
								Misc	47	24	8	0	3	0	2	84
0.1	1	21	12	37.8	85	19	31.4	Sal	8	9	3	2	1	0	0	23
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	3	2	0	0	0	0	7
								Misc	8	15	7	4	2	1	0	37
0.1	1	21	12	44.2	85	19	34.3	Sal	7	4	2	3	5	0	0	21
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	3	2	2	0	0	0	8
								Misc	10	13	7	5	2	1	0	38
0.1	1	21	13	24	85	19	29.9	Sal	8	4	4	3	2	0	0	21
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	3	2	5	0	0	0	12
								Misc	8	10	5	3	2	1	0	29
4	1	21	15	59.8	85	5	56.9	Sal	127	92	21	0	0	0	0	240
								Plasal	0	0	0	0	0	0	0	0
								Asan	39	51	8	4	0	0	0	102
								Misc	94	386	165	60	36	12	8	761
0.1	1	21	16	29	85	8	21.5	Sal	7	12	8	7	0	0	0	34
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	4	3	1	2	1	0	12
								Misc	10	10	9	8	9	3	1	50
0.1	1	21	16	20.1	85	8	6.1	Sal	8	12	9	8	4	2	0	43
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	2	3	1	1	1	0	10
								Misc	8	8	6	4	7	2	0	35
0.1	1	21	16	23.1	85	7	41.1	Sal	7	8	4	6	3	2	0	30
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	1	2	4	2	1	0	11
								Misc	10	8	9	8	7	2	1	45
0.1	1	21	16	23.1	85	7	37.6	Sal	8	7	4	7	2	1	0	29
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	3	2	3	2	1	0	13
								Misc	8	12	8	7	12	3	2	52
2.5	1	21	10	35.2	85	18	11.3	Sal	198	27	13	8	0	0	0	246
								Plasal	0	0	0	0	0	0	0	0

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									Asan	0	0	0	0	0	0	0	0
									Misc	277	218	154	93	108	53	32	935
		0.1	1	21	9	40.3	85	10	1.8	Sal	9	0	0	0	0	0	0	9
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	8	3	1	0	0	0	13
										Misc	8	17	12	8	0	0	0	45
		0.1	1	21	10	4	85	18	34.2	Sal	8	1	0	1	0	0	0	10
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	1	2	2	1	0	0	6
										Misc	10	12	11	27	11	0	0	71
		0.1	1	21	10	9.1	85	18	28.1	Sal	9	1	0	3	2	0	0	15
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	2	2	6	0	0	0	11
										Misc	8	9	11	4	0	0	0	32
	Jolanda Jankipani PRF	3	1	21	30	27.2	85	17	45.4	Sal	137	97	47	171	72	97	20	641
										Plasal	61	10	3	0	0	0	0	74
										Asan	48	17	21	92	4	0	0	182
										Misc	234	175	248	292	47	28	22	1046
		0.1	1	21	28	16.9	85	17	52	Sal	9	0	4	7	1	0	0	21
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	7	10	3	1	0	0	0	21
		0.1	1	21	29	34.1	85	17	51.8	Sal	8	10	7	9	1	1	0	36
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	2	0	0	0	0	0	4
										Misc	6	9	6	2	0	0	0	23
		0.1	1	21	29	34.9	85	18	25.4	Sal	10	5	7	0	3	1	0	26
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	4	5	1	0	0	0	0	10
		0.1	1	21	29	30.7	85	18	15.3	Sal	6	2	0	3	0	4	0	15
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	8	1	4	0	0	0	0	13
Pallahara		4	1	21	13	15.2	85	18	24.0	Sal	428	423	27	12	0	0	0	890
										Plasal	0	0	0	0	0	0	0	0
										Asan	68	63	11	0	0	0	0	142
										Misc	244	94	27	38	8	13		424
		0.1	1	21	12	36.4	85	16	31.2	Sal	9	45	18	4	6	0	0	82
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	3	0	0	0	0	0	4
										Misc	8	6	15	0	0	1	0	30
		0.1	1	21	12	38.9	85	16	55.9	Sal	8	12	13	2	3	0	0	38
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	5	0	0	0	0	0	5
										Misc	10	11	3	0	0	0	0	24
Bank info	Bank info	2	1	21	28	35.2	85	0	20.6	Sal	291	420	420	53	7	2		1193

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								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	73	44	9	0	0	0	0	126
0.1	1	21	26	45.8	85	3	10.9	Sal	10	0	0	0	0	0	0	10
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	5	3	1	0	0	0	11
								Misc	7	11	0	0	0	0	0	18
0.1	1	21	26	58.3	85	2	44	Sal	8	0	0	0	0	0	0	8
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	3	2	2	1	0	0	10
								Misc	7	12	5	2	0	3	0	29
0.1	1	21	27	2.1	85	2	25	Sal	9	0	0	0	0	0	0	9
								Pasal	1	0	0	0	0	0	0	1
								Asan	2	1	0	0	0	0	0	3
								Misc	7	15	5	3	3	0	0	33
0.1	1	21	27	9.4	85	2	13.2	Sal	10	0	0	0	0	0	0	10
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	1	2	0	0	0	0	5
								Misc	7	10	2	3	2	3	0	27
0.1	1	21	28	19.2	85	3	5.1	Sal	8	39	22	0	1	0	1	71
								Pasal	0	0	0	0	0	0	0	0
								Asan	2	0	0	0	0	0	0	2
								Misc	7	3	0	0	0	0	0	10
0.1	1	21	28	21	85	3	0.8	Sal	9	27	23	3	2	0	2	66
								Pasal	1	0	0	0	0	0	0	1
								Asan	2	0	0	0	0	0	0	2
								Misc	7	4	3	2	0	2	1	19
0.1	1	21	28	26.9	85	2	56.2	Sal	8	33	22	3	1	3	2	73
								Pasal	0	1	0	0	0	0	0	1
								Asan	0	0	0	0	0	0	0	0
								Misc	10	7	3	3	1	1	0	25
0.1	1	21	28	31.8	85	2	52.5	Sal	9	29	21	0	6	0	0	65
								Pasal	0	1	0	0	0	0	0	1
								Asan	1	0	0	0	0	0	0	1
								Misc	5	4	3	2	4	1	0	23
0.5	1	21	25	10.6	85	1	59.4	Sal	65	350	58	12	2	0	0	487
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	27	12	4	2	0	0	0	45
0.1	1	21	25	48.7	85	1	59.1	Sal	8	10	0	0	0	0	0	18
								Pasal	0	0	0	0	0	0	0	0
								Asan	0	0	0	0	0	0	0	0
								Misc	10	3	0	0	0	0	0	13
0.1	1	21	25	9.7	85	2	57	Sal	9	6	0	0	1	0	0	16
								Pasal	0	0	0	0	0	0	0	0
								Asan	1	0	0	0	0	0	0	1
								Misc	9	5	0	0	0	0	0	14

Kanjar B RF

Barkare

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		0.1	1	21	25	5.4	85	2	15.1	Sal	10	21	0	0	0	0	0	31
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	2	1	0	0	0	0	5
										Misc	7	4	0	0	1	0	0	12
Deogarh	Rajamunda RMF	2	1	21	31	52.5	84	46	2.3	Sal	107	17	3	0	0	3	11	141
										Plasal	0	0	0	0	0	0	0	0
										Asan	0	0	0	0	0	0	0	0
										Misc	187	23	8	4	2	0	0	224
		0.1	1	21	31	44.7	84	45	45	Sal	7	1	1	1	0	1	0	11
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	2	1	1	1	0	0	6
										Misc	6	17	9	6	5	2	0	45
		0.1	1	21	31	56.4	84	45	57	Sal	6	1	1	0	0	0	0	8
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	1	2	1	1	0	0	7
										Misc	7	16	7	8	4	1	0	43
		0.1	1	21	31	50.6	84	45	46.5	Sal	5	0	0	0	0	0	0	5
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	0	0	0	0	0	0	1
										Misc	9	15	9	6	4	1	0	44
Barkote	Kaunsilahal RMF	4.8	1	21	31	3.1	84	53	17.0	Sal	375	1762	548	0	0	0	0	2688
										Plasal	0	0	0	0	0	0	0	0
										Asan	32	22	18	0	0	0	0	67
										Misc	80	47	38	0	0	0	0	165
		0.1	1	21	21	1.6	84	53	25.7	Sal	8	50	6	0	0	0	0	64
										Plasal	0	1	0	0	0	0	0	1
										Asan	2	4	0	0	0	0	0	6
										Misc	8	4	0	0	0	0	0	12
		0.1	1	21	21	0.8	84	53	27.7	Sal	7	45	0	0	0	0	0	52
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	3	0	0	0	0	0	4
										Misc	10	5	0	0	0	0	0	15
		0.1	1	21	21	58.1	84	53	29.3	Sal	9	45	0	0	0	0	0	54
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	4	0	0	0	0	0	6
										Misc	5	6	0	0	0	0	0	11
Barkote	Thulsal RF	1	1	21	29	33.2	85	8	37.0	Sal	97	120	111	68	33	13	8	450
										Plasal	0	0	0	0	0	0	0	0
										Asan	22	19	13	7	3	0	0	64
										Misc	69	90	50	28	18	13	8	276
		1	1	21	29	20.7	85	8	40.5	Sal	102	63	14	3	3	0	0	185
										Plasal	0	2	1	0	0	0	0	3
										Asan	18	3	7	7	0	2		37
										Misc	72	149	85	29	8	3		346
		1	1	21	29	4.0	85	8	58.2	Sal	88	34	37	4	2	1	1	167
										Plasal	0	3	2	0	0	0	0	5
										Asan	27	20	19	11	0	0	0	79

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1	1	21	28	51.2	85	8	54.2	Misc	74	142	84	23	18	4	4	349
								Sal	103	109	167	58	16	4	3	550
								Plasal	0	0	0	0	0	0	0	0
								Asan	17	54	23	8	1	0	0	103
1	1	21	29	26.0	85	8	25.0	Misc	69	65	44	18	7	3	2	208
								Sal	98	134	89	43	18	3	4	389
								Plasal	3	3	2	0	0	0	0	7
								Asan	16	24	13	6	0	0	0	59
1	1	21	29	12.4	85	9	32.1	Misc	72	40	28	16	13	4	2	184
								Sal	79	153	103	63	29	5	4	436
								Plasal	0	0	0	0	0	0	0	0
								Asan	30	41	19	0	0	0	0	90
								Misc	80	78	39	32	18	0	0	247
0.1	1	21	28	51.5	85	9	53.6	Sal	7	0	0	0	0	0	0	7
								Plasal	0	0	0	0	0	0	0	0
								Asan	4	0	0	0	0	0	0	4
								Misc	9	6	7	3	5	2	0	32
0.1	1	21	29	49.8	85	10	7.2	Sal	8	0	0	3	3	3	2	19
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	4	3	0	1	0	0	10
								Misc	12	17	12	8	4	0	2	55
0.1	1	21	29	7.7	85	10	22	Sal	10	0	0	2	4	2	1	19
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	2	5	2	1	0	0	12
								Misc	10	12	15	7	4	2	1	51
0.1	1	21	29	0.1	85	8	36.4	Sal	7	8	4	2	0	0	0	21
								Plasal	0	0	0	0	0	0	0	0
								Asan	4	3	2	0	0	0	0	9
								Misc	9	9	5	0	2	1	1	27
0.1	1	21	28	45.7	85	8	43.9	Sal	8	2	0	0	0	0	0	10
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	2	0	0	0	0	0	4
								Misc	12	9	7	2	0	0	0	30
0.1	1	21	29	46	85	8	24.3	Sal	10	7	3	2	0	0	0	22
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	4	2	1	0	0	0	9
								Misc	10	0	0	0	0	0	0	10
0.1	1	21	29	44.7	85	6	21.6	Sal	10	5	2	2	0	0	2	21
								Plasal	0	0	0	0	0	0	0	0
								Asan	2	3	2	2	0	0	0	9
								Misc	9	0	0	0	0	0	0	9
0.1	1	21	29	38.1	85	8	19.4	Sal	9	5	3	3	0	1	1	22
								Plasal	0	0	0	0	0	0	0	0
								Asan	1	5	3	2	0	0	0	11
								Misc	11	0	0	0	0	0	0	11
0.1	1	21	29	33.7	85	8	21.4	Sal	7	6	4	2	0	2	0	21
								Plasal	0	0	0	0	0	0	0	0

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										Asan	1	3	2	1	2	0	0	9
										Misc	6	0	0	0	0	0	0	6
		0.1	1	21	29	26.1	85	8	18.5	Sal	6	7	2	0	1	0	0	16
										Piasal	0	0	0	0	0	0	0	0
										Asan	7	4	3	0	0	1	0	20
										Misc	7	0	0	0	0	0	0	7
Pallahara	Jharbhanan	0.5	1	21	24	20	85	6	19.6	Sal	51	382	38	0	15	8	7	501
										Piasal	0	0	0	0	0	0	0	0
										Asan	5	13	0	3	0	1	0	22
										Misc	32	56	0	0	6	3	0	97
		0.1	1	21	24	18.7	84	6	23.8	Sal	10	12	8	12	12	2	0	56
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	4	4	4	0	0	0	14
										Misc	6	22	12	13	8	3	0	64
		0.1	1	21	24	14.8	84	6	31.3	Sal	8	14	12	8	4	3	1	50
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	4	3	4	1	1	0	15
										Misc	8	15	14	13	8	4	2	64
Pallahara	Ranjo	1	1	21	24	4	85	6	44.9	Sal	102	347	5	0	0	3	2	459
										Piasal	0	0	0	0	0	0	0	0
										Asan	6	9	0	1	0	0	0	16
										Misc	68	102	2	3	0	0	3	178
		0.1	1	21	24	22.2	85	8	31.6	Sal	12	1	0	0	0	0	0	13
										Piasal	0	0	0	0	0	0	0	0
										Asan	3	0	0	0	0	0	0	3
										Misc	5	6	2	0	0	1	3	17
		0.1	1	21	25	16.2	85	8	16.3	Sal	8	3	2	0	0	0	0	13
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	5	3	0	0	0	0	10
										Misc	9	14	3	0	0	0	2	28
		0.1	1	21	24	44	85	7	39.4	Sal	9	0	0	0	0	0	0	9
										Piasal	0	0	0	0	0	0	0	0
										Asan	3	0	0	0	0	0	0	3
										Misc	8	0	0	0	0	0	0	8
Pallahara	Balibahal		1	21	37	0	85	16	17.4	Sal		70	16	1	0	0	0	87
										Piasal		0	0	0	0	0	0	0
										Asan		2	0	0	0	0	0	2
										Misc		25	13	2	0	0	0	44
Barkote	Kansar A	0.1	1	21	24	47.6	85	2	59.9	Sal	9	15	8	0	0	0	0	30
										Piasal	0	0	0	0	0	0	0	0
										Asan	1	3	0	0	0	0	0	4
										Misc	9	11	2	1	0	0	0	23
		0.1	1	21	24	41.4	85	2	50.3	Sal	10	26	6	0	0	0	0	42
										Piasal	0	0	0	0	0	0	0	0
										Asan	2	7	0	0	0	0	0	9
										Misc	7	8	6	0	0	0	0	21
		0.1	1	21	20	32.1	85	2	39.1	Sal	8	12	8	0	0	0	0	28

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									Piasal	0	0	0	0	0	0	0	0
									Asan	2	3	2	0	0	0	0	7
									Misc	7	11	8	0	0	0	0	26
0.1	1	21	25	53.2	85	7	59.2		Sal	9	14	21	0	0	0	0	44
									Piasal	1	0	0	0	0	0	0	1
									Asan	2	0	0	0	0	0	0	2
									Misc	7	6	0	0	0	0	0	13
0.1	2	21	17	19.4	85	7	39.1		Sal	5	0	1	1	0	0	0	7
									Piasal	0	0	0	0	0	0	0	0
									Asan	1	0	1	1	1	0	0	4
									Misc	12	8	12	8	6	2	1	49
0.1	3	21	17	16.4	85	7	36.2		Sal	6	0	0	1	1	2	0	10
									Piasal	0	0	0	0	0	0	0	0
									Asan	1	0	1	1	2	0	0	5
									Misc	10	7	9	9	7	1	0	43
0.1	3	21	17	10.8	85	7	19.1		Sal	4	1	1	1	0	0	0	7
									Piasal	0	0	0	0	0	0	0	0
									Asan	2	0	0	2	1	0	0	5
									Misc	14	7	7	9	7	2	0	46
0.1	3	21	17	19	85	7	33.1		Sal	5	0	0	0	0	0	0	5
									Piasal	0	0	0	0	0	0	0	0
									Asan	1	0	0	0	0	0	0	1
									Misc	12	8	9	12	7	0	0	48
0.1	2	21	16	59.6	85	7	31.8		Sal	6	2	1	1	0	0	0	10
									Piasal	0	0	0	0	0	0	0	0
									Asan	1	0	1	1	2	1	0	6
									Misc	10	9	0	0	0	0	0	19
0.1	2	21	17	9	85	7	31.1		Sal	4	3	3	1	1	0	0	12
									Piasal	0	0	0	0	0	0	0	0
									Asan	2	0	1	1	0	0	0	4
									Misc	14	7	8	8	8	1	0	46
0.1	3	21	17	15.9	85	7	28		Sal	5	1	1	2	0	0	0	9
									Piasal	0	0	0	0	0	0	0	0
									Asan	1	0	1	2	1	0	0	5
									Misc	12	11	9	10	8	3	0	59
0.1	3	21	16	58.9	85	7	50.9		Sal	6	31	0	0	0	0	0	37
									Piasal	0	0	0	0	0	0	0	0
									Asan	1	0	0	0	0	0	0	1
									Misc	10	7	2	12	4	0	0	35
0.1	2	21	16	59.6	85	7	41.4		Sal	4	3	2	1	0	0	0	10
									Piasal	0	0	0	0	0	0	0	0
									Asan	2	1	2	1	0	0	0	6
									Misc	14	7	6	12	7	2	0	48
0.1	3	21	17	8.8	85	7	49.6		Sal	5	2	1	2	1	0	0	11
									Piasal	0	0	0	0	0	0	0	0
									Asan	1	1	2	1	1	0	0	6
									Misc	12	7	4	7	3	1	0	34

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		0.1	3	21	17	1.3	85	7	44.4	Sal	6	7	1	2	0	0	0	16
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	1	1	2	1	0	0	6
										Misc	10	7	3	7	2	0	0	29
		0.1	1	21	17	18.8	85	7	49.4	Sal	4	4	3	5	2	0	0	18
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	2	2	3	0	0	0	9
										Misc	14	8	6	4	8	1	0	41
		0.1	3	21	17	10.8	85	8	40.8	Sal	9	5	3	0	0	0	2	19
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	1	2	1	1	0	0	6
										Misc	6	4	7	8	6	1	0	32
		0.1	3	21	17	22.8	85	8	20.9	Sal	3	3	4	5	2	0	0	17
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	2	2	3	3	0	0	11
										Misc	6	7	7	9	6	2	0	39
Khantiar	Nungpoin	0.1	1	21	15	59.4	85	14	18.3	Sal	7	13	6	0	4	3	1	34
										Plasal	0	0	0	0	0	0	0	0
										Asan	1	5	1	3	0	0	0	10
										Misc	10	4	0	0	1	0	0	15
		0.1	1	21	16	5.9	85	14	11.6	Sal	8	12	5	0	1	0	0	26
										Plasal	0	0	0	0	0	0	0	0
										Asan	2	0	0	0	0	0	0	2
										Misc	8	3	1	0	0	0	0	12
Khannar	Kunjam	0.1	1	21	12	7.9	85	13	44.6	Sal	9	29	7	0	0	0	0	45
										Plasal	0	0	0	0	0	0	0	0
										Asan	3	11	3	0	0	0	0	17
										Misc	8	22	12	4	0	0	0	46
		0.1	1	21	12	2.7	85	13	27.6	Sal	12	20	11	0	0	0	0	43
										Plasal	0	0	0	0	0	0	0	0
										Asan	4	24	17	0	0	0	0	45
										Misc	9	29	34	0	0	0	0	72
		0.1	1	21	11	41.2	85	13	19	Sal	9	14	13	0	0	0	0	36
										Plasal	1	0	0	0	0	0	0	1
										Asan	5	12	11	0	0	0	0	28
										Misc	11	18	19	0	0	0	0	48
		0.1	1	21	11	24.7	85	13	6.3	Sal	8	150	40	7	0	0	0	205
										Plasal	0	0	0	0	0	0	0	0
										Asan	3	12	5	0	0	0	0	20
										Misc	16	30	15	7	0	0	0	68
		0.1	1	21	12	0.2	85	12	25.3	Sal	12	33	6	0	0	0	0	51
										Plasal	0	32	8	0	0	0	0	40
										Asan	3	14	4	0	0	0	0	21
										Misc	10	9	12	8	0	0	0	39
		0.1	1	21	12	0.5	85	12	21.6	Sal	11	28	14	0	0	0	0	53
										Plasal	0	29	7	0	0	0	0	36
										Asan	5	12	10	0	0	0	0	27

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0.1	1	21	12	0.3	85	12	16.2
0.1	1	21	12	4.1	85	12	13.8
0.1	1	21	12	1.4	85	12	11.6
0.1	1	21	13	20.8	85	12	13.7
0.1	1	21	13	23.1	85	12	45.1

Misc	9	11	12	0	0	0	0	32
Sal	9	31	6	0	0	0	0	46
Plasal	0	33	8	0	0	0	0	41
Asan	3	14	4	0	0	0	0	21
Misc	8	9	9	5	0	0	0	31
Sal	12	32	5	0	0	0	0	49
Plasal	0	33	8	0	0	0	0	41
Asan	4	14	3	0	0	0	0	21
Misc	9	9	16	7	0	0	0	41
Sal	9	7	2	0	0	0	0	18
Plasal	1	13	2	0	0	0	0	16
Asan	5	12	7	0	0	0	0	24
Misc	11	31	16	2	0	0	0	60
Sal	8	13	6	0	0	0	0	27
Plasal	0	4	2	0	0	0	0	6
Asan	3	20	12	3	0	0	0	38
Misc	10	18	9	9	0	0	0	52
Sal	12	20	2	7	0	0	0	41
Plasal	0	0	0	0	0	0	0	0
Asan	3	15	18	5	0	0	0	41
Misc	10	35	25	12	0	0	0	82

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B-(III) 100% Tree Enumiration of Pln.WC area

Total area is 25431.7894 ha & 100% area is 25431.7894 ha.

Sl. No	GPS Reading						Name of RF/PF	Year	Location of Plantation	Scheme	Area Planted in ha	Species Planted	Average Height	Average Girth	Survival %
	Latitude			Longitude											
1	21	31	40.9	85	04	58.9	Pandi RF	2010-11	Bagadihadar	OFSDP (JICA)	115	Karanja, Aala, Bamboo	Wash Out		
2	21	33	21.4	85	04	52.2	Pandi RF	2010-11	Dandia	OFSDP (JICA)	100	Karanja, Aala, Bamboo	Wash Out		
3	21	32	39.5	85	03	49.1	Pandi RF	2010-11	Adyapur	OFSDP (JICA)	120	Karanja, Aala, Bamboo	Wash Out		
4	21	29	18.6	85	06	28.6	Pandi RF	2009-10	Nemalabeni	OFSDP (JICA)	139	Karanja, Asan, Aala, Bamboo , Jamu	Wash Out		
5	21	29	39.4	85	06	33.3	Pandi RF	2010-11	Pandi RF under Gurjung	CAMPA	50	Teak	4 mtr	17 cm	89%
6	21	32	47.1	85	12	12.6	Pandi RF	2010-11	Tumur	OFSDP (JICA)	130	Sisoo	Wash Out		
7	21	28	16.4	84	29	58.7	Kanjar	2010-11	Bangalimunda	OFSDP (JICA)	35	Teak, Sisoo, Bahada	1 mtr	5 cm	15%
8	21	28	35.9	84	29	33.6	Kanjar	2002-03	Kanjar under Dharma Chandra pur	OFSDP (JICA)	50	Teak	7 mtr	19 cm	40%
9	21	28	36.4	84	29	28.9	Kanjar	2010-11	Dharam Chandra pur	OFSDP (JICA)	50	Teak, Karanja, Gambari	1 mtr	5 cm	8%
10	21	25	8.3	84	32	15.9	Kanjar	2008-09	Hijasali	OFSDP (JICA)	61.5	Teak, Karanja, Gambari	1.5 mtr	6 cm	17%
11	21	32	19.5	84	32	33.7	Kanjar	2008-09	Kalia Khanar	OFSDP (JICA)	63.5	Teak, Karanja, Gambari	7 mtr	18 cm	13%
12	21	25	27	84	33	28.5	Kanjar	2008-09	Manjari bahal	OFSDP (JICA)	80	Teak, Karanja, Gambari	2 mtr	9 cm	37%
13	21	25	52.6	84	33	56	Kanjar	1964-65	old Plantation near Nirgundi pali VSS	OFSDP (JICA)	40.47	Teak	14 mtr	45 cm	26%
14	21	25	59.1	84	34	4.3	Kanjar	2008-09	Nirgundi pali	OFSDP (JICA)	78	Teak, Karanja, Gambari , Aala etc	4 mtr	8 cm	34%
15	21	26	21.5	84	34	29.5	Kanjar	2008-09	Kanjarpali	OFSDP (JICA)	61.5	Teak	4.5 mtr	10 cm	18%
16	21	25	34.4	84	31	43.9	Kanjar	2007-08	Ilco Block Bhantapada	Ilco (block)	20	Teak	4 mtr	12 cm	67%
17	21	26	17.9	84	29	0.9	Kanjar	2007-08	Near Sirsiligada	Ilco (RDF)	20	Teak	5 mtr	10 cm	15%
18	21	28	25.1	84	31	52.2	Dangilimunda	2010-11	Kalangpani	OFSDP (JICA)	58	Teak	3.5 mtr	10 cm	79%

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29	21	28	14.6	84	31	32.6	Bangilimunda	2011-12	Nathenur	OFSDP (JICA)	82	Teak, Asla etc	3.5 mtr	9 cm
30	21	28	3.4	84	30	26.3	Bangilimunda	2009-10	Departmentally	OFSDP (JICA)	80	Teak, Karanja, Gamhari ,Chakhonda etc	4 mtr	10 cm
31	21	28	28.6	84	31	24.4	Bangilimunda	2010-11	Departmentally	OFSDP (JICA)	70	Teak, Karanja, Gamhari ,Chakhonda etc	3.5 mtr	10 cm
32	21	28	30.7	85	2	47	Bankira PRF	1977-78	Bankira old	Old	8.09	Teak	10 mtr	40 cm
33	21	28	19.8	85	2	58.1	Bankira PRF	2008-09	Laxmipur	OFSDP (JICA)	49	Teak, Karanja, Gamhari ,Bamboo etc	1 mtr	6 cm
34	21	28	59.2	85	2	59	Bankira PRF	2010-11	Laxmipur	OFSDP (JICA)	5	Bamboo		Wash Out
35	21	27	50.1	85	1	36.9	Bankira PRF	2008-09	Near Goyalmara Dept.	OFSDP (JICA)	10	Teak	5 mtr	27 cm
36	21	27	42.7	85	1	55.5	Bankira PRF	2008-09	Goyalmara	OFSDP (JICA)	63.5	Teak, Gamhari , Asalia, Chakhonda, Bamboo	5 mtr	18 cm
37	21	25	9.6	85	2	57.1	Kansar A	1994-95	Kansar A	Departmentally	20	Teak	10 mtr	36 cm
38	21	25	12.7	85	2	30.2	Kansar A	1993-94	Kansar A	Departmentally	7	Teak	8 mtr	36 cm
39	21	23	16.5	85	2	4.8	Kansar B	2007-08	Kansar B	12th FC	20	Teak, Sisoo, Asalia	3 mtr	5 cm
40	21	28	17.7	85	9	28	Thimil	2010-11	Mandisala B	OFSDP (JICA)	65	Semarra Simil		Wash Out
41	21	29	46.2	85	8	41	Thimil	2007-08	Gurumaq	12th FC Dept	70	Teak, Karanja	2.5 mtr	9 cm
42	21	28	40	84	43	9.3	Rambhadevi	2008-09	Mandata	OFSDP (JICA)	78	Teak, Karanja, Asla, Bamboo	1 mtr	5 cm
43	21	29	41.7	84	43	26	Rambhadevi	2010-11	Kateri	OFSDP (JICA)	85	Teak, Karanja, Asla, Bamboo	1 mtr	5 cm
44							Rambhadevi	2010-11	Kalimdhara colony	Not Planted				
45	21	28	8.1	84	45	58.9	Rambhadevi	2008-09	Kanamunda	OFSDP (JICA)	78	Teak, Bamboo , Sisoo, Gamhari	1 mtr	5 cm
46	21	28	14	84	46	51.8	Rambhadevi	2007-08	Rambhadevi RF Dept	12th FC	50	Teak	3 mtr	12 cm
47	21	30	20.1	84	44	23	Rambhadevi	2008-09	Bolunda	OFSDP (JICA)	78	Bamboo	1 mtr	300 cm
48	21	26	35.7	84	43	58.8	Rambhadevi	2010-11	Rambhadevi Under Dasyapada	CAMPA	60	Teak, Asalia	2.5 mtr	8 cm
49	21	26	36.1	84	46	57.3	Rambhadevi	2010-11	Salia	OFSDP (JICA)	110	Teak, Asalia, Asla, Bamboo ,Karanja ,Sirish	2 mtr	6 cm
50	21	23	29.9	84	47	27.7	Rambhadevi	2010-11	Sankarpur	OFSDP (JICA)	90	Teak, Asalia, Asla, Bamboo ,Karanja ,Sirish	1.5 mtr	6 cm
51	21	26	22	84	47	49.9	Rambhadevi	2009-10	Kadalipal	OFSDP (JICA)	57	Teak, Asalia, Asla, Bamboo ,Karanja ,Sirish	2.5 mtr	7 cm

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42	21	33	12.2	84	49	39.3	Ramkhandeyi	2007-08	Ramkhandeyi Under Khumpui	Bee (RIDF)	50	Teak, Acasia, Anla	3 mtr	8 cm	9%
43	21	34	27.1	84	46	41.5	Ramkhandeyi	2007-08	Near vegikudi Bamboo WIC	Bamboo WIC	15	Bamboo	7 mtr	3.5 cm	65%
44	21	32	16.3	84	47	25.8	Pradhanpur	2006-07	Pradhanpur	River valley project near pada	90	Wash Out but Re-Planted in 2012-13			
45	21	32	16.3	84	47	25.8	Pradhanpur	2011-12	Kalimati	OFSDP (JICA)	80	Not Planted			
46	21	32	16.3	84	47	25.8	Pradhanpur	2010-11	Pradapada	OFSDP (JICA)	75	Not Planted			
47	21	32	41.7	84	41	14.7	Pradhanpur	2008-09	Badakalipani	OFSDP (JICA)	78	Teak, Bamboo	1 mtr	5 cm	6%
48	21	32	55.3	84	39	41.8	Pradhanpur	2008-09	Tulasar	OFSDP (JICA)	78	Karanja, Bamboo ,Chakhsdu, Arjun etc	7 mtr	6 cm	6%
49	21	33	3.3	84	38	43.2	Pradhanpur	2008-09	Khamarunda	OFSDP (JICA)	78	Bamboo , Anla, Bahada, Karanja etc	1.5 mtr	7 cm	3%
50	21	32	52.4	84	37	43.3	Pradhanpur	2008-09	Kureibahal	OFSDP (JICA)	78	Teak, Bamboo	1.5 mtr	8 cm	10%
51	21	28	57.6	84	42	52.2	Hadamunda	2009-10	Hadamunda	OFSDP (JICA)	81	Teak, , Bamboo ,Karanja , Anla, gambhar i, Tentula	1.5 mtr	6 cm	11%
52	21	29	11.6	84	39	41.8	Hadamunda	2010-11	Sindurakhal	OFSDP (JICA)	90	Teak, , Bamboo ,Karanja ,gambhari, Sisoo, Acacia	1.5 mtr	7 cm	72%
53	21	29	19	84	38	55.9	Hadamunda	2010-11	Asanpada	OFSDP (JICA)	77	Teak, , Bamboo Karanja, gambhari, Sisoo, Acacia	1.5 mtr	6 cm	85%
54	21	29	40.9	84	40	30	Jhadeswar PRF	2010-11	Sukhapadar	OFSDP (JICA)	100	Teak, , Karanja, gambhar i,Tentul, Anla	1 mtr	5 cm	3%
55	21	29	51.4	84	41	23.3	Jhadeswar PRF	2009-10	Jhalamara	OFSDP (JICA)	103	Teak, , Karanja, gambhar i Tentul, Anla, Bamboo	1 mtr	4 mtr	3%
56	21	29	57.6	84	38	59.2	Jhadeswar PRF	2010-11	Deojharan	OFSDP (JICA)	80	Teak, , Karanja, gambhar i,Tentul, Anla, Bamboo	3 mtr	15 cm	42%
57	21	30	57.8	84	43	42.9	Jhadeswar PRF	2010-11	Belamara	OFSDP (JICA)	60	Teak, , Karanja, gambhar i,Tentul, Anla, Bamboo	1 mtr	5 cm	3%
58	21	32	47.3	84	40	55.5	Pradhanpur	2008-09	Bhimabeda	OFSDP (JICA)	78	Teak, , Karanja, gambhar i,Tentul, Anla, Bamboo	1 mtr	5 cm	13
59	21	30	10.7	84	37	56.1	Pravasnur	2011-12	Thilijharan	OFSDP (JICA)	145	Teak, , Karanja, Acathal, Anla, Chakhsda, Bahada	1 mtr	5 cm	4.5

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60	21	34	57.6	84	37	54.5	Prevanni	2010-11	Gaila	OFSDP (JICA)	100	Teak	Wash Out	
61	21	32	28.3	84	39	56.5	Prevanni	2009-10	Gundeimura	OFSDP (JICA)	100	Teak	Wash Out	
62	21	28	22.7	84	49	22.6	Kikali	2006-07	Kalkati JFF under Binaguli	Eco (Block) Dept	13	Teak	10 mtr	25 cm
63	21	28	22.7	84	49	22.4	Kikali	2007-08		Eco (RUP)	50	Teak, Chakhonda, Acalie	10 mtr	18 cm
64	21	26	25.8	84	52	38.2	Tarli	2006-07	Tarli	Comp. Afforestation	10	Teak	10 mtr	27 cm
65	21	34	16.5	84	37	35.9	Prabhanani	2008-09	Kalkali	OFSDP (JICA)	78	Teak, , Karanja, Anla, Chakhonda, Bamboo	1 mtr	5 cm
66	21	32	8.4	84	56	25.9	Prabhanani	2010-11	Asurakhol	OFSDP (JICA)	67	Teak, Sisoo, Gambhari	4 mtr	10 cm
67	21	33	58.7	84	35	15.2	Prabhanani	2009-10	Bileighati	OFSDP (JICA)	113	Teak, , Karanja, , Anla, Acalia, Sisoo	3.5 mtr	12 cm
68	21	33	47.3	84	34	24.5	Prabhanani	2010-11	Mandar mth	OFSDP (JICA)	100	Anla, Harida, Bahada, Bamboo	4 mtr	8 cm
69	21	33	46.9	84	33	13.9	Prabhanani	2009-10	Prevanni	OFSDP (JICA)	84	Teak, , Karanja, , Anla, Neem, Bahada, Bamboo	1.5 mtr	5 cm
70	21	33	50	84	32	27.1	Prabhanani	2007-08	Prevanni	Bamboo WIC	20	Bamboo		
71	21	34	2.3	84	31	30.1	Prabhanani	2010-11	Kandapal	OFSDP (JICA)	120	Teak, ,Acalie, , Anla, Gambhari	1.5 mtr	5 cm
72	21	32	27.5	84	33	37.9	Prabhanani		Sarankhal	OFSDP (JICA)		Teak, , Karanja, Bamboo	0.5 mtr	5 cm
73	21	31	50.3	84	33	30.1	Prabhanani	2010-11	Prevanni RF under Dogua	CAMPA	50	Teak, , Karanja, Acalia, Chakhonda, Gambhari, Sisoo	3.5 mtr	13 cm
74	21	31	3.9	84	31	30.8	Prabhanani	2010-11	Prevanni RF under Gundeimura	CAMPA	20	Teak	4 mtr	12 cm
75	21	33	50.1	84	35	44.1	Prabhanani	2009-10	Baragadia	OFSDP (JICA)	81	Teak, , Karanja, Acalia, Chakhonda, Gambhari, Sisoo	1 mtr	5 cm
76	21	32	11.8	84	34	28.4	Prabhanani	2011-12	Laxmipur	OFSDP (JICA)	118	Teak, , Karanja, Acalia, Chakhonda, Gambhari, Sisoo	1 mtr	6 cm
77	21	30	43	84	34	30.1	Prabhanani	2009-10	Kantikali	OFSDP (JICA)	65	Teak, , Karanja, Acalia, Chakhonda, Gambhari, Sisoo	1 mtr	5 cm

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78	21	39	19.1	84	35	53.1	Pokhasasi	2009-10	Asuljuni	OFSDP (JICA)	105	Teak, , Karanja, Asalia, Chakhunda, Gambhari, Sisoo	1.5 mtr	5 cm	5%
79	21	39	20.2	84	36	11	Pokhasasi	2010-11	Bhatakhol	OFSDP (JICA)	120	Teak, , Karanja, Asalia, Chakhunda, Gambhari, Sisoo	1 mtr	6 cm	5%
80	21	39	32.4	84	36	43.3	Pokhasasi	2010-11	Durgakhet	OFSDP (JICA)	120	Teak, , Karanja, Asalia, Chakhunda, Gambhari, Sisoo	1 mtr	5 cm	5%
81	21	40	19	84	30	46.9	Khajuria	2009-10	Sahaja bahal	OFSDP (JICA)	143	Teak, , Karanja, Asla, Chakhunda, Gambhari	3 mtr	4 cm	12%
82	21	40	20.9	84	30	39.1	Khajuria	2009-10	Pakalamara	OFSDP (JICA)	121	Teak, , Karanja, Asla, Chakhunda, Gambhari	5 mtr	4 cm	10%
83	21	40	5.6	84	32	0.5	Khajuria	2008-09	Dimirikuda	OFSDP (JICA)	78	Not Planted in 2008-09			
83	21	40	16.7	84	37	23.6	Khajuria	2008-09	Paramapani	OFSDP (JICA)	88	Teak, , Karanja, Asla, Chakhunda, Gambhari	1 mtr	5 cm	25%
84	21	40	43.8	84	38	43.6	Khajuria	2009-10	Bhatagaha	OFSDP (JICA)	88	Teak, , Karanja, Asla, Chakhunda, Gambhari	1 mtr	5 cm	25%
85								2008-09	Lodhar	OFSDP (JICA)	78	Not Planted			
86	21	38	14.6	84	35	12.4	Telkoman	2010-11	Dashkhil	OFSDP (JICA)	90	Karanja, Simarva	0.5 mtr	4 cm	6%
87	21	15	5.9	84	49	42.4	Kundheigola	2010-11	Haladikhol	OFSDP (JICA)	95	Teak	2 mtr	8 cm	25%
88	21	12	43.2	84	31	16.6	Kundheigola	2009-10	Deojharan	OFSDP (JICA)	97	Teak, , Karanja, Asla, Chakhunda, Bamboo etc	3 mtr	9 cm	65%
89	21	12	33.2	84	31	42.2	Kundheigola	2010-11	Kanmipal	OFSDP (JICA)	100	Karanja, Asla, Chakhunda, Bamboo etc	1 mtr	5 cm	8%
90	21	13	47.7	84	51	41.0	Kundheigola	2011-12	Kopagola	OFSDP (JICA)	127	Teak, Asalia	3 mtr	9 cm	50%
91	21	14	12.6	84	50	13.7	Kundheigola	2008-09	Shadhubahal	OFSDP (JICA)	76	Teak, Karanja, Asla, Chakhunda, Bamboo etc	3 mtr	9 cm	85%
92	21	14	50.3	84	48	53.1	Kundheigola	2008-09	Khamdadhuan	OFSDP (JICA)	77	Teak, , Karanja, Gambhari, Sisoo, Bamboo	2 mtr	7 cm	15%
93	21	14	22.4	84	48	22	Kundheigola	2008-09	Arkhapal	OFSDP (JICA)	78	Teak, Karanja, Asla, Chakhunda, Bamboo, Neem	6 mtr	22 cm	10%

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96	21	14	36.8	84	46	53.7	Kundheigola	2009-10	Panchamohala	OFSDP (JICA)	60	Teak, Karanja, Asla, Chakhunda, Bamboo, Neem	1.5 mtr	6 cm
97	21	14	50.7	84	46	36.6	Kundheigola	2009-10	Pitasika	OFSDP (JICA)	45	Teak, Karanja, Asla, Chakhunda, Bamboo, Neem	3 mtr	9 cm
98	21	15	44.6	84	45	53.0	Kundheigola	2008-09	Polpani	OFSDP (JICA)	74	Teak, Karanja, Asla, Chakhunda, Bamboo, Neem	1 mtr	5 cm
99	21	15	14	84	47	25.8	Kundheigola	2008-09	Rantanpur	OFSDP (JICA)	74	Teak, , Karanja, Asla, Chakhunda, Acalia	1.5 mtr	6 cm
100	21	17	22.4	84	46	5.4	kankarkhol	2010-11	Kurudakud	OFSDP (JICA)	64	Teak, , Karanja, Asla, Chakhunda, Acalia	Wash Out	
101	21	17	33.4	84	47	18.9	kankarkhol	2010-11	Jambunali	OFSDP (JICA)	70	Teak, , Karanja, Asla, Chakhunda, Acalia	4 mtr	25 cm
102	21	18	4.9	84	44	50.9	kankarkhol	2009-10	Luling	OFSDP (JICA)	103	Teak, , Karanja, Asla, Chakhunda, Acalia	1 mtr	5 cm
103	21	18	5.2	84	44	41.9	kankarkhol	2002-03	Dept.	SGRY	15	Teak	6 mtr	30 cm
104	21	19	1.9	84	44	7.8	kankarkhol	2009-10	Chingudijharan	OFSDP (JICA)	97	Acasia, Chakhunda	10 mtr	20 cm
105	21	18	18.7	84	45	30	kankarkhol	2010-11	Khandiamunda	OFSDP (JICA)	73	Acalia, SimarunBaba da, Asla, Karanja, Bamboo	1 mtr	5 cm
106	21	18	38.2	84	45	55.4	kankarkhol	2009-10	Sendra	OFSDP (JICA)	83	Teak, Acalia, Simarua,Bah ada, Asla, Karanja,	10 mtr	18 cm
107	21	18	59.5	84	46	54.2	kankarkhol	2008-10	Sasilihota	OFSDP (JICA)	81	Teak, Acalia, Simarua,Bah ada, Asla, Karanja,	1 mtr	5 cm
	21	19	7.4	84	43	19.2	kankarkhol	2009-10	Kittrapali	OFSDP (JICA)	83	Teak, Acalia, Simarua,Bah ada, Asla, Karanja,	1mtr	5 cm
108	21	19	7.4	84	43	43.5	kankarkhol	2009-10	Sonarpada	OFSDP (JICA)	106	Teak, Acalia, Simarua,Bah ada, Asla, Karanja,	2 mtr	5 cm
109	21	20	36.7	84	43	54.7	kankarkhol	2009-10	Barbara	OFSDP (JICA)	75	Teak, Acalia, Simarua,Bah ada, Asla, Karanja,	4 mtr	16 cm
110	21	20	20.2	84	40	6	kankarkhol	2010-10	Tefimunda	OFSDP (JICA)	67	Teak	3 mtr	8 cm
111	21	14	18.2	85	8	5.4	Jamkon	2008-09	Jambon	OFSDP (JICA)	58	Teak, Acalia, Asla,Chakhu nda,Arjuna, Neem	2 mtr	6 cm
112	21	14	10.6	85	0	37.6	Jamkon	2008-09	Besalia	OFSDP (JICA)	78	Teak, Acalia, Asla, Sisoo, Karanja, Gambhari	7mtr	18 cm
113	21	14	1.4	85	0	41.1	Jamkon	2010-11	Besalia	OFSDP (JICA)	10	Neem, Asla, Chakhunda ,Bamboo	3 mtr	5 cm

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112	21	15	54	85	7	34.3	Jambua	2010-11	Jambua	OFSDP (JICA)	10	Neem, Anla,Chakhunda,Bamboo	4 mtr	5 cm	15%
113	21	16	1	85	6	1.2	Bagal	2010-11	Dept.	13 FC	10	Neem, Anla,Chakhunda,Bamboo	4 mtr	12 cm	40%
114	21	17	1.2	85	7	9.9	Dunia	2010-11	Pitto	OFSDP (JICA)	120	Teak, Uptus	6 mtr	20 cm	70%
115	21	23	1.5	85	5	38.8	Gurumalei	1995-96	Dept.ie Gurumalei	Economic	50	Teak, Acalia, Anla, Chakhunda, Karanja			
116	21	22	38.8	85	5	59.4	Gurumalei	2007-08	Sisahara purjana	OFSDP (JICA)	78	BambooTeak, Acalia	1 Ft	2 cm	5%
117	21	23	14.4	85	4	27.5	Gurumalei	2007-08	Dept.	12th FC	30	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	4.5 mtr	2 cm	45%
118	21	23	9.7	85	4	53.7	Gurumalei	1996-97	Dept.	Economic	25	Teak, Anla, Gambhari	5 mtr	25 cm	9%
119	21	18	41.3	84	55	12.5	Nuikul	2010-11	Kushakhola	OFSDP (JICA)	52	Teak, Acalia, Simarua, Bahada, Anla, Karanja,	2 mtr	7 cm	7%
120	21	18	23.9	84	54	57.8	Ghodapaka	2011-12	Dehuripal	OFSDP (JICA)	101	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	1 mtr	3 cm	30%
121	21	20	17.9	84	53	39.9	Chodapaka	2011-12	Bhatiapal	OFSDP (JICA)	61.68	Teak, Acalia, Simarua, Bahada, Anla, Karanja,	1.5 mtr	6 cm	20%
122	21	19	47.6	84	52	53.2	Gogua RF	2011-12	Belamunda	OFSDP (JICA)	150	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	2.5 mtr	7 cm	11%
123	21	23	2.9	84	49	47.8	Gogua RF	2008-09	Siartamal	OFSDP (JICA)	75	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	1 mtr	3 cm	5%
124	21	23	40	84	48	46.3	Gogua RF	2008-09	Bhaluchuba	OFSDP (JICA)	77	Teak	2 mtr	6 cm	15%
125	21	23	35.2	84	48	27.2	Gogua RF	2009-10	Nuailhi	OFSDP (JICA)	43	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	2 mtr	3 cm	30%
126	21	20	14.6	84	51	16	Gogua RF	2008-09	Laxmi pur	OFSDP (JICA)	78	Teak	6 mtr	13 cm	75%
127	21	20	32.4	84	49	52.3	Gogua RF	2008-09	Barachandi	OFSDP (JICA)	78	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	4.5 mtr	11 cm	50%
128	21	20	38	84	49	42.4	Gogua RF	2007-08	Barachandi Dept.	12th FC	60	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	4 mtr	12 cm	45%
129	21	22	3.9	84	48	12.2	Gogua RF	2008-09	Brahmanipali near hinjahiton	OFSDP (JICA)	56	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	1.5 mtr	6 cm	15%
130	21	22	26.7	84	47	52.5	Gogua RF	2008-09	Chirigumlisahi	OFSDP (JICA)	75	Teak, Acalia, Simarua, Bahada, Anla, Karanja,	3 mtr	9 cm	25%
131	21	23	13.6	84	47	55.9	Gogua RF	2008-09	Phulajhari	OFSDP (JICA)	61	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	3 mtr	8 cm	20%
132	21	21	3.2	84	49	0.7	Gogua RF	2007-08	Kantabrihal	12th FC	90	Teak, Acalia, Simarua, Bahada, Anla, Karanja,	Wash Out		
133	21	25	55.5	84	35	18.1	Kumar	2008-09	Malichua	OFSDP (JICA)	78	Teak, Acalia, Anla, Sisoo, Karanja, Gambhari	1 mtr	3 cm	5%

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134	21	25	55.5	84	35	18.1	Kanur	1961-62		old Plantation	47.5	Teak	10 mtr	30 cm		
135	21	25	16.3	84	35	2	Kanur	2010-11	Barjhari	OFSDP (JICA)	90	Acalia, Aala, Sisoo, Karanja, Gambhari	1 mtr	5 cm		
136	21	25	52.7	84	35	28.3	Kanur	2008-09	Andhari	OFSDP (JICA)	58	Teak, Acalia, Aala, Sisoo, Karanja, Gambhari, Jiga, Bamboo	8 mtr	20 cm		
137	21	25	17.8	84	37	46.1	Kanur	2008-09	Rampali	OFSDP (JICA)	91	Teak, Acalia, Aala, Sisoo, Karanja, Gambhari	2 mtr	5 cm		
138	21	22	53.4	84	35	42.5	Kanur	2008-09	Pokhpada	OFSDP (JICA)	78	Teak, Karanja	1 mtr	3 cm		
139	21	22	53.4	84	35	42.5	Kanur	1993-94	Pokhpada	old Plantation	11.38	Teak	10 mtr	45 cm		
140	21	23	19.2	84	40	15.6	Kanur	2007-08	Kanur RF near Barkudar	12th Fo	128	Teak, Acalia, Sisoo, Gambhari, Chakhunda	9 mtr	18 cm		
141	21	20	10.3	84	36	26.4	Kanur	2010-11		CAMPA	50	Teak, Acalia, Karanja, Chakhunda	4 mtr	12 cm		
142	21	22	22	84	38	8.1	Kanur	2009-10	Timur	OFSDP (JICA)	100	Teak, Acalia, Karanja, Chakhunda	3 mtr	10 cm		
143	21	22	38.3	84	38	46.9	Kanur	2011-12	Durgamunda	OFSDP (JICA)	29	Teak, Acalia, Karanja, Chakhunda	5 mtr	15 cm		
144	21	22	33	84	38	51.4	Kanur	2009-10	Mollaipur	OFSDP (JICA)	105	Teak, Acalia, Karanja, Chakhunda	12 mtr	18 cm		
145	21	23	15.4	84	37	35	Kanur	2011-12	Rasmal	OFSDP (JICA)	78	Teak, Acalia, Karanja, Chakhunda	4 mtr	8 cm		
146	21	22	33	84	38	51.4	Kanur	2010-11	Mollaipur	OFSDP (JICA)	15	Teak, Acalia, Karanja, Chakhunda	12 mtr	18 cm		
147	21	23	15.5	84	38	27.5	Kanur	2007-08	Kanur RF near rasmal V85	ECO (block)	25	Teak	10 mtr	30 cm		
148	21	23	15.4	84	37	35	Kanur	1963-64		old Plantation	80.94	Teak	10 mtr	38 cm		
149	21	23	33.4	84	39	34.8	Kanur	2006-09	Badkankerkhni	OFSDP (JICA)	78	Teak, Karanja, Sisoo	9 mtr	17 cm		
150	21	23	37.9	84	39	10.6	Kanur	2007-08	Under Ghumamunda	ECO (RDF)	30	Teak	10 mtr	30 cm		
151	21	23	37.9	84	39	10.6	Kanur	2008-09	Ghumamunda	OFSDP (JICA)	74	Teak	10 mtr	35 cm		
152	21	24	14.7	84	38	57.9	Kanur	2008-09	Jawar pali	OFSDP (JICA)	87	Teak, Arjuna, Sisoo, Gambhari, Chakhunda	5 mtr	9 cm		
153	21	24	14.7	84	38	57.9	Kanur	1968-69		old Plantation	52.38	Teak	12 mtr	30 cm		
154	21	24	56.9	84	35	59.6	Kanur	2008-09	Khairandha	OFSDP (JICA)	78	Teak, Sisoo, Gambhari, Chakhunda	6 mtr	9 cm		
155	21	24	56.9	84	35	59.6	Kanur	1967-68		old Plantation	78	Teak	12 mtr	35 cm		
156	21	37	7.5	84	37	40.2	Chiramkhed	2010-11	Tikonsil	OFSDP (JICA)	100	Aala, Teak	1 mtr	3 cm		
157	21	31	54.1	84	45	31.1	Rajamunda	1997-98	Rajamunda	Economic	7	Teak	3 mtr	27 cm		
158	21	27	59.8	85	13	26.7	Mankarchua	2010-11	Kalipal	OFSDP (JICA)	120	Simarin Seed			Wash Out	
159	21	28	05.3	85	14	38.6	Tawkia	2009-10	Koupokula	OFSDP (JICA)	55	Karanja, Aala, Jamu, Bamboo	1 Mt	3 cm		
160	21	28	04.7	85	14	42.0	Tawkia	2008-09	kadapal	OFSDP (JICA)	85.3	Teak	2 Mt	5 cm		
161	21	31	10.5	85	12	34.2	Mankarchua	2011-12	Tesapal	OFSDP (JICA)	100	Simarin Seed			Wash Out	
162	21	28	52.8	85	17	12.2	Nalda	2009-10	Simla	OFSDP (JICA)	125	Karanja, Aala, Bamboo, Neem	2 Mt	7 cm		

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163	21	27	35.3	85	16	37.4	Saida	2009-10	Simliguri	OFSDP (JICA)	99	Karanja, Anla, Neem	1.5 Mtr	6 cm	10%
164	21	20	30.4	85	07	12.4	Bankhol	2009-10	Bankhol	OFSDP (JICA)	10	Arjun, Sisho, Anla, Bamboo	2 Mtr	6 cm	20%
165	21	20	27.2	85	05	13.7	Bankhol	2006-07	Bankhol	OFSDP (JICA)	60	Asan, Arjun, Sisha, Bamboo	1.5 Mtr	6 cm	9%
166	21	31	13.4	85	17	10.8	Old Pauri	2008-09	Jalondh	OFSDP (JICA)	44	Teak, Karanja, Sisha, Anla, Bamboo	3.5 Mtr	8 cm	17%
167	21	31	40.7	85	17	11.8	Old Pauri	2008-09	Rugodehi	OFSDP (JICA)	64.5	Teak, Karanja, Sisha, Anla, Bamboo	5 Mtr	2 cm	42%
168	21	31	13.8	85	15	38.0	Old Pauri	2008-09	Dodipani	OFSDP (JICA)	64.5	Teak, Karanja, Anla, Bamboo	3 Mtr	20 cm	2%
169	21	31	36.1	85	14	08.3	Old Pauri	2010-11	Shimukund	OFSDP (JICA)	90	Simarin Seed	Wash Out		
170	21	33	13.0	85	13	26.0	Old Pauri	2010-11	Bandhakhunti	OFSDP (JICA)	120	Simarin Seed	Wash Out		
171	21	24	23.9	85	07	10.7	Ranja	2003-04 2006-07	Ranja PRF	Department	40	Teak, Karanja, Anla, Bamboo	Wash Out		
172	21	24	27.9	85	08	26.7	Ranja	1977-78 1982-83 1983-84 1984-85 1996-97 2006-07 2007-08	Ranja PRF	Department	65.9	Teak	5 Mtr	20 cm	80%
173	21	21	05.1	85	12	36.5	Malyagiri	2010-11	Balabhadrapur	OFSDP (JICA)	105	Karanja, Anla	Wash Out		
174	21	21	26.3	85	11	40.5	Malyagiri	2010-11	Sukuberpur	OFSDP (JICA)	120	Karanja, Anla	38 cm		3%
175	21	19	26.0	85	10	58.1	Chatigochhia	2007-08	Chatigochhia RF	12th F C	55	Anla, Mahula	7 Mtr	35 cm	40%
176	21	19	26.0	85	10	58.1	Chatigochhia	2010-11	Hatibindha	OFSDP (JICA)	108	Karanja, Anla, Teak, Bamboo	6 Mtr	30 cm	10%
177	21	18	58.0	85	12	16	Chatigochhia	2010-11	Chakradharpur	OFSDP (JICA)	120	Karanja, Anla, Anahia Teak, Bamboo	2 Mtr	7 cm	7%
178	21	18	03.8	85	11	10.7	Badasanda	1995-96	Badasanda PRF	Economic	20	Bamboo	5 Mtr	6 Mtr	6%
179	21	17	57.1	85	11	27.6	Budasanda	2007-08	Budasanda PRF	12th F C	25	Anla, Anahia Chakhanda, Bamboo	2.5 Mtr	7 cm	9%
180	21	12	59.2	85	17	32.7	Sanda	2007-08	Sandi by Department	12th F C	55	Teak, Asan, Arjun	8 Mtr	40 cm	27%
181	21	25	35.4	85	16	12.4	Malyagiri	2008-09	Jamira	OFSDP (JICA)	65.5	Teak	2 Mtr	5 cm	18%
182	21	24	31.2	85	15	54.0	Malyagiri		Nangana	OFSDP (JICA)	104	Asan, Karanja, Anla, Jamu, Harida, Bahada	4 Mtr	7 cm	7%
183	21	24	16.6	85	16	22.2	Malyagiri		Tapingharia	OFSDP (JICA)	69	Asan, Karanja, Anla, Jamu, Harida, Bahada	4 Mtr	12 cm	42%
184	21	23	5.1	85	17	21.9	Malyagiri		Kuguda	OFSDP (JICA)	120	Karanja, Anla, Jamu	Wash Out		
185	21	23	37.6	85	13	27.4	Malyagiri	1995-96	Tamper	OFSDP (JICA)	20	Teak	8.5 Mtr	25.8 cm	30%
186	21	23	37.6	85	13	27.4	Malyagiri	1999-00	Tamper	OFSDP (JICA)	50	Teak	4.5 Mtr	18 cm	38%
187	21	23	38.8	85	13	34.1	Malyagiri	2008-09	Tamper	OFSDP (JICA)	64.5	Teak, Karanja, Sisha, Anla, Bamboo	1.5 mtr	3 cm	10%
188	21	22	51.8	85	14	23.7	Malyagiri	2010-11	Sambai	OFSDP (JICA)	120	Karanja, Sisha, Chakhanda			6%
189	21	23	49.8	85	14	55.3	Malyagiri	2009-10	Gudapada	OFSDP (JICA)	65	Karanja, Jamu	8.5 Mtr	5 cm	2%
190	21	23	58.6	85	14	47.9	Malyagiri	2009-10	Kerjanga	OFSDP (JICA)	105	Karanja, Anla, Asan	1.5 Mtr	5 cm	20%

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192	21	26	02.6	85	13	05.3	Mulyajiri		Hirnan	OFSDP (JICA)	64.5	Teak, Asan	3 cm	7 cm	
193	21	21	24.7	85	18	21.2	Mulyajiri	2010-11	Kadalkuti	OFSDP (JICA)	120	Seemana	Wash Out		
194	21	28	11.8	85	11	5.6	Mankanchua	2008-09	Mankanchua	OFSDP (JICA)	65.5	Teak, Karanja, Aola, Bamboo	3.5Mtr	10 cm	
195	21	28	56.4	85	10	53.4	Mankanchua	2009-10	Kanthanpur	OFSDP (JICA)	125	Karanja, Aola, Bamboo	3 Mtr	7 cm	
196	21	30	04.0	85	12	19.9	Mankanchua	2010-11	Bil	OFSDP (JICA)	120	Teak, Karanja, Aola, Bamboo	Wash Out		
197	21	28	10.3	85	10	27.4	Mankanchua	2010-11	Nalkuiquli	OFSDP (JICA)	120	Simarua Seed	Wash Out		
198	21	33	40.8	84	48	46.7	Pradhanpat	2008-09	Brundabanpur	OFSDP (JICA)	78	Asan, Karanja, Chakhanda, Bamboo, Teak, Aola	4567 R	12 cm	
199	21	32	45.8	84	50	23.1	Pradhanpat	2008-09	Brahmanimul	OFSDP (JICA)	65.5	Asan, Karanja, Chakhanda, Bamboo, Teak, Aola	2.5 Mtr	6 cm	
200	21	32	58.8	84	49	48.8	Pradhanpat	2010-11	Brahmanimul	OFSDP (JICA)	15	Karanja, Bamboo	1.5 Mtr	5 cm	
201	21	33	12.8	84	57	14.5	Badtaila	2009-10	Chakenpali	OFSDP (JICA)	89	Teak, Karanja, Bamboo	2.5Mtr	5 cm	
202	21	31	14.7	84	50	15.7	Pradhanpat	2008-09	Basalai	OFSDP (JICA)	65.5	Karanja, Bamboo, Teak, Aola	4.5 Mtr	14 cm	
203	21	31	57.1	84	50	59.5	Pradhanpat	2008-09	Chhatiabahal	OFSDP (JICA)	84	Karanja, Bamboo, Teak, Aola	4 Mtr	13 cm	
204	21	32	53.3	84	53	43.9	Badtaila	2008-09	Bhagawanda VSS	OFSDP (JICA)	65.5	Karanja, Bamboo, Teak, Aola	2 Mtr	6 cm	
205	21	32	53.3	84	53	43.9	Badtaila	1989-90	Bhagawanda VSS	Economic	30	Teak	5 Mtr	14 cm	
206	21	32	3.3	84	55	17.3	Badtaila	2009-10	Gopalpali	OFSDP (JICA)	63	Acalia, Teak, Bamboo	4 Mtr	15 cm	
207	21	24	37.6	85	12	43.0	Nizigarh (A)		Nizigarh (A) RF	OFSDP	89	Teak	1.5 Mtr	5 cm	
208	21	28	00.0	85	18	15.5	Sarbeda		Sarbeda	OFSDP	120		Wash Out		
209	21	28	23.0	85	10	01.8	Kakharua	1980-81 1981-82 1982-83	Kakharua		64	Teak	8 Mtr	37 cm	
210	21	28	49.8	85	10	4.5	Kakharua	2006-07 2007-08	Kakharua	Economic & 12th FC Gears	50	Teak	2 Mtr	8 cm	
211	21	27	52.4	85	10	20.9	Bhatibeli	1970-71 1971-72 1972-73	Bhatibeli		30.36	Teak	5 Mtr	20 cm	
212	21	26	02.8	85	12	09.0	Nizigarh (B)	1984-95 2007-08	Nizigarh (B)	12th F C	40	Teak	5 Mtr	18 cm	
213	21	35	00.8	84	53	58.7	Badtaila RF	2010-11	Kanchhada	OFSDP (JICA)	73	Karanja, Bamboo, Teak	5 Mtr	3 cm	
214	21	36	29.9	84	51	20.0	Badtaila RF	2010-11	Sirigada	OFSDP (JICA)	120	Asan, Karanja, Chakhanda, Teak, Aola	1 Mtr	3 cm	
215	21	36	22.5	84	50	20.6	Badtaila RF	2010-11	Randihat	OFSDP (JICA)	120	Acalia, Karanja, Bamboo	1 Mtr	6 cm	
216	21	33	59.1	84	54	56.3	Badtaila RF	2009-10	Kanmilbahal	OFSDP (JICA)	92	Karanja, Bamboo, Teak	1 Mtr	5 cm	
217	21	35	21.9	84	47	49.9	Pradhanpat	2009-10	Badbahal	OFSDP (JICA)	53	Acalia, Karanja, Chakhanda, bamboo	4.5 Mtr	25 cm	
218	21	36	41.0	84	47	35.2	Badtaila RF	2010-11	Dangopat	OFSDP (JICA)	80	Asan, Karanja, Chakhanda, Teak, Aola	2 Mtr	4 cm	
219	21	35	41.5	84	49	56.3	Pradhanpat	2010-11	Balunahpali	OFSDP (JICA)	89	Acalia, Karanja, Aola,	2 Mtr	5 cm	

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												bamboo			
219	21	35	41.3	84	43	26.4	Pradhanpat	2010-11	Tadkhali	OFSDP (JICA)	115	Asan, Karanja, Gambhari, Teak, Anla	1.5 Mtr	7 cm	14%
220	21	36	38.4	84	44	24.8	Badtaila RF	2011-12	Ragada	OFSDP (JICA)	80	Acalia, Gambhari, U Putra etc	2 mtr	5 cm	39%
221	21	35	34.1	84	44	00.9	Pradhanpat	2010-11	Gumriposi	OFSDP (JICA)	118	Teak, Karanja, Sisha, Acalia	5 Mtr	10 cm	40%
222	21	35	52.2	84	41	15.5	Pradhanpat	2010-11	Intala	OFSDP (JICA)	63	Teak, Karanja, Sisha, Acalia	4 Mtr	4 cm	70%
223	21	35	05.3	84	43	21.0	Pradhanpat	2010-11	Betajharan	OFSDP (JICA)	90	Acalia, Karanja, Anla, bamboo	2 Mtr	18 cm	30%
224	21	34	38.5	84	47	22.2	Pradhanpat	2008-09	Nagadihi	OFSDP (JICA)	65.5	Teak, Anla	5.5 Mtr	5 cm	70%
225	21	33	54.1	84	46	34. 1	Pradhanpat	2008-09	Chainagali	OFSDP (JICA)	74	Acalia, Karanja, Anla, bamboo	wash Out		
226	21	33	41.1	84	48	02.4	Pradhanpat	2008-09	Umiamunda	OFSDP (JICA)	46	Bamboo	wash Out		
227	21	34	54.3	84	48	33.1	Pradhanpat	2010-11	Kusumkuti	OFSDP (JICA)	45	Acalia, Arjuna, Karanja, Chakhunda, Sisha	wash Out		
228	21	37	00.6	84	56	10.9	Badtaila RF	2008-09	Mandanila RF	OFSDP (JICA)	65.5	Karanja, Gambhari, Teak, Anla, Acalia, Bamboo	3 Mtr	11c m	10%
229	21	37	25.6	84	56	07.4	Badtaila RF	1996-97	Haltaila Department	Economic	30	Teak	5 Mtr	27c m	97%
230	21	37	11.3	84	54	42.4	Badtaila RF	2009-10	Brahmanidei	OFSDP (JICA)	84	Karanja, Gambhari, Teak, Anla, Acalia, Bamboo	2.5 Mtr	7 cm	63%
231	21	36	49.2	84	58	6.3	Badtaila RF	2008-09	Kudapada	OFSDP (JICA)	65.5	Teak, Karanja, Sisha, Acalia	5 Mtr	1.7 cm	85%
232	21	36	28.7	84	58	50.3	Badtaila RF	1995-96	Badtaila Department	Economic	80	Kaju, Teak	2 Mtr	10 cm	20%
233	21	39	00.9	84	53	00.6	Badtaila RF	2009-10	Kelda VSS	OFSDP (JICA)	105	Teak, Karanja, Sisha, Acalia	30	13 cm	34%
234	21	37	38.6	84	50	26.6	Badtaila RF	2008-09	Sibapali	OFSDP (JICA)	65.5	Acalia, Karanja, Chakhunda, bamboo	2.5 Mtr	13 cm	12%
235	21	34	28.1	84	58	39.1	Badtaila RF	2008-09	Sirapali	OFSDP (JICA)	65.5	Gambhari, Teak, Sisha, Bamboo	6 Mtr	27 cm	85%
236	21	38	36.4	84	50	17.8	Mandanila	2010-11	Chapabahal	OFSDP (JICA)	120	Acalia, Karanja	4 Mtr	18 cm	80%
237	21	38	39.8	84	52	12.8	Mandanila	2010-11	Ratnapali	OFSDP (JICA)	78	Karanja, Gambhari, Anla, Acalia	3 Mtr	7 cm	70%
238	21	38	48.3	84	54	31.2	Mandanila	2009-10	Saloni	OFSDP (JICA)	61	Teak, karanj, Chakhunda	5 Mtr	5 cm	5%
239	21	34	58.5	84	57	51.1	Badtaila RF	2008-09	Chakudihi	OFSDP (JICA)	65.5	Teak, Bamboo, Gambhari,Ch akhunda	4 Mtr	30 cm	40%
240	21	33	50.2	84	57	38.6	Badtaila RF	1996-97	Economic Jay Pichhula VSS	Economic	5	Teak	10 Mtr	50 cm	35%
241	21	33	50.7	84	57	37.9	Badtaila RF	2009-10	Jay Pichhula VSS	OFSDP (JICA)	106	Karanja, Gambhari, Teak, Chakunda	1 Mtr	5 cm	4%
242	21	33	32.9	84	57	37.9	Badtaila RF	2008-09	Gumriposi	OFSDP (JICA)	63.3	Karanja, Gambhari, Teak, Chakunda	5Mtr	5 cm	3%
243	21	33	32.9	84	57	37.9	Badtaila RF	1994-95	Dept. near Gumriposi	Economic	20	Teak	9 Mtr	35 cm	42%
244	21	17	28.7	85	14	21.5	Malyagiri	2008-09	Podapasi	OFSDP (JICA)	78	Teak, Karanja, Acalia	4 Mtr	28 cm	3%

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245	21	17	28.7	85	14	31.5	Malyagiri	2010-11	Pedapuni	OFSDP (JICA)	89	Teak, Karanja, Acalia	4 Mtr	28 cm	
246	21	18	40.4	85	13	51.0	Malyagiri	2008-09	Tandur	OFSDP (JICA)	78	Teak, Karanja, Acalia	5 Mtr	12 cm	
247	21	18	11.1	85	14	04.8	Malyagiri	2008-09	Bahudakasi	OFSDP (JICA)	78	Karanja, Teak, Acalia	1 Mtr	5 cm	
248	21	20	20.6	85	14	56.7	Malyagiri	2009-10	Kusumada	OFSDP (JICA)	90	Karanja, Aola, Asan	Wash Out		
249	21	20	40.8	85	14	92.6	Malyagiri	2009-10	Rakila	OFSDP (JICA)	117	Karanja, Aola, Sisarsa			
250	21	17	22.6	85	16	92.45	Malyagiri	2010-11	Bagalaxmi	OFSDP (JICA)	139	Karanja, Aola, Sisarsa	2 Mtr	7 cm	
251	21	17	48.2	85	16	02.9	Malyagiri		Bralamunda	OFSDP (JICA)	120	Teak, Acalia	Wash Out		
252	21	16	19.5	85	15	31.5	Malyagiri	2008-09	Naugaon	OFSDP (JICA)	67	Karanja, Teak, Acalia,Sisarsa	2.5 Mtr	9 cm	
253	21	16	90.8	85	16	01.9	Malyagiri	2009-10	Bhatia	OFSDP (JICA)	82	Karanja, Teak, Aola	5 Mtr	5 cm	
254	21	16	47.2	85	14	22.7	Malyagiri	2009-10	Bandarpur	OFSDP (JICA)	41	Karanja, Teak, Aola	25 mtr	5 cm	
255	21	15	20.6	85	16	53.2	Malyagiri	2008-09	Arjunjhri	OFSDP (JICA)	66	Karanja, Teak, Aola	7 Mtr	17 cm	
256	21	15	17.6	85	17	08.0	Malyagiri	2008-09	Alasi	OFSDP (JICA)	65.5	Karanja, Teak, Aola	3 Mtr	12 cm	
257	21	13	50.8	85	17	44.6	Kalabira	2010-11	Bichora	OFSDP (JICA)	120	Wash Out	Wash Out		
258	21	13	23.3	85	18	10.2	Kalabira	2010-11	Mallapur	OFSDP (JICA)	60	Wash Out	Wash Out		
259	21	11	51.0	85	22	33.7	Kalabira	2010-11	Tandhorini	OFSDP (JICA)	110	Wash Out	Wash Out		
260	21	12	03.3	85	21	47.5	Kalabira	2010-11	Magarmahat	OFSDP	95	Wash Out	Wash Out		
261	21	14	19.6	85	21	34.6	Kalabira	2008-09	Barkhali	OFSDP	65.9	Teak, Sisham, Gambhari,	4 Mtr	25 cm	
262	21	14	11.0	85	20	48.8	Kalabira	2008-09	Hasuda	OFSDP	55	Bamboo, Teak	2.5 Mtr	5 cm	
263	21	13	52.9	85	20	00.6	Kalabira	2010-11	Malarbeda	OFSDP	85	Karanja, Sisarsa	Wash Out		
264	21	11	50.9	85	13	23.8	Kanjam RF	2009-10	Pasuria	OFSDP	102	Karanja, Acalia, Kaju, Khaira	2 Mtr	7 cm	
265	21	12	26.9	85	12	41.6	Kanjam RF	1984-85	Department	OFSDP	40.47	Khaira	2.5 Mtr	15 cm	
266	21	12	26.9	85	12	41.6	Kanjam RF	1989-90	Department	OFSDP	30	Khaira	2.5 Mtr	15 cm	
267	21	12	26.9	85	12	41.6	Kanjam RF	1990-91	Department	OFSDP	20	Khaira	2.5 Mtr	15 cm	
268	21	12	26.9	85	12	41.6	Kanjam RF	1991-92	Department	OFSDP	7	Khaira	2.5 Mtr	15 cm	
269	21	12	26.9	85	12	41.6	Kanjam RF	1991-92	Department	OFSDP	28	Khaira	2.5 Mtr	15 cm	
270	21	12	26.5	85	12	36.9	Kanjam RF	2009-10	Jamadhara Outlet	VSS	107	Karanja, Acalia, Khaira, Teak, Chakhanda	2 Mtr	9 cm	
271	21	12	28.9	85	12	39.9	Kanjam RF	2010-11	Department	13th FC	20	Acalia, Khaira, Teak	1.5 Mtr	1.5 cm	
272	21	13	00.1	85	12	16.8	Kanjam RF	2010-11	Department	OFSDP	20	Teak	1.5 mtr	2 cm	
273	21	13	39.5	85	12	36.8	Kanjam RF	2010-11	Satyagudha	Canopy	13	Gambhari, Teak, Acalia, Khaira	2 Mtr	8 cm	
274	21	12	45.9	85	13	39.0	Kanjam RF	2009-10	Dangajal	OFSDP	63	Gambhari, Teak, Acalia, Khaira	Wash Out		
275	21	12	33.9	85	13	56.5	Kanjam RF	2007-08	Department	Eco-RDF	50	Teak	5 Mtr	30 cm	
276	21	40	34.4	85	59	34.1	Pangoli	2009-10	Mamuja	OFSDP (JICA)	91	Gambhari, Acalia, Khaira, Bamboo, Nima, Aola	4.5 Mtr	13 cm	
277	21	39	09.7	85	00	12.5	Pangoli	2009-11	Kadagola	OFSDP (JICA)	82	Gambhari, Acalia, Khaira, Bamboo, Nima, Aola	2.5 Mtr	8 cm	

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278	21	35	06.7	85	00	19.3	Pangali	2009-12	Ghantijuni	OFSDP (JICA)	60	Gambhari, Acalia, Khaira, Bamboo, Nima, Anla	5 Mtr	4 cm	7%
279	21	38	18.4	85	00	49.9	Pangali	2008-09	Hanskrampur	OFSDP (JICA)	61.5	Teak, Gambhari, Acalia, Khaira, Bamboo, Nima, Anla, Sisu	2 Mtr	3 cm	5%
280	21	36	57.7	85	01	10.8	Pangali	2008-10	Singpal	OFSDP (JICA)	68	Teak, Gambhari, Acalia, Khaira, Bamboo, Nima, Anla, Sisu	5 Mtr	13 cm	6%
281	21	36	53.0	85	01	21.7	Pangali	2008-11	Jagannathpur	OFSDP (JICA)	62.5	Teak, Gambhari, Acalia, Khaira, Bamboo, Nima, Anla, Sisu	Wash Out		
282	21	33	09.8	85	01	28.1	Pangali	2008-12	Akhirtala	OFSDP (JICA)	80.5	Teak, Gambhari, Acalia, Khaira, Bamboo, Nima, Anla, Sisu	5 Mtr	4 cm	3%
283	21	34	21.0	85	01	46.8	Pangali	2010-11	Indramjharan	OFSDP (JICA)	120	Karanja, Gambhari, Bamboo, Anla, Bamboo	2.5 Mtr	8 cm	29%
284	21	33	54.1	85	01	22.0	Pangali	1996-97	Department	Economic	20	Teak	10 Mtr	37 cm	12%
285	21	33	17.1	85	01	21.5	Pangali	2007-08	Department	12th F C	80	Teak	9 Mtr	33 cm	28%
286	21	32	42.0	85	01	36.3	Pangali	2003-09	Department	Eco (RDF)	50	Teak	8 Mtr	34 cm	27%
287	21	32	42.0	85	02	05.0	Pangali	2009-10	Gopapur	OFSDP (JICA)	98	Khaira, Anla	3 Mtr	8 cm	12%
288	21	32	59.7	85	02	35.6	Pangali	2010-11	Ramachandrapur	OFSDP (JICA)	100	Karanja, Teak, Anla	3 Mtr	3 cm	10%
289	21	34	24.6	85	02	16.3	Pangali	2009-10	Nunkuda	OFSDP (JICA)	69	Karanja, Teak, Anla, Bamboo	1.5 Mtr	3 cm	5%
290	21	34	28.4	85	02	51.5	Pangali	2009-10	Talabahali	OFSDP (JICA)	141	Acalia, Karanja, Chakunda, Anla, Upatas	2.5 Mtr	6 cm	12%
291	21	34	42.6	85	03	45.8	Pangali	2009-10	Kalinpal	OFSDP (JICA)	149	Karanja, Anla, Sisu	1.5 Mtr	6 cm	4%

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C. REGENERATION SURVEY

Regeneration Survey in (2 mt. x 2 mt.)							GPS Reading					
Block	Sample Plot No.	E	W	U	S	R	Lattitude			Longitude		
							D	M	S	D	M	S
Jambua	1	0	0	2	4	6	21	14	13.3	85	8	3.7
	2	1	1	3	4	8	21	14	24.3	85	7	25.4
	3	0	1	4	5	9	21	14	19.7	85	7	57.5
	4	0	2	3	5	8	21	13	55.5	85	7	43.3
	5	1	1	4	3	9	21	14	15.8	85	6	39.2
	6	1	2	3	3	10	21	14	20.4	85	6	54
Talabahali	1	1	0	1	2	7	21	34	2.8	85	3	1.1
Kakharua	1	0	0	3	5	7	21	29	29.7	85	16	16.9
	2	0	2	2	7	8	21	29	22.2	85	16	26.5
	3	0	1	4	7	21	21	28	452	85	16	29.6
Sarbeda	1	0	0	2	7	10	21	28	31.2	85	18	17.4
	2	7	5	0	7	8	21	28	4.9	85	18	46.7
	3	4	6	0	0	15	21	28	36.8	85	18	53.8
	4	3	6	6	12	11	21	28	6.9	85	18	3.1
	5	3	5	4	10	12	21	28	55.9	85	18	17.2
	6	2	4	6	3	10	21	28	52.6	85	18	41
Bhaluhuli	1	1	0	3	2	7	21	27	57.2	85	10	11.2
	2	2	1	3	5	3	21	39	25.1	84	29	42.3
	3	3	5	2	8	10	21	39	25.3	84	29	16.1
Atolanka	1	0	0	2	4	7	21	30	33.6	85	16	40.6
	2	0	1	3	7	11	21	30	37.3	85	16	23.9
	3	0	0	3	5	12	21	30	45.3	85	16	57.3
Timi	1	0	0	3	4	6	21	29	12.4	85	13	58.6
	2	2	2	6	4	3	21	30	17.1	85	13	55.3
	3	3	5	7	9	4	21	30	6.5	85	14	36.7
	4	4	7	5	8	7	21	30	8	85	14	44.1
	5	2	8	7	10	6	21	30	7.5	85	14	54.5
	6	3	4	7	9	11	21	30	4.8	85	14	54.8
Nizigarh B	1	0	0	2	5	10	21	25	49.6	85	12	20.1
	2	3	2	1	4	7	21	25	51.8	85	12	41.6
Thianal	1	1	0	3	5	9	21	29	33.2	85	8	37
	2	0	0	4	4	11	21	29	20.7	85	8	40.5
	3	0	1	2	6	8	21	29	4	85	8	58.2
	4	1	0	3	5	8	21	28	51.2	85	8	54.2
	5	0	0	3	7	9	21	29	26	85	8	25
	6	0	1	2	4	6	21	29	12.4	85	9	32.1

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	7	3	0	2	4	8	21	29	0.1	85	8	36.4
	8	2	3	5	2	4	21	28	45.7	85	8	43.9
	9	2	2	6	2	3	21	29	46	85	8	24.3
	10	2	3	4	2	5	21	29	44.7	85	8	21.6
	11	2	4	3	5	6	21	29	38.1	85	8	19.4
	12	1	2	5	4	4	21	29	33.7	85	8	21.4
	13	2	0	3	2	6	21	29	26.1	85	8	18.5
	14	2	0	2	1	4	21	28	51.5	85	9	53.6
	15	1	2	0	5	4	21	28	49.8	85	10	7.2
	16	1	2	0	2	5	21	29	7.7	85	10	22
Khulundikudar	1	0	1	2	2	6	21	38	51.5	84	56	16.1
	2	1	2	4	6	7	21	39	47.4	84	54	28.3
	3	0	2	3	4	6	21	39	47.7	84	55	7.4
	4	1	3	4	4	5	21	39	28.8	84	55	44
	5	2	2	3	3	6	21	39	45.8	84	56	8.7
	6	1	2	2	3	8	21	40	1.8	84	54	17.9
	7	1	0	1	2	12	21	39	59.1	84	54	28.5
	8	1	0	1	1	5	21	40	4.1	84	54	46.7
Tamkia PRF	1	0	1	3	3	8	21	12	8	84	54	1.2
	2	1	2	1	10	14	21	29	9.8	85	14	14.6
	3	0	1	2	9	20	21	29	3	85	14	17.8
	4	0	1	6	6	12	21	28	56.7	85	14	23.8
	5	1	3	6	12	15	21	28	45.6	85	14	25.4
	6	2	1	3	12	28	21	28	40.4	85	14	30.7
	7	2	4	5	17	13	21	28	29.5	85	14	21.1
New Pauri	1	0	1	2	2	8	21	37	52.4	85	13	56
	2	2	3	4	4	10	21	37	20.6	85	14	47.1
	3	3	2	5	2	8	21	37	32.9	85	14	36.5
	4	2	3	0	5	4	21	37	46.4	85	14	22.9
	5	2	0	3	4	6	21	37	52.4	85	14	20.2
	6	2	2	4	2	7	21	37	57.6	85	14	15.1
	7	3	4	6	5	15	21	38	12.9	85	14	23.1
	8	5	3	7	8	12	21	38	13.6	85	14	25.6
	9	2	6	7	7	11	21	38	16.2	85	14	1.8
	10	4	8	5	9	11	21	38	20.7	85	14	34
	11	3	7	6	8	14	21	38	26	85	14	38.1
	12	3	1	2	5	3	21	39	10.1	85	13	7.6
	13	2	0	4	2	5	21	39	23.6	85	12	57.6
	14	4	4	2	3	0	21	39	24.7	85	12	56.2
	15	3	2	1	2	3	21	38	55.3	85	13	15.6
	16	2	3	3	5	0	21	38	58.7	85	13	14.6

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Kuladera	1	1	1	3	5	11	21	14	10.8	85	19	35.5
	2	0	1	2	5	9	21	14	17.2	85	19	47.6
	3	0	1	3	4	7	21	13	5.1	85	22	24.5
	4	1	0	2	5	12	21	12	56.3	85	22	14.1
	5	0	0	2	4	7	21	15	28.8	85	18	15.4
	6	0	1	3	3	6	21	15	41.6	85	18	40.5
	7	1	2	4	3	8	21	16	0	85	17	26.7
	8	1	3	2	4	9	21	16	16.2	85	17	36.9
	9	2	0	3	5	11	21	16	20.6	85	17	48.3
	10	1	2	4	6	8	21	16	18.5	85	17	50
	11	1	0	5	4	12	21	15	59.4	85	17	21
	12	1	4	3	5	10	21	15	57.5	85	17	36.5
	13	2	1	3	5	11	21	13	2.5	85	22	17.5
	14	1	3	3	4	7	21	13	1.3	85	22	30.5
	15	2	3	3	5	9	21	12	2.5	85	22	34.7
	16	1	2	2	3	5	21	11	53.4	85	22	50.3
	17	2	4	4	5	7	21	11	50.4	85	22	45.5
	18	1	2	4	5	8	21	15	16.2	85	18	18.2
	19	1	0	2	3	7	21	15	9.8	85	18	31.6
	20	0	2	4	4	9	21	15	1.6	85	19	1.5
	21	1	1	3	5	8	21	14	3.5	85	18	46.3
	22	1	2	2	3	6	21	14	31.1	85	18	55.4
	23	2	3	5	5	6	21	14	44.6	85	18	20.8
	24	1	2	3	4	7	21	14	40.8	85	18	40.4
Rajamunda	1	0	1	1	2	5	21	31	52.5	84	46	2.3
	2	2	2	5	7	7	21	31	44.7	84	45	45
	3	1	3	4	4	11	21	31	56.4	84	45	57
	4	1	1	4	5	10	21	31	50.6	84	45	46.9
Kansar B	1	0	0	3	5	9	21	25	19.6	85	1	59.4
	2	2	5	3	5	8	21	25	48.7	85	1	59.1
	3	3	3	5	4	11	21	25	9.7	85	2	5.7
	4	1	3	4	5	7	21	25	4.4	85	2	15.1
Banbira	1	0	0	1	3	7	21	28	35.2	85	0	20.6
	2	3	2	3	3	4	21	26	45.8	85	3	10.9
	3	1	3	3	2	6	21	26	58.3	85	2	44
	4	1	2	5	5	4	21	27	2	85	2	25
	5	2	2	3	2	5	21	27	9.4	85	2	13.2
	6	1	0	3	5	7	21	28	19.2	85	3	5.1
	7	1	1	2	3	5	21	28	21	85	3	0.8
	8	2	1	2	2	4	21	28	26.9	85	2	56.2
	9	1	3	2	4	5	21	28	31.8	85	2	52.5

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sanda	1	0	1	3	4	6	21	13	13.2	85	18	24
	2	3	0	2	5	3	21	12	36.4	85	16	51.2
	3	2	1	2	3	3	21	12	38.9	85	16	55.9
Jolanda jankapani	1	0	1	3	5	8	21	30	24	85	17	55.6
	2	3	2	6	10	22	21	29	16.9	85	17	52
	3	2	0	0	5	28	21	29	34.1	85	17	51.8
	4	1	5	6	8	10	21	29	34.9	85	18	25.4
	5	3	2	0	0	4	21	29	30.7	85	18	15.3
Bhuluka	1	0	0	0	0	0	21	10	35.2	85	18	11.3
	2	0	3	2	2	3	21	9	40.3	85	19	1.1
	3	1	2	2	5	2	21	10	4	85	18	34.2
	4	1	1	3	3	2	21	10	9.1	85	18	28.1
Birpal	1	1	1	2	3	7	21	15	59.8	85	5	56.9
	2	1	1	3	6	11	21	16	29	85	8	21.5
	3	2	1	4	5	7	21	16	20.1	85	8	6.1
	4	1	2	5	5	8	21	16	23.1	85	8	41.1
	5	2	0	3	4	7	21	16	23.1	85	7	37.6
Rengalmunda	1	0	0	4	5	7	21	12	47.8	85	19	31.5
	2	1	2	4	3	7	21	12	32.6	85	19	81.4
	3	1	3	4	5	10	21	12	44.2	85	19	34.3
	4	1	0	5	4	9	21	13	2.4	85	19	29.9
	5	1	1	5	6	7	21	12	37.6	85	19	31.4
	6	1	0	5	6	9	21	13	2.4	85	19	29.9
	7	1	1	0	7	11	21	12	44.2	85	19	34.3
Kalamjuangasahi	1	0	0	1	2	6	21	20	58.4	85	12	37.2
	2	1	3	5	7	5	21	21	8.6	85	12	55.8
	3	1	4	3	4	9	21	20	33.5	85	12	2.2
Badasada	1	1	0	2	4	3	21	18	6.2	85	11	31.1
	2	2	3	6	6	5	21	18	37.8	85	11	48.3
	3	1	7	6	5	7	21	18	14.6	85	11	47.6
	4	1	3	5	5	7	21	18	12.6	85	11	20.3
Injidi	1	0	1	3	4	5	21	11	35.8	85	18	3
	2	1	1	2	2	2	21	11	34.3	85	18	6.5
	3	1	3	2	2	6	21	11	37.3	85	18	3.2
Rangiapal	1	0	0	1	2	4	21	11	5.3	85	21	37.6
	2	1	1	2	3	5	21	10	51.8	85	21	45
	3	1	2	2	4	7	21	10	53.2	85	21	47.4
	4	1	2	3	3	6	21	10	56.4	85	21	50.2
	5	1	3	3	4	5	21	11	0.5	85	21	51.1
Priyambadapur	1	0	0	3	2	5	21	12	25.9	85	16	21.4
	2	2	2	0	4	4	21	12	27.6	85	16	29.6

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	3	2	0	4	7	9	21	12	28.7	85	16	17.1
	4	1	1	3	5	6	21	12	25.2	85	16	22.2
Charigochhia	1	0	1	2	5	10	21	19	50.5	85	13	9.8
	1	1	2	3	4	10	21	19	48.7	85	13	11
	2	2	2	4	5	12	21	19	37.4	85	13	5.6
	3	0	2	3	5	11	21	19	43.6	85	12	50.6
	4	1	1	4	4	8	21	19	21.8	85	12	24.7
	5	1	2	3	4	6	21	19	4.5	85	11	49.1
	6	1	3	4	5	9	21	19	22.5	85	11	0.3
	7	0	2	4	5	8	21	19	38.6	85	11	25.5
	8	1	2	5	4	12	21	20	2.4	85	11	53.6
	9	0	1	3	4	9	21	20	16.1	85	12	48.5
	10	0	1	4	5	11	21	20	1.8	85	13	2
Bankhol	1	0	2	3	6	9	21	20	37.6	85	6	17.4
	2	1	0	2	5	6	21	20	43.2	85	6	29.4
	3	0	0	2	3	12	21	20	45.6	85	6	20.8
	4	1	1	3	4	8	21	20	41.6	85	6	9.6
	5	1	1	2	3	10	21	20	52.8	85	6	12.2
	6	0	0	3	4	7	21	20	48	85	6	58.4
	7	0	1	3	5	11	21	20	43.2	85	6	49.9
	8	1	1	2	3	9	21	20	59.2	85	6	0.2
	9	0	0	2	5	6	21	20	28.3	85	6	27.1
	10	1	1	3	6	8	21	20	38.8	85	6	13.5
	11	1	0	2	4	10	21	20	34.1	85	6	27.8
	12	0	1	3	5	7	21	20	41.7	85	6	30.7
	13	0	0	4	6	9	21	20	38.4	85	5	27.5
	14	0	1	3	4	7	21	20	43.2	85	5	12
	15	0	0	6	5	8	21	20	51.2	85	5	33.5
	16	1	0	5	5	9	21	21	6.3	85	5	46.5
	17	0	1	3	4	11	21	21	12	85	5	51.6
	18	0	0	4	4	10	21	21	13.6	85	5	34.4
	19	0	0	5	6	12	21	21	23.2	85	5	41.2
	20	1	0	4	2	8	21	21	28	85	5	31.8
	21	0	1	3	4	7	21	21	34.4	85	5	47.3
	22	1	0	2	5	6	21	21	32.8	85	6	1.9
	23	0	0	4	6	10	21	21	47.2	85	5	55
	24	0	1	2	4	5	21	20	27.1	85	8	6.5
	25	1	2	3	3	6	21	20	31.8	85	7	15.7
	26	0	1	2	3	4	21	20	35.7	85	6	27.5
	27	2	3	2	4	5	21	20	35.8	85	6	19.9
	28	1	2	3	6	4	21	20	32.9	85	6	37.4

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	29	2	4	5	4	6	21	20	37.8	85	5	37.6
	30	1	3	4	3	8	21	20	48	85	5	17.7
	31	1	2	3	5	6	21	20	43.3	85	5	26.5
	32	1	5	4	3	6	21	21	27.4	85	5	31.1
	33	1	4	3	5	5	21	21	24.7	85	5	37.1
	34	2	3	5	6	8	21	21	17.5	85	5	56.3
	35	0	4	3	5	9	21	21	5	85	6	2.4
Old pauri	1	0	0	4	6	12	21	31	18	85	16	12.8
	2	0	1	2	3	10	21	31	8.8	85	16	21.7
	3	0	1	3	2	8	21	35	24.8	85	14	32.1
	4	1	0	1	2	10	21	35	34.4	85	15	5.2
	5	1	0	3	4	8	21	35	58.6	85	11	58.7
	6	0	0	2	5	11	21	35	44.8	85	12	10.2
	7	0	1	1	3	8	21	34	10.8	85	12	54.7
	8	1	0	2	4	12	21	35	27.8	85	13	58.7
	9	0	1	0	3	8	21	35	37.6	85	13	51
	10	1	0	1	2	8	21	33	19.6	85	15	57.2
	11	0	1	1	2	8	21	33	36.5	85	13	1.4
	12	1	0	1	1	10	21	33	43.9	85	12	55.4
	13	0	0	2	4	13	21	33	52.8	85	12	53.2
	14	0	1	1	2	12	21	32	27.2	85	16	37.9
	15	0	0	2	3	10	21	32	31.1	85	16	27.7
	16	1	0	0	4	10	21	33	8.4	85	15	34.4
	17	0	0	1	3	10	21	33	22	85	16	50
	18	1	0	0	4	8	21	33	30.8	85	16	32.9
	19	1	1	4	6	10	21	32	47.2	85	17	20
	20	3	2	6	12	11	21	32	30	85	17	11.3
	21	4	5	8	14	10	23	32	24	85	17	11.4
	22	3	4	5	12	10	21	32	18.4	85	17	14.5
	23	4	4	6	12	14	21	32	9.6	85	17	16.5
	24	1	2	4	7	10	21	31	59.6	85	17	24.3
	25	2	4	8	12	10	21	37	54.4	85	17	26.2
	26	5	4	10	14	9	21	31	48.6	85	17	24.5
	27	3	5	8	12	10	21	31	39.8	85	17	21.4
	28	4	3	6	10	14	21	31	34.2	85	17	20.3
	29	5	4	8	12	16	21	31	28.2	85	17	21.4
	30	3	5	6	9	14	21	31	18.9	85	17	23.9
	31	2	4	8	10	12	21	31	15.3	85	17	25.3
	32	1	2	4	7	10	21	31	10.9	85	17	19.3
	33	4	3	6	9	12	21	30	51.2	85	16	40.4
	34	2	4	6	12	14	21	30	39.1	85	16	53.7

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	35	1	3	7	10	12	21	30	15.3	85	16	21.4
	36	1	4	6	10	9	21	31	26.9	85	13	0.6
	37	1	5	6	15	8	21	31	37.2	85	13	24.5
	38	4	5	7	3	19	21	31	2.3	85	12	45.6
	39	0	4	3	4	15	21	30	55	85	12	50.4
	40	0	2	3	7	9	21	33	20.9	85	17	22.9
	41	2	0	3	5	9	21	33	26.2	85	17	9.6
	42	1	0	4	6	11	21	33	40.5	85	16	54.2
	43	0	3	7	11	17	21	33	58.8	85	16	26.7
	44	0	1	3	3	7	21	33	57.2	85	16	4.7
	45	0	1	1	3	8	21	33	59.5	85	15	54.4
	46	1	0	5	7	9	21	34	11.7	85	15	33.5
	47	1	0	2	6	12	21	34	32.2	85	15	27.8
	48	0	0	4	7	10	21	34	35.2	85	15	24.7
	49	2	0	2	6	11	21	34	54.8	85	15	34.6
	50	2	1	4	6	10	21	35	28.5	85	15	34.7
	51	1	0	5	9	9	21	33	49.7	85	21	41.9
	52	0	3	4	6	6	21	34	50.7	85	21	0.8
	53	0	2	3	5	6	21	35	24.9	85	11	8.4
Mandasila	1	1	2	3	3	5	21	29	12.7	84	53	44.4
	2	0	3	2	4	7	21	29	11	84	53	28.8
	3	1	2	4	3	5	21	39	4.5	84	50	53.6
	4	0	1	4	4	7	21	39	20.8	84	50	57
	5	0	1	2	3	5	21	39	12.7	84	49	41.5
	6	0	0	3	5	7	21	39	24.1	84	49	34.5
	7	1	0	3	4	5	21	38	48.2	84	49	8.6
	8	0	1	3	3	6	21	38	49.9	84	49	17.6
	9	0	2	2	5	6	21	38	18.6	84	49	27.6
	10	0	2	3	5	6	21	38	6.6	84	49	12.7
	11	1	2	4	4	5	21	39	48.6	84	54	13.5
	12	2	2	3	5	5	21	39	45.6	84	54	14.8
	13	2	3	3	4	6	21	39	35.5	84	54	19.8
	14	1	2	2	3	5	21	39	43.6	84	54	19.6
	15	0	1	3	4	6	21	39	33.7	84	54	17.6
	16	1	1	3	3	7	21	39	40.9	84	54	24.7
	17	2	2	3	5	8	21	39	28.9	84	54	25.1
	18	1	3	2	4	6	21	39	37.9	84	54	26.2
	19	1	2	3	4	6	21	39	35.5	84	54	28.4
	20	2	3	4	5	7	21	38	54.9	84	55	27.4
	21	1	0	2	2	5	21	39	20.5	84	54	46.4
	22	0	0	2	3	4	21	39	20.4	84	54	50.4

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	23	1	1	0	2	5	21	39	14.1	84	54	53.6
	24	0	2	3	2	6	21	39	13.6	84	54	48.8
	25	1	2	0	3	5	21	39	12.3	84	54	42.4
	26	1	1	2	2	4	21	39	12.5	84	54	30.5
	27	2	0	1	3	7	21	39	11.3	84	54	25.1
	28	0	1	2	2	3	21	39	19.2	84	55	2.2
	29	0	1	3	3	5	21	39	13.2	84	54	6.7
	30	1	1	2	2	6	21	39	13.2	84	54	50.5
	31	3	2	4	3	5	21	39	33.6	84	54	24.2
	32	4	5	3	4	4	21	39	31	84	54	31.6
	33	2	4	2	3	3	21	39	21	84	54	53.6
	34	3	2	4	2	6	21	39	27.4	84	54	32.9
	35	0	3	2	3	4	21	39	24	84	54	35.4
	36	5	4	3	2	5	21	39	22.9	84	54	37.3
	37	3	2	4	3	4	21	39	21.3	84	54	40.3
	38	2	3	2	4	3	21	39	19.9	84	54	36.4
	39	3	4	3	2	5	21	38	19.9	84	54	36.3
	40	4	2	4	5	4	21	39	20.1	84	54	43
	41	3	3	3	2	6	21	40	5.7	84	54	12.2
Malyagiri	1	0	2	4	3	6	21	18	53.1	85	14	17.3
	2	1	3	3	4	7	21	19	4.5	85	14	19
	3	0	1	1	2	6	21	19	23.6	85	16	5.4
	4	0	0	2	3	7	21	19	17.8	85	16	1.9
	5	1	0	3	4	6	21	17	33.3	85	14	44.9
	6	0	3	4	4	5	21	17	29.9	85	15	3.5
	7	0	1	2	4	6	21	17	33.2	85	15	41.2
	8	0	0	3	4	8	21	17	35.6	85	15	27.5
	9	0	1	2	4	5	21	16	32.8	85	15	22.3
	10	0	0	3	5	6	21	16	34.4	85	15	44.7
	11	1	0	2	3	7	21	16	51.2	85	15	24.9
	12	0	0	3	4	6	21	16	48.8	85	15	430
	13	0	1	2	2	7	21	21	23.3	85	14	4.8
	14	0	1	3	2	6	21	21	28	85	14	20
	15	1	2	2	2	8	21	26	56.6	85	14	42.5
	16	0	0	2	3	9	21	26	28.2	85	14	42.5
	17	2	3	5	6	11	21	26	35.7	85	14	32.2
	18	1	2	4	6	14	21	27	5.7	85	14	29.1
	19	2	5	5	7	19	21	27	10.1	85	13	47.3
	20	2	3	4	5	12	21	26	36	85	15	33.3
	21	2	4	6	7	9	21	26	24.5	85	15	59.4
	22	1	3	5	8	10	21	26	9.3	85	16	14.3

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23	3	2	6	4	9	21	25	51.6	85	16	16.9
24	1	4	3	5	9	21	25	24	85	16	10.6
25	3	6	5	4	8	21	25	23.9	85	15	39.5
26	0	1	8	7	15	21	24	26.9	85	16	0.1
27	2	5	5	8	15	21	24	11.9	85	16	26.5
28	3	3	7	6	8	21	23	45	85	16	41.4
29	2	4	5	8	10	21	23	18.6	85	16	54.5
30	2	5	5	6	8	21	23	6.3	85	17	16.6
31	1	3	4	3	8	21	23	0.2	85	17	34.6
32	2	2	3	4	7	21	22	56.3	85	17	48.3
33	0	2	3	2	7	21	22	33.6	85	17	46.2
34	2	4	8	6	10	21	22	3.1	85	17	58.5
35	1	4	6	7	10	21	21	54.7	85	18	18
36	1	2	6	8	12	21	21	38	85	18	1.7
37	1	4	6	8	20	21	21	27.5	85	18	12.3
38	1	3	5	6	8	21	20	58.7	85	18	31.2
39	1	3	5	8	10	21	20	37.9	85	18	30.1
40	2	5	6	5	12	21	20	10.4	85	18	25.4
41	2	3	5	4	14	21	19	48	85	18	16.4
42	2	4	3	4	7	21	19	17.4	85	18	22.1
43	2	3	5	6	8	21	19	3.5	85	18	0.3
44	2	4	6	5	12	21	26	13.7	85	13	19.9
45	2	4	5	6	9	21	25	46.7	85	15	16.7
46	3	4	3	4	8	21	25	14.9	85	13	59.5
47	1	3	4	6	9	21	24	19.6	85	14	36.8
48	2	5	6	7	13	21	23	57.7	85	14	45.4
49	1	4	5	4	15	21	23	20.3	85	15	4.4
50	2	3	7	8	10	21	23	9.3	85	14	54.8
51	1	5	6	7	15	21	21	49.2	85	14	10.1
52	0	3	3	4	7	21	21	38.9	85	13	37.9
53	0	4	5	3	9	21	21	6.2	85	13	8.8
54	2	4	6	8	15	21	21	57.3	85	13	4.5
55	0	3	5	4	8	21	21	36.9	85	12	43.1
56	2	4	6	5	12	21	21	38.7	85	12	31.1
57	1	4	5	3	15	21	21	45	85	12	30
58	1	4	3	6	18	21	21	30.9	85	12	3.7
59	1	2	4	4	7	21	21	30.2	85	11	34
60	2	4	4	7	10	21	21	44	85	10	8.8
61	1	2	4	3	12	21	21	29.8	85	9	44.1
62	2	4	5	7	13	21	21	13.7	85	9	52.1
63	3	3	5	7	0	1	1	50.9	85	10	15.9

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	64	1		4	8	13	21	21	26.6	85	10	53.9
	65	1	2	4	3	8	21	21	19.5	85	11	23.2
	66	1	3	5	7	18	21	21	18	85	11	59
	67	1	2	5	7	10	21	21	23.8	85	12	29.7
	68	2	1	7	8	11	21	21	21.5	85	13	14.2
	69	1	2	4	7	12	21	21	24.3	85	13	44.6
	70	2	3	3	6	10	21	20	57.7	85	14	9.2
	71	1	3	5	7	15	21	20	38.6	85	13	57.7
	72	1	2	4	6	17	21	20	29.2	85	13	47
	73	1	2	5	6	10	21	20	11.1	85	13	50
	74	1	1	4	5	8	21	20	6.4	85	14	4.3
	75	1	2	2	2	2	21	20	22.7	85	14	40.5
	76	1	1	3	5	6	21	20	23.4	85	15	20.2
	77	1	2	2	4	7	21	20	16.6	85	15	46.5
	78	2	2	4	5	8	21	19	47.8	85	15	22.8
	79	1	1	3	4	6	21	19	28.1	85	14	37.1
	80	1	2	4	4	5	21	19	16.3	85	14	20.1
	81	1	3	4	6	12	21	18	53.4	85	13	39.9
	82	2	3	4	5	9	21	18	45.6	85	13	40.4
	83	0	1	4	6	7	21	18	36.5	85	13	57.5
	84	0	1	3	4	6	21	18	35.9	85	14	4.2
	85	0	1	2	3	8	21	18	21.9	85	14	22.7
	86	1	2	3	5	10	21	18	7.7	85	14	5.2
	87	1	2	4	6	11	21	18	10.7	85	14	20.8
	88	1	2	3	5	9	21	18	13.3	85	14	35.8
	89	1	2	3	2	14	21	17	52	85	14	24
	90	1	1	2	4	8	21	17	31.5	85	14	16.3
	91	0	1	2	3	6	21	17	12.2	85	14	40.8
	92	1	1	3	4	8	21	16	58.7	85	14	57.6
	93	1	2	4	5	9	21	16	52.8	85	15	0.9
	94	1	1	3	2	8	21	16	36.9	85	15	8.5
	95	1	2	4	4	9	21	15	54.3	85	16	2.9
	96	0	1	3	4	6	21	15	49.7	85	16	7.2
	97	0	1	2	3	7	21	15	48.1	85	16	17.6
	98	1	1	3	4	6	21	15	37.3	85	16	36.9
	99	0	2	3	3	9	21	15	23.8	85	16	49
	100	1	1	4	3	8	21	15	16.3	85	17	18.3
	101	0	2	3	4	8	21	15	30.6	85	17	31
	102	1	1	2	3	5	21	15	47.1	85	17	1.5
	103	0	2	2	4	7	21	15	56.1	85	15	38.4
	104	1	2	4	4	5	21	16	50.9	85	16	47.1

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	105	0	2	3	3	8	21	17	39.2	85	16	3.5
	106	1	2	4	5	7	21	18	20	85	16	7.9
	107	0	1	3	4	6	21	18	32.7	85	16	11.9
	108	1	1	2	4	5	21	18	45.2	85	16	11.9
	109	1	2	4	5	11	21	18	52.9	85	15	53.2
	110	0	2	3	4	8	21	19	20.1	85	16	14.4
	111	1	1	4	5	9	21	18	55.2	85	16	30.1
	112	1	2	3	4	7	21	19	1.1	85	16	54
	113	0	2	5	3	8	21	19	5.5	85	17	10.7
	114	1	0	0	5	10	21	27	5.8	85	14	17.1
	115	1	0	1	6	12	21	26	37.0	85	15	12.7
	116	0	1	1	8	9	21	26	18.5	85	15	54.7
	117	0	0	3	4	5	21	25	30.5	85	15	46
	118	1	0	1	8	12	21	25	4.2	85	15	46.7
	119	0	3	2	5	6	21	24	25.6	85	16	8.8
	120	1	2	3	4	7	21	26	50.4	85	14	20.8
	121	1	1	2	3	5	21	26	37.6	85	14	18.3
	122	0	0	3	4	6	21	26	40.8	85	14	8
	123	1	2	3	3	5	21	26	38.8	85	14	9.7
	124	1	3	3	6	9	21	26	28	85	14	14.9
	125	0	0	2	4	10	21	26	23.2	85	14	2.8
	126	1	1	2	3	8	21	26	18.4	85	14	15.2
	127	1	1	3	6	12	21	26	10.4	85	14	9.6
	128	0	0	2	2	4	21	26	8.8	85	14	14.9
	129	1	1	3	3	6	21	25	59.2	85	14	8
	130	0	0	2	3	5	21	26	15.2	85	14	50.9
	131	0	1	2	6	9	21	25	59.2	85	14	26.9
	132	0	0	3	3	7	21	25	49.6	85	14	18.3
	133	1	0	2	4	6	21	25	51.2	85	14	35.5
	134	0	1	3	5	9	21	26	26.4	85	14	37.2
	135	0	0	2	4	10	21	26	37.6	85	14	52.7
	136	0	0	3	3	6	21	26	23.2	85	14	54.4
	137	0	1	2	4	12	21	26	12	85	14	45.8
	138	1	0	3	3	6	21	25	59.2	85	14	40.7
	139	0	1	2	2	4	21	25	57.6	85	14	56.2
	140	1	1	3	4	7	21	24	13.3	85	16	15.8
	141	1	0	2	4	9	21	24	4.4	85	16	17
	142	0	0	3	5	10	21	23	1.3	85	17	19.9
	143	1	1	2	6	8	21	22	22.2	85	17	30.9
	144	0	1	3	4	9	21	26	23.2	85	15	22.3
	145	0	1	2	3	8	21	26	23.2	85	15	5.1

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	146	1	0	3	3	7	21	26	23.1	85	15	39.5
	147	0	1	2	3	6	21	26	18.4	85	15	55
	148	0	0	3	4	10	21	26	10.4	85	15	37.8
	149	0	1	2	8	9	21	26	5.6	85	15	56.7
	150	0	1	3	5	7	21	25	54.4	85	16	7
	151	0	1	1	4	8	21	25	43.2	85	15	51.6
	152	1	0	3	6	7	21	25	27.2	85	15	44.7
	153	0	1	2	3	10	21	25	33.6	85	15	32.6
	154	0	2	2	4	6	21	25	19.2	85	15	85.8
	155	1	1	3	6	12	21	25	11.2	85	15	37.8
	156	1	0	2	3	6	21	25	0	85	15	34.4
	157	0	1	3	4	8	21	24	50.8	85	15	48.1
	158	0	1	2	2	6	21	24	30	85	15	51.6
	159	1	0	2	5	7	21	24	26.8	85	16	0.6
	160	0	1	3	4	9	21	24	15.6	85	15	58.4
	161	0	0	2	5	7	21	24	4.4	85	16	5.3
	162	0	0	3	4	6	21	23	58	85	16	17.4
	163	0	1	2	3	5	21	23	59.6	85	16	29.4
	164	1	1	3	4	10	21	23	56.4	85	16	44.9
	165	0	1	2	3	7	21	23	50	85	16	53.5
	166	1	1	2	5	10	21	23	45.2	85	16	34.6
	167	1	0	3	6	12	21	23	43.6	85	16	12.2
	168	0	0	2	4	9	21	23	30.8	85	16	24.2
	169	0	1	3	3	7	21	22	38	85	13	48.7
	170	1	1	2	4	9	21	23	50.5	85	14	29.9
	171	0	1	2	5	12	21	23	37.6	85	15	18.2
	172	1	1	3	4	9	21	24	51.8	85	14	59.9
	173	0	0	2	3	7	21	23	1.7	85	14	49.2
	174	1	1	3	4	9	21	23	30.8	85	16	43.2
	175	0	1	2	3	7	21	23	24.4	85	16	32.8
	176	0	0	2	4	6	21	23	13.2	85	16	32.9
	177	0	1	3	3	9	21	23	19.6	85	16	44.9
	178	1	1	2	2	8	21	23	11.6	85	16	51.8
	179	0	1	3	3	7	21	23	57.2	85	16	45
	180	1	1	2	4	6	21	23	1.4	85	17	3.8
	181	1	0	3	3	10	21	22	44.4	85	16	56.9
	182	0	1	2	2	7	21	22	46	85	17	17.6
	183	1	1	3	3	12	21	22	47.6	85	17	46.8
	184	0	0	3	4	9	21	22	34.8	85	17	33
	185	1	1	2	2	6	21	22	19.2	85	17	19.3
	186	0	1	3	4	10	21	22	22.4	85	17	33

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187	1	0	2	2	7	21	22	11.2	85	16	56.9
188	1	1	3	4	6	21	22	4.8	85	17	10.7
189	0	2	3	3	9	21	22	12.8	85	17	41.6
190	1	0	2	2	7	21	22	0	85	17	46.8
191	1	1	3	4	6	21	21	56.8	85	18	6.1
192	0	2	2	5	12	21	21	48.8	85	17	52.36
193	1	1	3	4	9	21	21	48.9	85	17	14.1
194	0	1	2	2	7	21	21	45.6	85	18	14.7
195	1	1	3	3	10	21	21	40.8	85	17	57.5
196	0	2	2	4	9	21	21	37.6	85	17	42
197	1	2	3	5	8	21	21	36	85	17	19.3
198	1	0	2	3	6	21	27	0	85	14	14.9
199	0	1	2	4	12	21	21	58.4	85	14	12
200	1	1	3	3	10	21	22	11.2	85	10	17.2
201	0	1	3	5	9	21	22	3.2	85	10	25.8
202	1	0	2	4	8	21	22	12.8	85	10	34.4
203	0	1	3	4	7	21	21	50.4	85	10	32.6
204	1	0	2	6	12	21	22	3.3	85	10	43
205	0	1	2	3	7	21	22	22.4	85	10	20.6
206	0	0	2	5	9	21	21	48.8	85	10	49.9
207	0	1	3	4	10	21	26	56.8	85	13	31.9
208	1	0	2	3	8	21	26	53.6	85	13	18.1
209	0	1	2	3	7	21	26	42.4	85	13	16.4
210	0	1	3	4	6	21	26	44	85	13	28.4
211	1	0	2	3	7	21	26	37.6	85	13	23.3
212	0	1	2	4	10	21	26	28	85	13	21.6
213	0	1	3	5	8	21	27	8	85	14	2.8
214	0	1	2	3	9	21	27	4.8	85	13	54.2
215	0	0	3	4	6	21	27	11.2	85	13	45.6
216	1	1	2	3	5	21	27	3.2	85	13	38.8
217	0	0	2	4	6	21	26	50.4	85	13	52.5
218	0	1	3	3	9	21	26	48.8	85	13	35.3
219	1	2	2	3	7	21	22	49.2	85	10	27.5
220	0	1	2	5	6	21	22	39.6	85	10	41.2
221	0	1	3	4	9	21	22	39.7	85	10	12
222	0	1	2	3	8	21	22	34.8	85	10	39.5
223	1	0	3	3	7	21	22	31.6	85	10	49.9
224	0	1	2	2	10	21	22	36.4	85	9	52.7
225	0	1	3	3	8	21	22	30	85	10	6.9
226	1	0	2	3	9	21	22	12.8	85	10	0
227	0	1	2	4	6	21	22	23.1	85	11	14.6

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	228	1	0	3	5	7	21	22	16	85	11	19.1
	229	0	1	2	3	6	21	22	20.8	85	11	36.3
	230	0	1	2	4	7	21	22	16.1	85	11	44.9
	231	0	0	3	5	10	21	22	11.2	85	10	51.6
	232	0	1	2	6	9	21	22	4.8	85	11	5.3
	233	1	0	3	4	6	21	21	55.2	85	11	7
	234	0	1	2	3	7	21	21	50.4	85	11	24.2
	235	0	1	2	4	8	21	21	40.8	85	10	58.5
	236	1	1	3	6	9	21	21	37.6	85	11	13.9
	237	0	1	2	4	10	21	23	0.4	85	13	16.4
	238	0	1	3	3	6	21	22	50.8	85	13	26.7
	239	1	0	3	4	7	21	23	10	85	13	28.4
	240	1	1	2	2	7	21	22	49.2	85	13	40.5
	241	0	1	2	3	9	21	22	42.8	85	13	54.2
	242	0	1	3	3	10	21	22	34.8	85	13	35.5
	243	1	1	2	4	9	21	22	38	85	12	24.4
	244	0	1	3	3	12	21	22	38.1	85	12	43.7
	245	0	0	3	3	8	21	22	20.8	85	12	33.4
	246	1	0	2	5	9	21	22	30	85	12	52.3
	247	0	1	2	3	7	21	22	44.4	85	12	59.2
	248	1	2	3	4	9	21	22	39.6	85	13	13
	249	0	1	2	6	10	21	22	24	85	13	11.2
	250	0	1	3	5	8	21	22	25.6	85	11	52.5
	251	0	0	2	6	9	21	22	20.8	85	12	9
	252	1	1	3	5	12	21	22	16	85	12	50.6
	253	0	1	2	4	6	21	22	33.2	85	14	8
	254	0	2	3	3	8	21	22	44.4	85	14	23.5
	255	1	1	2	4	10	21	22	36.4	85	14	25.2
	256	1	0	3	5	9	21	22	42.8	85	14	39
	257	0	1	2	4	7	21	22	30	85	14	47.6
	258	1	0	3	3	9	21	22	38	85	14	51
	259	0	1	2	4	10	21	24	49.2	85	14	32.1
	260	0	0	3	5	12	21	25	1.6	85	14	45.8
	261	1	0	3	3	9	21	25	8	85	14	26.9
	262	0	1	2	4	8	21	25	17.6	85	14	11.4
	263	1	0	3	3	7	21	25	19.2	85	14	40.7
	264	0	1	2	3	6	21	25	25.6	85	14	25.2
	265	1	0	2	4	7	21	25	35.2	85	14	37.2
	266	0	1	2	3	5	21	25	36.8	85	14	51
	267	0	1	2	2	8	21	22	52.4	85	14	45.8
	268	1	0	2	3	9	21	23	3.6	85	14	56.2

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	269	0	1	3	4	10	21	24	1.2	85	14	52.7
	270	0	1	2	3	11	21	24	14	85	14	45.8
	271	1	0	2	5	9	21	24	25.2	85	14	57.9
	272	0	1	3	4	8	21	24	30	85	14	44.1
	273	1	1	2	3	12	21	24	31.6	85	14	32.1
	274	0	0	2	5	9	21	24	44.4	85	14	52.7
	275	0	1	3	3	8	21	19	31.6	85	18	2.6
	276	1	0	2	4	10	21	19	48.9	85	18	5.8
	277	0	1	2	3	7	21	19	43.9	85	18	8
	278	0	0	3	4	9	21	19	39.3	85	17	59.2
	279	1	0	3	5	12	21	19	33	85	17	58.6
	280	0	1	2	4	8	21	19	10.7	85	17	29.4
	281	1	0	3	6	9	21	26	16.8	85	13	26.7
	282	1	0	2	4	9	21	19	9.2	85	18	0.9
	283	0	1	3	5	12	21	19	18.8	85	17	50.6
	284	0	1	2	3	7	21	19	28.2	85	18	26.7
	285	1	0	3	4	11	21	19	36.4	85	18	9.5
	286	0	1	2	3	10	21	19	20.4	85	18	50.6
	287	1	0	3	5	9	21	20	52.8	85	17	33.4
	288	1	0	2	6	11	21	20	51.2	85	17	45.4
	289	0	1	2	5	9	21	20	40	85	17	6.1
	290	0	1	2	7	12	21	20	44.8	85	18	38.6
	291	0	2	3	4	8	21	20	29.2	85	17	48.9
	292	0	0	3	3	7	21	20	17.6	85	17	19.9
	293	1	0	2	5	6	21	20	9.6	85	17	30
	294	0	1	2	3	9	21	20	22.4	85	18	12.4
	295	0	1	3	4	8	21	21	26.4	85	17	22.7
	296	0	1	2	3	11	21	21	13.6	85	17	36.9
	297	0	0	2	5	9	21	21	5.6	85	17	47.2
	298	1	0	3	4	7	21	21	12	85	17	54
	299	1	1	2	6	8	21	21	24.8	85	17	11.2
	300	0	1	4	5	6	21	21	8.8	85	17	7.8
	301	0	1	3	3	10	21	21	16.8	85	18	40.3
	302	1	0	3	4	9	21	21	0.8	85	18	55.8
	303	0	0	2	3	11	21	19	39.6	85	17	9.5
	304	1	0	3	6	9	21	19	47.6	85	17	1
	305	0	1	2	5	10	21	20	0	85	18	30
	306	1	0	2	4	8	21	20	12.8	85	18	17.6
	307	1	0	3	6	12	21	20	4.8	85	17	5.5
	308	0	1	3	3	11	21	19	42.8	85	17	2.1
	309	0	1	2	4	8	21	19	50.8	85	17	55.2

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	310	1	0	3	6	12	21	19	28.4	85	17	41.4
	311	0	1	2	4	5	21	19	41.2	85	16	46.6
	312	0	1	3	5	9	21	19	30	85	16	22.5
	313	1	0	2	4	7	21	19	18.8	85	16	27.7
	314	0	1	2	3	10	21	19	28.4	85	16	3.8
	315	0	1	3	3	9	21	19	17.2	85	16	7.2
	316	0	1	2	4	7	21	19	12.4	85	17	51.8
Panguli	1	1	0	2	5	8	21	34	37.1	85	2	13.2
	2	0	1	1	3	12	21	34	30.6	85	1	54.2
	3	0	0	3	5	9	21	38	58	85	1	31.7
	4	1	0	2	3	7	21	38	53.1	85	1	4
	5	1	3	4	4	5	21	34	17.9	85	2	10.5
	6	1	2	2	3	4	21	34	15	85	2	9
	7	2	1		3	5	21	35	0.7	85	2	10
	8	1	2	3	3	4	21	34	11.3	85	2	6.9
	9	1	1	2	3	5	21	34	55.9	85	2	6.7
	10	2	2	1	3	6	21	34	7.9	85	2	7.4
	11	1	3	2	3	7	21	34	18	85	2	3.8
	12	1	2	2	5	5	21	34	2.7	85	2	7.7
	13	2	3	3	2	7	21	33	58.6	85	2	2.7
	14	1	3	2	2	5	21	33	53.5	85	2	8.4
	15	3	2	3	3	6	21	33	50.2	85	2	10.1
	16	2	3	5	4	5	21	33	48.3	85	2	10.5
	17	4	2	4	3	4	21	33	18.3	85	2	15.5
	18	2	3	2	4	6	21	33	43	85	2	10.7
	19	3	4	3	3	7	21	33	23	85	1	40.7
	20	4	3	5	3	4	21	33	26.6	85	2	8.7
	21	2	4	3	4	5	21	33	31.3	85	2	12.6
	22	1	3	4	3	4	21	33	22.9	85	2	18.6
	23	1	2	3	3	5	21	34	34.3	85	2	34.5
	24	2	2	4	4	6	21	34	44.2	85	2	34.6
	25	1	3	3	4	5	21	34	39.9	85	2	27.2
	26	2	2	4	5	8	21	34	42.3	85	2	23.1
	27	0	1	3	4	6	21	34	35	85	2	17.7
	28	2	2	4	3	7	21	34	36.4	85	2	14.5
	29	2	3	3	4	5	21	34	27.2	85	2	17.9
	30	1	2	4	3	6	21	35	4.2	85	2	7.9
	31	2	3	3	4	5	21	34	25.6	85	2	15.9
	32	2	2	4	4	6	21	34	16.4	85	2	10.5
	33	0	1	2	4	5	21	34	21.8	85	2	17.1
	34	1	3	4	4	6	21	34	1.8	85	2	10.1

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	35	0	2	3	4	5	21	34	19	85	2	12.5
	36	1	3	3	3	4	21	34	15.6	85	2	4.8
Baltaila	1	0	1	3	4	6	21	37	49.6	84	51	19.6
	2	1	0	3	5	6	21	37	36.5	84	51	16.1
	3	1	0	2	4	5	21	37	5.2	84	55	20.7
	4	0	1	3	4	5	21	36	57.4	84	55	24.2
	5	0	1	2	4	8	21	36	45.9	84	57	2.8
	6	0	1	1	5	9	21	36	28	84	56	50.7
	7	0	1	2	4	6	21	34	7.8	84	53	58.2
	8	0	1	3	5	7	21	34	20.8	84	54	1.7
	9	0	1	0	3	8	21	33	36.8	84	56	45.5
	10	0	1	3	2	6	21	33	51.5	84	56	47.2
	11	1	0	2	4	5	21	36	31.3	84	53	25.4
	12	0	1	3	4	7	21	36	41.1	84	53	34
	13	1	0	2	4	5	21	33	46.6	84	58	2.8
	14	0	1	3	4	5	21	33	59.6	84	58	16.7
	15	1	0	2	4	5	21	37	38.2	84	49	32.8
	16	0	2	3	4	6	21	37	46.3	84	49	44.9
	17	0	1	3	3	5	21	34	37.1	84	52	59.4
	18	0	0	2	4	7	21	34	24.1	84	52	57.7
	19	1	0	2	4	8	21	34	4.5	84	54	43.2
	20	0	0	3	3	9	21	34	22.5	84	54	44.9
	21	0	1	2	4		21	36	37.8	84	50	29.4
	22	1	0	3	5	7	21	36	50.8	84	50	25.9
Makarchua	1	1	1	3	2	7	21	28	32.4	85	11	17.4
	2	0	0	2	3	8	21	28	22.6	85	11	13.7
	3	1	1	3	4	10	21	28	30.7	85	11	0.5
	4	0	1	2	3	9	21	28	54.3	85	10	56.7
	5	1	0	2	3	7	21	28	26	85	11	26.4
	6	0	1	3	5	11	21	28	27.6	85	11	36.3
	7	0	1	2	3	9	21	28	42	85	11	39.7
	8	1	0	2	2	6	21	28	24.4	85	10	49.9
	9	0	1	3	5	8	21	28	21.2	85	10	39.5
	10	1	1	2	3	12	21	28	35.6	85	10	41.2
	11	0	0	3	4	9	21	28	46.8	85	10	25.8
	12	0	1	2	3	7	21	29	1.2	85	10	37.8
	13	1	0	2	4	6	21	29	9.2	85	10	44.7
	14	0	1	3	3	9	21	29	22	85	10	41.3
	15	0	1	2	4	10	21	28	48.4	85	10	37.8
	16	1	0	2	3	8	21	28	43.6	85	10	6.9
	17	1	1	3	3	8	21	28	10.6	85	13	33.1

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	18	0	1	1	6	11	21	28	9.3	85	13	40.1
	19	1	0	3	5	7	21	28	43.6	85	13	33.3
	20	0	1	4	3	8	21	28	37.4	85	13	40.2
	21	0	0	5	4	12	21	28	38.8	85	12	5.5
	22	0	1	2	5	7	21	28	58	85	12	21
	23	0	0	1	6	13	21	28	35.6	85	13	35.3
	24	1	1	4	5	11	21	28	45.2	85	13	0.9
	25	0	1	1	6	9	21	29	6	85	12	50.6
	26	0	0	1	4	8	21	29	28.4	85	12	47.2
	27	1	0	2	3	7	21	29	2.8	85	12	33.4
	28	0	1	3	5	9	21	29	18.8	85	12	35.1
	29	3	1	2	3	6	21	28	12.1	85	14	0.6
	30	6	4	1	2	8	21	27	52.9	85	13	44.7
	31	5	4	2	3	7	21	27	7.9	85	13	30.8
	32	4	3	1	4	3	21	27	8.7	85	13	18.4
	33	4	1	3	3	7	21	27	29.7	85	13	8.3
	34	4	4	2	3	5	21	27	36	85	12	40.4
	35	3	4	2	4	6	21	27	30.3	85	12	28.9
Tamkia	1	0	1	1	6	9	21	29	10.8	85	14	23.5
	2	0	0	2	3	11	21	29	20.4	85	14	33.8
	3	0	0	3	5	7	21	29	4.4	85	14	40.7
	4	1	0	1	4	8	21	28	48.4	85	14	25.2
	5	0	1	4	3	9	21	28	35.6	85	14	20
	6	0	0	2	5	12	21	28	13.2	85	14	25.2
	7	1	0	3	6	8	21	28	37.2	85	14	23.5
	8	0	1	2	4	10	21	28	46.8	85	14	56.2
	9	0	0	3	5	8	21	28	13.2	85	14	38.6
	10	1	0	3	7	11	21	28	24.4	85	14	35.5
	11	0	1	2	4	7	21	28	26	85	14	25.2
	12	0	1	4	5	9	21	28	35.6	85	14	52.7
	13	0	0	2	6	8	21	28	50	85	14	42.4
	14	1	0	1	5	11	21	29	14	85	14	52.7
	15	0	1	3	4	7	21	29	4.4	85	15	6.9
	16	0	0	2	7	10	21	29	18.8	85	15	5.1
	17	1	0	2	4	8	21	28	50	85	15	1.7
	18	0	0	3	5	12	21	29	2.8	85	14	52.7
	19	0	1	3	6	9	21	29	15.6	85	14	21.8
	20	1	0	4	5	8	21	28	42	85	14	11.5
	21	1	2	1	10	14	21	29	9.8	85	14	14.6
	22	0	1	2	9	20	21	29	3	85	14	17.8
	23	0	1	6	6	12	21	28	56.7	85	14	23.8

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	24	1	3	6	12	15	21	28	45.6	85	14	25.4
	25	2	1	3	12	28	21	28	40.4	85	14	30.7
	26	2	4	5	17	13	21	28	29.5	85	14	21.1
Kuladera	1	1	0	3	6	8	21	21	16.8	85	9	44.1
	2	0	1	2	4	10	21	21	31.2	85	9	45.9
	3	0	1	3	5	9	21	21	20	85	9	26.9
	4	1	0	2	3	7	21	21	15.2	85	9	13.2
	5	1	0	2	2	9	21	21	28	85	9	16.6
	6	0	1	3	4	12	21	21	18.4	85	9	2.9
	7	0	0	2	3	6	21	21	28	85	9	1.1
	8	1	0	3	5	9	21	21	37.6	85	8	56
	9	1	1	2	3	8	21	21	16.8	85	8	6.3
	10	0	1	2	6	7	21	21	26.4	85	8	43.9
	11	0	1	3	5	11	21	21	44	85	8	45.7
	12	1	0	2	4	7	21	21	32.8	85	8	33.6
	13	1	0	2	3	9	21	21	47.2	85	8	31.9
	14	0	1	3	6	10	21	21	37.6	85	8	21.6
	15	0	1	2	4	8	21	21	50.4	85	8	16.4
	16	1	0	3	5	12	21	21	42.4	85	8	11.2
	17	1	0	4	6	9	21	21	45.6	85	8	0.9
	18	0	1	2	3	7	21	21	56.8	85	7	52.3
	19	0	2	3	5	10	21	21	24.8	85	8	52.5
	20	1	0	3	4	9	21	21	44	85	8	21.6
	21	0	1	2	6	11	21	21	15	85	8	58.5
	22	1	2	4	3	8	21	16	0	85	17	26.7
	23	1	3	2	4	9	21	16	16.2	85	17	36.9
	24	2	0	3	5	11	21	16	20.6	85	17	48.3
	25	1	2	4	6	8	21	16	18.5	85	17	50
	26	1	0	5	4	12	21	15	59.4	85	17	21
	27	1	4	3	5	10	21	15	57.5	85	17	36.5
	28	2	1	3	5	11	21	13	2.5	85	22	17.5
	29	1	3	3	4	7	21	13	1.3	85	22	30.5
	30	2	3	3	5	9	21	12	2.5	85	22	34.7
	31	1	2	2	3	5	21	11	53.4	85	22	50.3
	32	2	4	4	5	7	21	11	50.4	85	22	45.5
	33	1	2	4	5	8	21	15	16.2	85	18	18.2
	34	1	0	2	3	7	21	15	9.8	85	18	31.6
	35	0	2	4	4	9	21	15	1.6	85	19	1.5
	36	1	1	3	5	8	21	14	3.5	85	18	46.3
	37	1	2	2	3	6	21	14	31.1	85	18	55.4
	38	2	3	5	5	6	21	14	44.6	85	18	20.8

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	39	1	2	3	4	7	21	14	40.8	85	18	40.4
Saida	1	0	0	1	4	8	21	28	56.5	85	17	1.6
	2	1	0	2	5	8	21	28	12.8	85	16	58.4
	3	0	1	1	3	9	21	28	50	85	16	50
	4	0	1	1	6	11	21	28	21.2	85	16	46.6
	5	1	0	2	3	10	21	28	51.6	85	16	44.9
	6	0	0	3	1	7	21	29	34.1	85	17	29
	7	3	2	2	2	4	21	28	43.3	85	16	39.3
	8	4	5	3	4	2	21	27	59.4	85	16	55
	9	3	1	5	6	13	21	29	20.4	85	17	5.2
Kundheigola	1	0	1	3	4	10	21	13	18.3	84	49	54.7
	2	0	1	2	3	11	21	13	20.9	84	50	2
	3	1	0	2	5	9	21	13	28.6	84	49	57.1
	4	0	1	3	4	8	21	13	38.2	84	50	13.3
	5	1	1	2	3	12	21	13	48.2	84	50	10.7
	6	1	2	3	4	6	21	12	50.9	84	50	26.9
	7	2	3	4	6	5	21	13	20.4	84	49	18.9
	8	1	2	3	3	7	21	13	24.1	84	49	1.3
	9	1	3	11	3	5	21	13	33.4	84	48	36.9
	10	2	0	3	5	6	21	14	16.2	84	48	26.4
	11	1	3	3	3	6	21	13	47.4	84	51	49.3
	12	2	3	4	4	5	21	13	53.3	84	51	34.2
	13	1	1	3	5	5	21	14	2.4	84	51	19
	14	1	3	4	4	6	21	14	6.5	84	51	4.8
	15	1	2	3	5	7	21	14	7.6	84	50	55.7
	16	2	4	2	4	4	21	14	8	84	50	50
	17	2	3	4	6	5	21	14	0.5	84	50	35.7
	18	1	2	3	3	6	21	14	18.8	84	50	28.2
	19	1	3	4	6	5	21	14	29.3	84	50	1.2
	20	2	2	3	4	6	21	14	27.8	84	49	50.6
	21	1	2	3	5	6	21	15	50.2	84	45	41
	22	1	2	2	4	7	21	15	27.2	84	46	51.3
	23	2	3	4	5	8	21	15	20.9	84	46	59.5
	24	1	2	3	5	6	21	15	15	84	47	22.3
	25	1	1	2	4	6	21	15	11.9	84	47	34.6
	26	2	2	3	5	8	21	15	9.4	84	47	33.5
	27	1	0	4	4	5	21	14	54.2	84	47	59.5
	28	1	1	2	4	7	21	14	54.9	84	48	31.6
	29	1	0	3	5	9	21	14	49.9	84	48	47.9
	30	2	2	3	4	6	21	14	47	84	49	2.8
	31	1	3	2	4	7	21	14	24.1	84	49	39.4

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	32	1	2	3	5	6	21	13	44.4	84	51	59.3
	33	2	2	4	5	7	21	13	43.2	84	52	13.9
	34	1	3	3	4	5	21	13	39.7	84	52	33.6
	35	1	2	2	3	5	21	13	30.2	84	53	5.2
	36	1	2	3	4	6	21	13	26.1	84	53	22.7
	37	0	3	4	4	5	21	13	10	84	53	32.6
	38	1	2	2	3	6	21	12	26.7	84	53	1.7
	39	1	2	2	4	6	21	12	58.9	84	52	35.2
	40	1	1	3	5	7	21	12	27.8	84	52	33.2
Kankarkhol	1	0	0	2	5	9	21	19	53.6	84	40	37.4
	2	0	1	3	3	8	21	19	57.1	84	40	48.7
	3	1	0	2	4	10	21	21	12.5	84	44	40.6
	4	0	1	2	3	7	21	21	15.7	84	44	16.5
	5	0	0	3	4	9	21	21	26.7	84	44	28
	6	1	0	3	5	12	21	20	51.8	84	44	35.9
	7	0	1	2	4	8	21	21	1.8	84	44	19.3
	8	1	0	3	6	9	21	21	9.5	84	44	30.7
	9	1	0	2	4	9	21	21	23.5	84	44	35.5
	10	0	1	3	5	12	21	21	23.1	84	44	17.3
	11	1	2	3	3	5	21	16	18.9	84	46	8.1
	12	2	3	5	5	4	21	16	26	84	46	4.2
	13	2	3	4	4	6	21	16	52.4	84	45	34.5
	14	1	2	5	5	5	21	16	56.5	84	45	21.6
	15	1	3	4	4	4	21	17	11.6	84	45	21.9
	16	2	2	5	5	6	21	17	21.1	84	44	49
	17	1	2	6	6	7	21	17	46	84	44	40.6
	18	0	1	3	4	6	21	19	16.8	84	41	45.5
	19	1	2	2	3	4	21	19	22.2	84	41	54.3
	20	1	1	3	4	5	21	19	9.8	84	42	8.6
	21	1	2	2	4	6	21	18	53.7	84	42	47.6
	22	1	2	3	3	6	21	18	50.3	84	42	55.8
	23	1	1	2	3	5	21	18	39.2	84	43	8.6
	24	0	1	2	4	6	21	18	27.3	84	43	33.3
	25	1	2	4	5	6	21	19	10	84	41	7.9
	26	0	1	2	3	5	21	19	69	84	40	58.7
	27	1	2	2	4	5	21	19	4.1	84	40	50.1
	28	2	2	3	3	6	21	19	3.7	84	40	40.5
	29	1	1	3	4	6	21	18	58.3	84	40	21.8
	30	1	3	4	5	7	21	18	49.8	84	39	39.9
	31	0	2	3	4	5	21	18	46.7	84	39	37.7
	32	1	2	4	6	8	21	19	39.9	84	40	2.5

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	33	1	1	2	4	5	21	19	18.6	84	39	38.4
	34	2	0	3	4	6	21	19	9.1	84	39	16.2
	35	1	1	4	5	9	21	18	55.5	84	39	43.4
	36	2	2	3	4	7	21	18	48.7	84	39	20.8
	37	3	1	0	6	7	21	20	14.2	84	40	44.9
	38	1	0	2	3	7	21	20	40.4	84	41	49.3
	39	1	0	0	5	4	21	20	49.6	84	41	56.4
	40	1	2	4	3	6	21	20	44.8	84	41	53.8
	41	1	1	3	4	5	21	20	57	84	42	3.9
	42	1	2	4	3	5	21	20	54.4	84	42	22
	43	3	0	0	4	6	21	20	36.4	84	42	50
	44	1	2	2	3	4	21	19	25.6	84	40	19.9
	45	1	3	3	4	5	21	19	46.8	84	41	6
	46	0	2	3	3	6	21	20	16.2	84	41	49.2
	47	0	2	2	3	4	21	20	14	84	42	12.8
	48	1	3	3	4	5	21	20	18.7	84	42	53.1
	49	1	2	3	3	5	21	20	19	84	42	58.7
	50	2	2	3	4	6	21	20	22.3	84	43	0.8
	51	1	2	3	5	6	21	18	55.2	84	44	9.5
	52	2	2	4	3	5	21	18	54.5	84	43	59.2
	53	1	1	3	5	7	21	19	8.1	84	43	27.8
	54	0	2	3	4	6	21	19	6.5	84	43	34.9
	55	0	1	4	5	5	21	19	13.9	84	43	32.5
	56	1	2	3	5	6	21	19	31.4	84	43	47
	57	1	2	2	4	5	21	19	36.2	84	43	50.9
	58	0	2	4	5	6	21	19	27.7	84	40	37.9
	59	0	2	3	4	5	21	19	27.9	84	40	58.7
	60	1	3	3	3	6	21	19	24.8	84	41	6.3
	61	1	2	4	4	7	21	19	26	84	41	58.3
	62	2	3	4	5	6	21	19	19.4	84	42	19.9
	63	1	2	3	3	5	21	19	23.1	84	42	34.7
	64	1	1	2	2	5	21	19	14	84	43	0.4
Hadamunda	1	0	1	2	3	7	21	29	18.1	84	39	35.2
	2	1	0	3	4	11	21	29	23.9	84	39	34.4
	3	1	2	2	3	5	21	29	25.4	84	39	5.2
	4	1	2	3	4	5	21	29	34.6	84	39	31.9
	5	1	1	3	3	6	21	29	34.8	84	39	41.2
	6	1	2	2	4	7	21	29	30.1	84	40	3.3
	7	0	2	3	5	6	21	29	29.9	84	40	11.4
	8	1	1	2	4	10	21	29	13.9	84	39	16.1
	9	1	2	3	3	8	21	29	11.7	84	39	34.6

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	10	1	1	3	5	6	21	29	0.9	84	40	19.7
	11	1	0	2	4	7	21	28	52.2	84	40	51.3
	12	1	1	4	4	15	21	28	43.1	84	41	25.3
	13	2	1	3	3	7	21	28	41.9	84	41	48.5
	14	1	2	3	4	8	21	28	59.7	84	42	24
	15	3	2	3	5	7	21	29	6.6	84	41	50.2
	16	1	2	3	6	8	21	29	32.5	84	40	4.8
Gogun	1	0	1	2	3	10	21	21	40.9	84	50	32.9
	2	1	0	3	5	9	21	21	33.2	84	50	20.6
	3	0	1	3	4	10	21	21	24.4	84	50	18.8
	4	0	1	2	3	11	21	21	26.7	84	50	6.4
	5	1	0	2	5	9	21	21	19.1	84	50	5
	6	0	1	3	4	8	21	21	2.1	84	49	34
	7	1	1	2	3	12	21	21	4.5	84	49	44.1
	8	0	0	2	5	9	21	21	11.5	84	49	44.3
	9	0	1	3	3	8	21	21	13.8	84	49	56.7
	10	1	0	2	4	10	21	21	19.7	84	49	57.3
	11	1	2	2	4	5	21	21	3.9	84	50	43.4
	12	0	2	3	3	6	21	21	9.1	84	50	39.4
	13	1	3	3	4	7	21	21	49.4	84	50	37.5
	14	1	2	4	4	5	21	20	39.4	84	50	39.6
	15	2	3	3	4	6	21	21	16.1	84	50	37
	16	1	2	3	3	4	21	20	56.2	84	50	47
	17	0	2	2	3	5	21	21	36.2	84	50	36.8
	18	1	2	4	5	6	21	21	17.2	84	50	32
	19	1	3	3	4	7	21	21	29.9	84	50	28.8
	20	1	2	2	3	5	21	21	18.9	84	50	29.2
	21	0	2	2	4	5	21	21	23	84	50	24
	22	1	2	2	4	4	21	21	26.9	84	50	20.6
	23	1	3	3	5	6	21	21	47.1	84	50	19
	24	0	2	2	3	5	21	21	38.4	84	50	15
	25	1	0	0	5	6	21	20	21.7	84	51	8.8
	26	1	1	0	3	5	21	20	24.7	84	51	7.3
	27	2	1	1	4	4	21	20	25.4	84	51	3.8
	28	1	0	2	3	5	21	20	26.5	84	50	39.5
	29	1	1	2	4	6	21	20	46.3	84	50	58.5
	30	1	2	2	3	7	21	20	30.6	84	50	57.6
	31	2	3	3	4	5	21	20	35.5	84	51	1.4
	32	2	2	3	5	5	21	20	42	84	51	5
	33	1	1	0	3	4	21	20	42.7	84	50	57.3
	34	2	2	3	5	7	21	21	1.7	84	50	54.4

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	35	1	0	2	3	5	21	20	47.8	84	50	52.8
	36	0	3	2	4	6	21	21	6.9	84	50	52.7
	37	1	2	0	5	5	21	20	54.6	84	50	52.2
	38	1	1	2	3	7	21	20	59.8	84	50	46.7
	39	1	2	3	3	6	21	21	25.3	84	50	8.9
	40	1	2	3	4	5	21	21	21.2	84	50	6.7
	41	1	2	2	3	7	21	21	15.9	84	50	5.9
	42	0	1	3	4	5	21	21	11.2	84	50	3
	43	1	2	3	3	6	21	21	3.8	84	50	4.2
	44	2	2	4	5	7	21	20	40.5	84	49	57.1
	45	1	2	3	3	6	21	20	38	84	49	47
Pradhanpat	1	0	1	2	3	7	21	32	33.3	84	46	17.8
	2	0	0	3	4	9	21	32	46.3	84	46	14.4
	3	1	0	3	5	12	21	31	52.5	84	48	25.4
	4	0	1	2	4	8	21	31	54.1	84	48	44.4
	5	1	0	3	6	9	21	32	51.2	84	43	29.3
	6	1	0	2	4	9	21	32	52.3	84	43	8
	7	0	1	3	5	12	21	33	3.3	84	43	18.4
	8	0	1	2	3	7	21	33	12.2	84	43	33.2
	9	1	0	3	4	11	21	33	16.9	84	43	13.7
	10	0	1	2	3	10	21	32	40.1	84	46	59.3
	11	1	0	3	5	9	21	32	42.7	84	47	13.1
	12	0	1	3	4	10	21	33	0.8	84	47	7.6
	13	0	1	2	3	11	21	33	2.1	84	46	55
	14	1	0	2	5	9	21	32	52.7	84	47	4.6
	15	0	1	3	4	8	21	33	50.5	84	39	44.3
	16	1	1	2	3	12	21	33	26.9	84	39	29.9
	17	0	0	2	5	9	21	33	35.5	84	39	37
	18	0	1	3	3	8	21	33	34.9	84	39	22.6
	19	1	0	2	4	10	21	33	49.6	84	39	29.1
	20	0	1	2	3	7	21	33	31.9	84	46	6.3
	21	0	0	3	4	9	21	33	34.2	84	46	55.6
	22	1	0	3	5	12	21	33	46.5	84	46	1.2
	23	0	1	2	4	8	21	33	50.4	84	46	17.2
	24	1	0	3	6	9	21	33	3.3	84	46	17.3
	25	1	0	2	4	9	21	32	37.4	84	46	36.2
	26	0	1	3	5	12	21	32	38.7	84	46	45.6
	27	0	1	2	3	7	21	32	54.3	84	46	36.8
	28	1	0	3	4	11	21	32	57.1	84	46	41.9
	29	1	2	3	4	6	21	32	50.5	84	43	44.2
	30	0	2	2	4	5	21	32	54.9	84	43	44.5

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31	1	1	2	3	5	21	33	14.9	84	43	44.8
32	1	2	3	4	6	21	33	55.7	84	42	55.7
33	0	1	2	3	5	21	33	35.7	84	43	5.1
34	1	2	3	4	5	21	32	58.6	84	43	42.9
35	1	2	4	3	6	21	33	0.8	84	43	45.2
36	1	3	3	4	7	21	33	11.1	84	43	52.7
37	0	2	3	4	5	21	33	30.9	84	43	44.5
38	1	2	4	5	6	21	32	40.5	84	43	32.2
39	1	2	2	3	6	21	32	58	84	44	29.7
40	1	0	3	4	7	21	32	53	84	44	25.7
41	2	1	2	5	8	21	32	59.5	84	44	39.1
42	2	1	0	4	7	21	32	40.6	84	44	33.2
43	1	1	2	3	6	21	32	59	84	44	59.1
44	1	2	2	3	5	21	32	59.9	84	45	53.2
45	1	3	2	2	7	21	33	51.1	84	45	23
46	2	2		4	8	21	33	50.9	84	45	53
47	2	2	4	3	7	21	33	50.7	84	45	42
48	1	1	2	4	7	21	33	50.7	84	45	52.7
49	1	2	3	4	6	21	33	34.1	84	43	59.2
50	1	0	2	2	5	21	33	1.6	84	43	50.3
51	0	2	4	3	5	21	33	35.1	84	43	43.2
52	1	2	3	4	6	21	33	1.5	84	43	53.1
53	1	3	4	3	5	21	33	21.5	84	43	48.3
54	1	2	3	4	5	21	32	57.5	84	43	51.9
55	1	2	3	4	6	21	33	1.3	84	43	57.7
56	0	2	2	3	5	21	34	5.2	84	43	57.7
57	1	2	2	3	4	21	34	0.9	84	43	47.6
58	1	2	2	4	6	21	32	57.2	84	44	0.5
59	0	2	2	3	4	21	33	1.9	84	43	48.1
60	1	1	3	3	7	21	33	29.6	84	43	58.1
61	1	2	2	4	6	21	34	0.7	84	43	55.2
62	0	3	3	3	5	21	33	51.8	84	43	45.3
63	1	2	2	4	6	21	33	41.4	84	43	40.2
64	0	0	2	3	8	21	33	35.1	84	42	43.3
65	1	2	3	4	6	21	33	36.3	84	42	58.2
66	1	0	2	3	5	21	33	29.9	84	42	54.1
67	5	2	3	5	11	21	34	3.9	84	38	2
68	5	3	7	8	10	21	33	42.9	84	38	8
69	4	2	4	6	6	21	33	17.2	84	37	52
70	1	2	1	5	8	21	32	45.6	84	37	29.6
71	1	2	2	3	8	21	32	39.5	84	42	1.1

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	72	1	0	3	9	7	21	32	40.9	84	41	26
	73	2	1	0	8	9	21	32	45.5	84	41	2.8
	74	1	1	5	3	7	21	32	39.7	84	40	294
	75	3	1	5	4	10	21	32	56.3	84	40	4.7
	76	2	2	0	4	8	21	32	2.2	84	39	52.4
	77	1	3	4	8	11	21	33	10	84	39	29.8
	78	1	1	3	6	7	21	33	15.3	84	39	6.8
Sargidihi	1	0	1	2	3	10	21	42	49.2	84	39	23.5
	2	11	3	4	5	11	21	42	40.8	84	39	20.2
	3	2	2	3	4	9	21	42	53.3	84	39	25.6
Pravasuni	1	1	0	3	5	9	21	31	56.8	84	30	44.7
	2	1	0	2	3	5	21	32	3.2	84	30	55
	3	0	1	3	1	6	21	32	9.6	84	31	7
	4	0	0	4	3	7	21	32	19.2	84	30	58.4
	5	0	1	0	2	6	21	32	30	84	31	10.5
	6	0	0	3	5	8	21	32	19.2	84	31	12.2
	7	1	0	2	3	5	21	33	50	84	33	4.4
	8	0	1	1	3	4	21	34	2.8	84	33	13
	9	0	0	1	2	10	21	34	12.4	84	33	6.1
	10	0	0	1	3	12	21	34	28.4	84	33	7.8
	11	1	0	2	4	6	21	34	34.8	84	32	54
	12	0	0	2	3	7	21	30	41.6	84	33	19.8
	13	1	0	1	4	6	21	30	54.4	84	33	23.3
	14	0	1	3	4	5	21	30	46.4	84	33	28.4
	15	0	1	2	2	6	21	31	4	84	33	35.3
	16	0	0	4	3	5	21	31	8.8	84	33	30.2
	17	1	0	0	4	6	21	33	24.4	84	30	53.3
	18	0	1	0	2	7	21	33	26	84	30	44.7
	19	0	0	1	3	8	21	33	13.2	84	30	20.6
	20	0	1	2	4	6	21	33	24.4	84	30	30.9
	21	0	1	3	2	6	21	33	16.4	84	30	55
	22	0	0	2	3	7	21	37	38	84	31	26
	23	0	1	3	2	6	21	37	31.6	84	31	27.7
	24	1	0	2	3	5	21	37	50.8	84	31	36.3
	25	0	1	1	4	6	21	38	8.4	84	31	34.6
	26	1	0	0	6	8	21	38	13.2	84	31	48.3
	27	0	0	2	5	6	21	38	19.6	84	31	46.6
	28	1	2	7	6	10	21	33	59.5	84	31	8.5
	29	2	3	5	6	9	21	33	4	84	30	45.2
	30	0	6	7	12	14	21	32	32.8	84	37	0.2
	31	0	5	7	10	7	21	32	5.2	84	35	54.6

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	32	0	4	7	10	8	21	31	40	84	34	40.4
	33	0	5	6	12	14	21	31	28.3	84	34	53
	34	0	8	5	10	8	21	31	28.1	84	34	35.5
	35	0	10	6	8	6	21	31	19.1	84	33	48.9
	36	0	6	4	8	10	21	31	11.9	84	33	45.4
	37	0	4	4	7	8	21	31	24.9	84	33	15.3
	38	2	4	4	5	10	21	31	33.1	84	33	15.9
	39	1	5	3	5	11	21	31	38.8	84	33	13.8
	40	0	5	3	4	9	21	31	49	84	33	3.3
	41	2	3	5	4	8	21	31	53.8	84	32	51
	42	3	3	2	3	10	21	31	55.2	84	32	47.3
	43	0	3	3	4	8	21	32	0.9	84	32	40.8
	44	1	1	3	6	6	21	32	3.8	84	32	31.9
	45	3	5	6	8	14	21	32	1.4	84	32	15.8
	46	1	2	3	2	11	21	36	59.4	84	34	48.6
	47	2	3	1	2	12	21	38	7.6	84	32	57.2
	48	0	2	4	3	5	21	34	41.6	84	30	52.8
	49	0	3	5	4	6	21	33	54.9	84	32	22.1
	50	1	1	1	8	7	21	32	36	84	29	45.8
	51	1	1	3	6	6	21	32	6.2	84	30	12.2
	52	2	1	2	6	3	21	31	42.3	84	31	0.8
	53	1	2	4	9	4	21	31	22.9	84	31	18
	54	0	2	2	3	3	21	30	54.8	84	33	9.4
	55	1	3	5	4	6	21	30	55.3	84	32	52
	56	5	4	6	5	7	21	31	0.6	84	32	51
	57	1	4	5	6	8	21	30	16.9	84	37	34.5
	58	0	4	6	7	10	21	30	27	84	37	0
	59	0	5	5	8	13	21	30	30.8	84	37	54.6
	60	0	4	4	5	7	21	30	16.2	84	35	48.7
	61	1	4	4	5	9	21	30	16.1	84	35	39.6
	62	0	4	4	5	7	21	30	18.6	84	35	34
	63	2	4	3	6	8	21	30	25	84	35	23
	64	0	5	6	7	12	21	30	28.2	84	35	18.8
	65	0	3	2	4	11	21	30	28.4	84	35	7.3
	66	2	3	5	6	10	21	30	32.8	84	35	1
	67	0	4	6	7	9	21	30	42.9	84	34	58.7
	68	1	3	5	6	12	21	30	47.3	84	34	48
	69	0	3	5	6	8	21	30	48	84	34	26.7
	70	1	4	6	7	10	21	30	31.6	84	34	4.6
	71	2	1	5	3	6	21	32	40.2	84	29	54.2
	72	0	3	4	3	4	21	32	56.7	84	30	1.5

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	73	2	3	6	4	7	21	33	6.4	84	30	19.7
	74	1	3	3	5	7	21	34	30.5	84	30	16.6
	75	1	4	3	5	7	21	34	37.1	84	29	55.3
	76	1	3	4	7	10	21	34	43.3	84	29	37.3
Naikul	1	0	1	2	4	6	21	18	55.8	84	56	46.6
	2	0	1	3	2	6	21	18	15.3	84	56	38.4
	3	0	0	2	3	7	21	18	23.4	84	56	27.7
	4	1	0	2	5	9	21	18	44.5	84	56	0.2
	5	0	0	3	6	11	21	19	8	84	55	46.4
	6	3	0	2	2	12	21	18	15.1	84	55	36.7
	7	1	1	3	3	15	21	18	20	84	55	39.3
	8	1	0	2	2	7	21	18	24.6	84	55	41
	9	1	1	3	2	8	21	18	33.5	84	55	45.9
	10	2	1	2	3	6	21	18	43.6	84	55	48.4
	11	2	2	2	2	7	21	18	34.9	84	55	54.6
	12	1	1	0	3	5	21	18	37	84	55	58.3
	13	2	0	3	2	9	21	18	35.7	84	56	3.2
	14	1	2	2	3	6	21	18	36.8	84	56	9
	15	4	1	0	5	11	21	18	37.2	84	56	11.9
	16	2	0	3	4	8	21	18	36.4	84	56	17.5
	17	1	1	2	3	5	21	18	31.8	84	56	23.2
	18	1	0	3	3	7	21	18	29.2	84	56	25.2
	19	2	2	4	3	6	21	18	22	84	56	26.8
	20	2	3	3	5	8	21	18	15.6	84	56	26.6
	21	1	2	2	3	6	21	18	2.2	84	57	21.6
	22	1	1	3	5	6	21	17	59.6	84	57	25.1
	23	1	2	4	4	5	21	17	56	84	57	29
	24	2	2	4	5	7	21	17	53.6	84	57	31.2
	25	1	2	3	6	4	21	17	51.1	84	57	34.8
	26	1	3	3	4	5	21	17	48.3	84	57	36.7
Tirib	1	0	1	2	4	6	21	26	29.6	84	52	36.8
	2	1	2	3	3	5	21	25	56.4	84	52	15.7
	3	1	2	2	4	6	21	25	42.9	84	52	16.5
Bangalimunda	1	0	1	3	2	6	21	28	0.4	84	30	46.4
	2	4	0	3	3	10	21	28	30.8	84	31	9.5
	3	2	3	4	1	15	21	28	3	84	30	32.4
	4	1	1	5	4	5	21	28	24.7	84	31	55.5
Kalkath	1	0	0	2	3	7	21	28	34	84	49	13.2
	2	1	2	2	4	5	21	28	59.4	84	49	18.3
	3	1	2	3	2	5	21	28	40.5	84	49	20.3
	4	2	2	3	3	6	21	29	10.4	84	49	16.3

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Telikusum	1	1	0	3	3	7	21	38	22.8	84	34	25.2
	2	1	3	2	4	7	21	38	1	84	34	34.4
	3	2	2	4	3	7	21	38	10.6	84	34	28.3
	4	1	0	4	5	8	21	38	31.7	84	34	13
	5	1	2	3	4	6	21	37	35.4	84	35	19.7
Paburi	1	0	1	3	4	7	21	29	38.8	85	6	45.5
	2	0	0	4	4	5	21	29	40.4	85	6	23.5
	3	0	1	2	4	6	21	34	2.9	85	4	19
	4	0	1	3	2	6	21	34	6.2	85	4	31.1
	5	0	0	2	3	7	21	33	5.8	85	3	53
	6	1	0	3	3	7	21	33	1	85	4	10.3
	7	1	0	2	3	5	21	30	37.5	85	7	44.7
	8	0	1	3	5	5	21	30	52.2	85	7	20.1
	9	0	1	3	4	6	21	33	51.5	85	4	27.6
	10	1	0	3	3	7	21	33	56.4	85	4	8.6
	11	0	1	1	3	4	21	33	10.8	85	5	3.5
	12	0	0	2	4	5	21	33	17.3	85	5	19
	13	1	0	1	2	6	21	30	49	85	5	50.1
	14	0	0	2	4	4	21	30	48.5	85	6	2.3
	15	1	0	0	6	8	21	30	49	85	5	52.5
	16	0	0	2	5	6	21	30	55.9	85	5	57.8
	17	0	1	2	4	6	21	31	0.8	85	5	49.3
	18	0	1	3	2	6	21	31	8.7	85	5	57.2
	19	0	0	2	3	7	21	35	23.7	85	5	28.6
	20	1	0	2	5	9	21	35	17.9	85	5	18
	21	0	0	3	6	11	21	35	17.9	85	5	36.5
	22	0	1	1	4	6	21	35	13.2	85	5	24.1
	23	0	0	2	5	4	21	35	6.7	85	5	27.6
	24	0	0	2	4	6	21	35	10.6	85	5	43.8
	25	2	5	5	4	7	21	33	47.7	85	11	55.5
	26	3	3	4	5	5	21	33	53.1	85	11	54.2
	27	1	2	5	5	6	21	33	58.2	85	11	53.3
	28	2	3	5	4	7	21	34	13.3	85	11	49.8
	29	2	4	3	5	3	21	34	19.9	85	11	31.6
	30	1	3	2	4	7	21	34	29.9	85	11	35.7
	31	1	2	4	5	5	21	35	18.2	85	11	19.2
	32	0	1	2	3	5	21	35	20.6	85	11	13.3
	33	1	2	2	3	4	21	35	20.7	85	11	4.9
	34	0	1	4	5	4	21	35	20.6	85	10	59.9
	35	1	1	3	4	5	21	35	20.6	85	10	50.2
	36	0	1	2	3	5	21	35	17.5	85	10	35.5

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	37	1	1	2	4	11	21	35	16.6	85	10	7
	38	1	0	2	3	8	21	35	14.4	85	10	9.6
	39	0	1	1	4	9	21	35	10.6	85	10	1.7
	40	1	2	4	4	6	21	35	37.8	85	8	30.3
	41	2	4	6	6	7	21	35	41	85	8	19.9
	42	0	1	3	4	8	21	35	38.4	85	7	17.9
	43	1	2	4	5	6	21	35	37.3	85	7	52.2
	44	0	1	2	3	5	21	35	35	85	6	22.9
	45	1	2	3	4	6	21	35	53.4	85	6	50.6
	46	2	3	4	5	11	21	35	17.4	85	5	27.7
	47	2	2	4	6	10	21	35	25.5	85	5	12
	48	1	3	3	5	8	21	35	29	85	5	0.9
	49	2	2	4	4	6	21	35	21.7	85	4	50.5
	50	2	3	4	5	7	21	35	17.4	85	4	23.4
	51	1	2	3	5	6	21	35	14.3	85	4	10.2
	52	1	2	2	5	7	21	34	11.5	85	4	17.6
	53	4	2	4	5	9	21	34	27.8	85	4	11.6
	54	2	3	3	4	5	21	34	50.5	85	4	5.1
	55	2	0	3	3	4	21	33	37.6	85	3	55.5
	56	2	2	5	4	4	21	33	20.9	85	3	45.3
	57	1	2	4	3	3	21	33	15.4	85	3	47.3
	58	1	1	3	5	5	21	31	52.3	85	4	25
	59	2	3	2	3	5	21	31	57.2	85	4	14.3
	60	2	2	5	3	4	21	32	27.2	85	3	50.7
	61	3	2	3	4	7	21	32	40.6	85	3	48.5
	62	2	2	4	5	7	21	32	17.7	85	5	12.2
	63	1	2	3	4	6	21	32	0.1	85	5	0.1
	64	1	1	3	5	6	21	31	40	85	4	55.5
	65	2	3	5	5	11	21	32	12.9	85	10	57.4
	66	1	0	3	7	7	21	32	8.6	85	11	7.4
	67	2	4	4	3	7	21	32	15.8	85	11	13.3
	68	1	3	2	3	4	21	32	18.4	85	11	17.2
	69	1	5	3	3	6	21	32	14.2	85	11	7.1
	70	0	2	2	4	3	21	32	25.3	85	11	8.8
	71	1	4	4	4	3	21	32	27.5	85	11	28.8
	72	4	3	4	6	12	21	32	37.2	85	11	33.2
	73	2	4	2	3	9	21	32	43.4	85	11	19.2
	74	1	2	5	7	6	21	32	52.1	85	11	1.2
	75	2	3	4	6	5	21	32	51.7	85	11	32.6
	76	2	5	5	4	7	21	32	56.6	85	11	35.2
	77	1	5	3	3	4	21	33	1.3	85	11	33.2

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	78	2	4	3	3	5	21	33	15.5	85	11	33.8
	79	1	5	3	4	6	21	33	24.2	85	11	38.4
	80	3	4	4	6	4	21	33	28.2	85	11	41.6
	81	2	2	4	5	3	21	33	41.8	85	11	53
	82	0	1	2	4	5	21	32	12.4	85	9	38.3
	83	1	2	3	5	7	21	32	29.9	85	9	52.1
	84	2	0	3	4	5	21	32	39.2	85	10	10.4
	85	1	2	4	5	8	21	32	51.1	85	10	24.4
	86	2	2	4	4	6	21	32	56.3	85	10	42.3
	87	1	2	3	5	7	21	32	35.4	85	11	1.3
	88	0	1	3	4	8	21	32	23.4	85	11	5
	89	2	3	2	3	5	21	29	52.2	85	8	3.8
	90	1	2	3	4	6	21	30	9	85	7	56.9
	91	1	2	3	2	4	21	30	49.7	85	8	18
	92	2	3	4	5	6	21	30	56	85	8	19.6
	93	2	3	4	5	5	21	30	56.2	85	8	27.9
	94	1	2	2	4	4	21	30	58.6	85	8	33.2
	95	2	1	3	4	4	21	31	0.1	85	8	38.8
	96	1	2	4	5	6	21	31	9.8	85	8	37.2
	97	0	3	3	4	6	21	31	18	85	8	32.4
	98	2	2	4	4	5	21	31	24.3	85	8	35.1
	99	0	1	2	4	7	21	31	33.5	85	8	31.1
	100	0	1	3	4	5	21	31	43.4	85	8	27.8
	101	1	2	4	1	3	21	31	58.1	85	8	56.9
	102	1	2	3	4	6	21	31	51.6	85	8	52.9
	103	2	4	3	3	6	21	29	22.3	85	7	16.7
	104	2	4	2	0	4	21	29	28	85	7	5
	105	2	2	4	2	8	21	29	21.9	85	6	43.9
	106	2	1	3	5	6	21	29	47.3	85	6	12.5
	107	2	0	0	4	7	21	31	2.7	85	5	50.2
	108	1	1	3	8	3	21	31	17.3	85	5	23.1
	109	1	1	0	2	4	21	31	19.3	85	4	51.2
	110	1	1	3	5	15	21	30	31.2	85	5	46.1
Kansar (A)	1	2	3	4	4	7	21	24	47.6	85	2	59.9
	2	1	2	4	6	8	21	24	41.4	85	2	50.3
	3	1	2	3	4	5	21	26	12.1	85	2	39.1
	4	2	3	3	5	8	21	25	53.2	85	2	59.2
Danda	1	1	2	4	4	7	21	17	39.1	85	7	39.1
	2	2	0	4	5	10	21	17	36.2	85	7	36.2
	3	1	0	3	5	12	21	17	19.1	85	7	19.1
	4	1	3	3	4	8	21	17	33.1	85	7	33.1

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	5	1	2	4	4	9	21	17	31.8	85	7	31.8
	6	2	0	0	5	11	21	16	31.1	85	7	31.1
	7	1	2	3	5	10	21	17	28	85	7	28
	8	2	3	0	3	9	21	17	59.9	85	7	50.9
	9	1	0	4	5	7	21	16	8.8	85	7	41.4
	10	1	2	5	4	9	21	16	1.3	85	7	49.6
	11	1	0	0	6	12	21	17	18.8	85	7	44.4
	12	2	4	3	5	10	21	17	10.8	85	7	49.4
	13	1	2	5	3	7	21	17	23.8	85	7	40.8
	14	1	2	3	4	8	21	17	34.8	85	7	29.9

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Total Bamboo area is 108250.80 ha
Bamboo in SWC area is 104661.65 ha and other area (SWC & Pr. WC) is 3589.15 ha
Total Enumeration area is 5268.974 ha

Bamboo Enumeration Data per ha.									
Block	No. of Clump.	Clump girth in Mtr.	Clump height in Mtr	No. of Culms in each year				Total	Culm to be cut
				1st year	2nd year	3rd year	4th year		
Pradhanpat RF	1	5	6.5	7	8	6	4	25	3
	2	4	6	3	2	2	2	9	0
	3	4	7	2	4	3	1	10	0
	4	4.5	6.5	6	5	3	2	16	0
	5	6	7	9	11	4	8	32	3
	6	5.5	6	8	6	3	4	21	0
	7	4.5	6	5	2	2	1	10	0
	8	4	6	4	4	2	2	12	0
	9	4.5	6	3	2	1	0	6	0
	10	4	6.5	2	2	1	0	5	0
	11	4.5	6.5	3	3	1	0	7	0
	12	6	7	4	2	2	1	9	0
	13	5.5	6	3	3	0	1	7	0
	14	4.5	6	3	4	1	1	9	0
	15	5.5	6	3	4	3	2	12	0
			Total	**65**	**62**	**34**	**29**	**190**	**6**
Rambhadevi RF	1	4.5	6.5	8	6	3	4	21	0
	2	6	6	5	2	2	1	10	0
	3	5.5	7	4	4	2	2	12	0
	4	4.5	6.5	6	5	3	2	16	0
	5	5.5	7	8	5	4	3	20	0
	6	4	6	3	3	1	0	7	0
	7	4	6	4	2	2	1	9	0
	8	4.5	6	3	2	2	2	9	0
	9	6	6	11	6	3	3	23	0
	10	5.5	6	6	5	3	2	16	0
	11	4.5	6	9	11	4	8	32	3
	12	4.5	6.5	8	6	3	4	21	0
	13	5.5	6	5	2	2	1	10	0
	14	5	6.5	6	5	4	2	17	0
			Total	**86**	**64**	**38**	**35**	**223**	**3**
Pravasuni RF	1	5	6	5	7	3	2	17	0
	2	4.5	6.5	4	6	3	3	16	1

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	3	4	7	3	4	2	2	11	0
	4	4	6.5	4	5	2	0	11	0
	5	4	7	3	5	1	1	10	0
	6	4.5	6	5	5	2	1	13	0
	7	4.5	6.5	4	5	2	3	14	0
	8	5	7	5	3	2	0	10	0
	9	5	7	6	6	2	1	15	0
	10	4	7	3	6	3	1	13	0
	11	6	8	6	9	4	2	21	0
	12	6	6.5	5	10	3	1	19	0
	13	4	7	4	6	2	0	12	0
			Total	**57**	**77**	**31**	**17**	**182**	**1**
Khajuria RF	1	4	6	6	7	3	1	17	0
	2	4	6.5	4	6	2	1	13	0
	3	4.5	6	5	5	2	0	12	0
	4	5	7	3	5	2	1	11	0
	5	6	6.5	3	4	4	2	13	0
	6	5	6.5	5	3	3	3	14	0
	7	5.5	5	5	6	1	0	12	0
	8	4.5	5.5	4	7	0	2	13	0
	9	4	5.5	5	5	3	1	14	0
	10	4	6.5	4	6	1	0	11	0
	11	4.5	6.5	3	5	2	2	12	0
	12	5	6.5	7	3	2	2	14	0
	13	5	7	6	4	3	3	16	0
	14	5	6.5	5	6	1	1	13	0
	15	4.5	6	4	3	2	1	10	0
			Total	**69**	**75**	**31**	**20**	**195**	**0**
Kansar RF	1	5	7	6	8	4	2	20	0
	2	6	7	5	6	3	1	15	0
	3	5.5	6	4	8	3	2	17	1
	4	6	6.5	5	6	3	2	16	0
	5	5	6	4	7	2	2	15	0
	6	5	5.5	10	8	4	2	24	0
	7	4	7	5	7	5	3	20	3
	8	5	7	7	12	4	2	25	0
	9	5.5	6.5	5	6	3	2	16	0
	10	5	6	6	7	3	1	17	0
	11	5.5	7	5	8	2	0	15	0
	12	5	6.5	7	4	2	0	13	0
	13	4	6.5	5	7	3	1	16	0

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	14	4.5	6	6	8	4	2	20	0
	15	5.5	6	6	7	3	2	18	0
	16	4	5.5	5	5	4	1	15	0
	17	5.5	6	4	11	2	3	20	1
	18	6	6.5	5	6	4	2	17	1
	19	5	6	6	6	2	2	16	0
	20	5	5.5	4	7	4	2	17	2
	21	4	7	6	6	4	3	19	1
	22	5	7	5	5	3	1	14	0
	23	5.5	6.5	6	8	4	2	20	0
	24	5	6	5	6	3	1	15	0
	25	5.5	7	8	8	4	2	22	0
	26	5	6.5	5	6	3	2	16	0
	27	4	6.5	4	7	2	2	15	0
	28	4.5	6	10	8	4	2	24	0
	29	4	5.5	5	7	5	3	20	3
	30	5	6.5	4	5	4	2	15	0
	31	4.5	6	5	6	3	2	16	0
	32	4	6	6	7	3	1	17	0
	33	5	6	4	5	2	3	14	0
	34	5	5.5	5	6	4	2	17	1
	35	4	7	6	6	2	0	14	0
	36	5	7	4	7	4	2	17	2
	37	5.5	6.5	9	6	3	3	21	0
	38	5	6	5	9	3	1	18	0
	39	5.5	7	6	8	2	2	18	0
	40	5	6.5	5	6	3	1	15	0
	41	5	6.5	4	8	3	2	17	1
	42	4.5	7	5	13	5	2	25	2
	43	5	6	4	7	2	2	15	0
	44	4	6.5	6	6	2	0	14	0
	45	4	7	4	7	4	2	17	2
	46	5	7	7	9	4	2	22	0
	47	5.5	6.5	5	6	3	2	16	0
	48	5	6	6	8	4	2	20	0
	49	5.5	7	5	6	3	1	15	0
	50	5	6.5	4	8	2	2	16	0
	51	4	6.5	5	6	3	2	16	0
	52	4.5	6	4	7	2	2	15	0
	53	5.5	6	6	9	2	2	19	0
	54	4	5.5	4	7	4	2	17	2

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	55	4.5	6	5	6	4	3	18	2
			Total	**297**	**389**	**176**	**99**	**961**	**24**
Kandarpa-Lambdura PRF	1	3	6.5	2	2	3	1	8	0
	2	3	6	3	4	1	1	9	0
	3	3.5	6	0	2	1	0	3	0
	4	3.5	7	1	3	2	0	6	0
	5	4	6.5	3	5	3	1	12	0
	6	2.5	6	1	3	0	1	5	0
	7	2	6.5	1	4	0	0	5	0
	8	2.5	6	0	6	0	0	6	0
	9	3.5	6.5	4	4	3	2	13	0
	10	4	6	3	4	2	1	10	0
	11	3.5	6	3	3	2	6	14	0
	12	3.5	5	2	5	4	2	13	0
			Total	**23**	**45**	**21**	**15**	**104**	**0**
Chilantikhol PRF	1	4	7	2	4	3	1	10	0
	2	4.5	6.5	6	5	3	2	16	0
	3	6	7	9	11	4	8	32	3
	4	5.5	6	8	6	3	4	21	0
	5	4.5	6	5	2	2	1	10	0
	6	4	6	4	4	2	2	12	0
	7	4.5	6	3	2	1	0	6	0
	8	4	6.5	2	2	1	0	5	0
	9	4.5	6.5	3	3	1	0	7	0
	10	6	7	4	2	2	1	9	0
	11	5.5	6	3	3	0	1	7	0
	12	4.5	6	3	4	1	1	9	0
			Total	**52**	**48**	**23**	**21**	**144**	**3**
Telikusm PRF	1	3	4	1	4	3	1	9	0
	2	4	5	3	4	4	2	13	3
	3	2.5	4.5	2	2	1	0	5	0
	4	3	5	1	3	0	0	4	0
	5	3.5	6	4	2	1	1	8	0
	6	2	5	1	3	0	1	5	0
	7	2.5	5	1	4	0	0	5	0
	8	2.5	6.5	3	2	0	1	6	0
			Total	**16**	**24**	**9**	**6**	**55**	**3**
Gogua RF	1	4	6	6	7	3	1	17	0
	2	4	6.5	4	6	2	1	13	0
	3	4.5	6	5	5	2	0	12	0

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	4	5	7	3	5	2	1	11	0
	5	6	6.5	3	4	4	2	13	0
	6	5	6.5	5	3	3	3	14	0
	7	5.5	5	5	6	1	0	12	0
	8	4.5	5.5	4	7	0	2	13	0
	9	4	5.5	5	5	3	1	14	0
	10	4	6.5	4	6	3	0	13	0
	11	4.5	6.5	3	5	3	2	13	0
	12	5	6.5	7	3	5	2	17	0
	13	5	7	6	4	5	3	18	2
	14	5	6.5	5	6	1	1	13	0
	15	2.5	4.5	6	2	1	2	11	0
	16	3	5	5	3	2	2	12	0
	17	3.5	6	5	2	2	3	12	0
	18	2	5	4	3	3	1	11	0
	19	2.5	5	3	4	1	2	10	0
	20	2.5	6.5	3	2	2	1	8	0
	21	4	5.5	5	5	3	1	14	0
	22	4	6.5	4	6	4	1	15	0
	23	4.5	6.5	3	5	2	2	12	0
	24	5	6.5	7	3	3	2	15	0
	25	5	7	6	4	3	3	16	0
	26	5	6.5	5	6	4	2	17	1
	27	4.5	6.5	3	5	2	2	12	0
	28	5	6.5	7	3	2	2	14	0
	29	5.5	5	5	6	3	2	16	0
	30	4.5	5.5	4	7	0	2	13	0
			Total	**140**	**138**	**74**	**49**	**401**	**3**
Kankarkhol PRF	1	4	5.5	5	5	3	1	14	0
	2	2.5	6.5	4	6	1	0	11	0
	3	4.5	6.5	3	5	2	2	12	0
	4	5	6.5	7	3	2	2	14	0
	5	5	7	6	4	3	3	16	0
	6	5	6.5	5	6	1	1	13	0
	7	3.5	6.5	3	5	2	2	12	0
	8	5	6.5	7	3	3	2	15	0
	9	5	7	6	4	3	3	16	0
	10	5	6.5	5	6	4	2	17	1
	11	3	6.5	3	5	2	2	12	0
	12	5	6.5	7	3	2	2	14	0
			Total	**61**	**55**	**28**	**22**	**166**	**1**

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Naikul PRF	1	4	6	6	7	3	1	17	0
	2	4	6.5	4	6	2	1	13	0
	3	4.5	6	5	5	1	0	11	0
	4	5	7	5	5	2	1	13	0
	5	6	6.5	3	4	2	2	11	0
	6	5	6.5	5	3	3	3	14	0
	7	5.5	5	5	6	1	0	12	0
	8	4.5	5.5	4	3	0	2	9	0
	9	4	5.5	5	5	3	1	14	0
	10	5.5	6	3	4	1	0	8	0
	11	4.5	5.5	3	4	2	2	11	1
	12	4	5	5	3	3	3	14	1
	13	4	6	4	6	2	1	13	0
			Total	**57**	**61**	**25**	**17**	**160**	**2**
Tamkia PRF	1	5	5	4	2	2	1	9	0
	2	3	6.5	3	4	2	0	9	0
	3	5.5	4	3	3	2	2	10	0
	4	5	6	2	3	4	1	10	0
	5	5.5	6.5	2	3	3	1	9	0
	6	6	5.5	4	3	1	0	8	0
	7	5.5	5	2	2	1	0	5	0
	8	5	5.5	3	4	2	1	10	0
	9	5	5.5	4	3	2	1	10	0
				27	**27**	**19**	**7**	**80**	**0**
Badtaila RF	1	3	4	1	4	3	1	9	0
	2	4	5	3	4	4	2	13	3
	3	2.5	4.5	2	2	1	0	5	0
	4	3	5	1	3	0	0	4	0
	5	3.5	6	4	2	1	1	8	0
	6	2	5	1	3	0	1	5	0
	7	2.5	5	1	4	0	0	5	0
	8	2.5	6.5	3	2	0	1	6	0
	9	3	6	2	4	1	2	9	0
	10	2.5	5.5	3	2	2	1	8	0
	11	2	5	3	3	2	6	14	4
	12	2	5.5	2	3	3	2	10	0
	13	2.5	4	1	2	1	1	5	0
	14	3	5	2	4	3	1	10	0
	15	3	5	1	3	2	0	6	0
	16	3.5	5.5	2	2	1	0	5	0
			Total	**32**	**47**	**24**	**19**	**122**	**7**

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Mandasila RF	1	3	6.5	2	2	3	1	8	0
	2	3	6	1	4	1	1	7	0
	3	3.5	6	0	2	1	0	3	0
	4	3.5	7	1	1	0	0	2	0
	5	4	6.5	4	2	3	1	10	0
	6	2.5	6	1	3	0	1	5	0
	7	2	6.5	1	4	0	0	5	0
	8	2.5	6	0	2	0	0	2	0
	9	3.5	6.5	7	4	3	2	16	0
	10	4	6	3	2	2	1	8	0
	11	3.5	6	3	3	2	6	14	0
	12	3.5	5	2	5	4	2	13	3
	13	4	6	4	6	5	4	19	4
	14	3	5	2	4	3	1	10	0
	15	3.5	5.5	3	2	2	1	8	0
			Total	**34**	**46**	**29**	**21**	**130**	**7**
Panguli RF	1	3.5	6	3	7	5	0	15	0
	2	2.8	6	2	3	2	1	8	0
	3	3	6.5	4	4	6	0	14	0
	4	3	6	2	5	3	2	12	0
	5	2.5	6.5	1	4	2	1	8	0
	6	3	5.5	2	4	4	1	11	1
	7	3.5	5	5	5	3	0	13	0
	8	3	6	2	3	4	1	10	0
	9	3	6.5	3	2	5	1	11	0
	10	3.5	6	5	6	3	0	14	0
	11	3	6	2	4	2	1	9	0
	12	4	6	3	6	3	1	13	0
			Total	**34**	**53**	**42**	**9**	**138**	**1**
Thianal RF	1	4	7	7	4	3	2	16	0
	2	5	5	3	2	2	1	8	0
	3	4	6	3	3	2	6	14	0
	4	4	7	2	5	4	2	13	0
	5	5	7	4	6	5	4	19	0
	6	5	6	2	4	3	1	10	0
			Total	**21**	**24**	**19**	**16**	**80**	**0**
Paburi RF	1	4	6	4	4	3	1	12	0
	2	2.5	6	2	5	2	2	11	0
	3	3	6	3	2	2	1	8	0
	4	3	5.5	2	3	1	1	7	0
	5	2.5	6	1	4	0	2	7	0

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	6	2.5	5	4	3	2	2	11	0
	7	3	6	3	3	2	0	8	0
	8	3	6	2	2	0	0	4	0
	9	2	5.5	3	4	2	2	11	1
	10	3	6	2	2	1	0	5	0
	11	2.5	5.5	1	3	3	2	9	0
	12	3	6	0	3	3	2	8	0
	13	3	5	3	2	0	2	7	0
	14	3	6	2	4	4	1	11	0
	15	4	5.5	5	3	2	1	11	0
	16	3	6	3	3	3	1	10	0
	17	3	6	3	5	3	2	13	0
			Total	**43**	**55**	**33**	**22**	**153**	**1**
Tusula PRF	1	3	6	2	2	1	0	5	0
	2	2.5	5.5	1	3	3	2	9	0
	3	3	6	0	3	3	2	8	0
	4	3	5	3	2	0	2	7	0
	5	3	6	2	4	4	1	11	0
	6	4	5.5	5	3	2	1	11	0
	7	3	6	3	3	3	1	10	0
	8	3	6	4	5	2	2	13	0
			Total	**20**	**25**	**18**	**11**	**74**	**0**
Mankarchua RF	1	6	7	12	16	5	8	41	1
	2	5	6.5	9	12	8	12	41	11
	3	5	6	11	13	7	6	37	2
	4	6	7	10	8	6	7	31	3
	5	5.5	6	8	10	9	4	31	5
			Total	**50**	**59**	**35**	**37**	**181**	**22**
Tamkia RF	1	4.5	6	7	9	5	2	23	0
	2	5	7	8	5	4	3	20	0
	3	4	6.5	6	5	3	1	15	0
			Total	**21**	**19**	**12**	**6**	**58**	**0**
Old Pauri RF	1	0.5	1	1	0	0	0	1	0
	2	0.5	1	0	0	1	1	2	0
	3	0.5	1	1	0	0	1	2	0
	4	0.5	1	1	0	0	0	1	0
	5	0.5	3	0	1	0	0	1	0
	6	0.5	1	0	0	1	0	1	0
	7	0.5	1	0	0	0	1	1	0
	8	0.5	2	1	1	1	1	4	0
	9	0.5	1	0	0	1	0	1	0

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	10	0.5	1	1	1	0	0	2	0
	11	0.5	1	0	0	0	1	1	0
	12	0.5	1	1	0	0	0	1	0
			Total	**6**	**3**	**4**	**5**	**18**	**0**
Malyagiri RF	1	5	7	6	8	4	5	23	3
	2	6	7	5	6	3	4	18	2
	3	5.5	6	4	8	3	3	18	2
	4	6	6.5	5	6	3	3	17	1
	5	5	6	4	7	2	2	15	0
	6	5	5.5	10	8	4	2	24	0
	7	4	7	5	7	5	3	20	3
	8	5	7	7	12	4	2	25	1
	9	5.5	6.5	5	6	3	2	16	0
	10	5	6	6	7	3	5	21	2
	11	5.5	7	5	8	4	2	19	1
	12	5	6.5	7	4	3	3	17	0
	13	4	6.5	5	7	3	1	16	0
	14	4.5	6	6	8	4	2	20	0
	15	5.5	6	6	7	3	2	18	0
	16	4	5.5	5	5	4	3	17	2
	17	5.5	6	4	11	2	3	20	1
	18	6	6.5	5	6	4	4	19	3
	19	5	6	6	6	2	4	18	0
	20	5	5.5	4	7	4	4	19	4
	21	4	7	6	6	4	3	19	1
	22	5	7	5	5	4	2	16	1
			Total	**121**	**155**	**75**	**64**	**415**	**27**
Denda RF	1	4.5	6.5	3	5	2	2	12	0
	2	5	6.5	7	3	2	2	14	0
	3	5	7	6	4	3	3	16	0
	4	5	6.5	5	6	1	1	13	0
	5	3.5	6.5	3	5	2	2	12	0
	6	5	6.5	7	3	3	2	15	0
	7	5	7	6	4	3	3	16	0
			Total	**37**	**30**	**16**	**15**	**98**	**0**
Biripal RF	1	4.5	5.5	4	3	0	2	9	0
	2	4	5.5	5	5	3	1	14	0
	3	5.5	6	3	4	1	0	8	0
	4	4.5	5.5	3	4	2	2	11	1
	5	4	5	5	3	3	3	14	1
	6	4	6	4	6	2	1	13	0

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	7	4	6.5	5	7	3	1	16	0
	8	4.5	6	6	8	4	2	20	0
	9	5.5	6	6	7	3	2	18	0
	10	4	5.5	5	5	4	3	17	2
	11	5.5	6	4	11	2	3	20	1
	12	6	6.5	5	6	4	4	19	3
				55	**69**	**31**	**24**	**179**	**8**
Jambua RF	1	4	6	6	7	3	1	17	0
	2	4	6.5	4	6	2	1	13	0
	3	4.5	6	5	5	1	0	11	0
	4	5	7	5	5	2	1	13	0
	5	6	6.5	3	4	2	2	11	0
	6	5	6.5	5	3	3	3	14	0
	7	5.5	5	5	6	1	0	12	0
	8	4.5	5.5	4	3	0	2	9	0
	9	4	5.5	5	5	3	1	14	0
	10	5.5	6	3	4	1	0	8	0
	11	4.5	5.5	3	4	2	2	11	1
	12	4	5	5	3	3	3	14	1
	13	5	6.5	5	3	3	3	14	0
	14	5.5	5	5	6	1	0	12	0
	15	4.5	5.5	4	3	0	2	9	0
	16	4	5.5	5	5	3	1	14	0
			Total	**72**	**72**	**30**	**22**	**196**	**2**

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Abstract of Bamboo Enumeration

Block	No. of Clump.	Avg.Clump girth in Mtr.	ClumP hight in Mtr	No. of Culms in each year				Total
				1st year	2nd	3rd	4th	
Pradhanpat RF	6375	5.5	6.5	27625	26350	14450	12325	80750
Rambhadvi RF	2170	4.5	6	13330	9920	5890	5425	34565
Pravasuni RF	5850	4.5	7	25650	34650	13950	7650	81900
Khajuria RF	3150	4.5	6.5	14490	15750	6510	4200	40950
Kansar RF	25410	3.5	6.5	137214	179718	81312	45738	443982
Kandarp Lamdura PRF	972	3.5	6	1863	3645	1701	1215	8424
Chilantikhol PRF	1020	4.5	6.5	4420	4080	1955	1785	12220
Telikusum PRF	24	2.5	5.5	48	72	27	18	165
Gogua RF	3960	4.5	6	18480	18216	9768	6468	52932
Kankarkhol PRF	2664	5	6.5	13542	12210	6216	4884	36852
Naikul PRF	1228	5	5.5	5386	5764	2362	1606	15120
Tamkia PRF	45	5.5	5.5	135	135	95	35	400
Badtaila RF	6352	3	5.5	12704	18659	9528	7543	48434
Mandasila RF	1870	3.5	6	4250	5740	3620	2627	16250
Panguli RF	1080	3.5	6	3060	4770	3780	810	12420
Thianal RF	39	4.5	6.5	136	156	123	104	520
Paburi RF	6120	3	6.5	15480	19800	11880	7920	55080
Tusula PRF	616	3	6	1540	1925	1386	847	5698
Mankarchua RF	140	5.5	6.5	1400	1652	980	1036	5068
Tamkia RF	57	4.5	6.5	399	361	228	114	1102
Old Pauri RF	3828	0.5	1.5	1914	957	1276	1595	5742
Malyagiri RF	10186	5.5	6.5	56023	71765	34725	29632	192145
Danda RF	101	5	6.5	536	435	232	217	1421
Biripal RF	51	4.5	6	236	296	133	103	769
Jambua RF	16	4.5	5.5	72	72	30	22	196

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E. BOUNDARY PILLAR SURVEY

Range	Block	Pillar No.	GPS Reading					
			Lattitude			Longitude		
			D	M	S	D	M	S
Pallahara	Charigachhia R.F	1	21	19	21.5	85	10	58.3
		2	21	19	27.6	85	10	55.6
		3	21	19	27.2	85	10	59.8
		4	21	19	28.1	85	11	03.2
		5	21	19	31.8	85	11	08.6
		6	21	19	36.3	85	11	17.8
		7	21	19	40.4	85	11	36.3
		8	21	19	43.2	85	11	27.0
		9	21	19	46.1	85	11	27.9
		10	21	19	50.1	85	11	34.7
		11	21	19	51.9	85	11	40.5
		12	21	19	55.9	85	11	50.0
		13	21	20	02.5	85	11	52.0
		14	21	20	05.4	85	11	53.5
		15	21	20	9.6	85	11	59.6
		16	21	20	15.0	85	12	07.3
		17	21	20	15.9	85	12	12.6
		18	21	20	18.7	85	12	18.7
		19	21	20	22.7	85	12	27.2
		20	21	20	25.1	85	12	34.0
		21	21	20	24.9	85	12	36.3
		22	21	20	22.7	85	12	40.1
		23	21	20	20.2	85	12	42.5
		24	21	20	26.6	85	12	49.2
		25	21	20	11.1	85	12	53.4
		26	21	20	09.0	85	12	56.2
		27	21	20	06.3	85	12	57.1
		28	21	20	02.9	85	13	02.3
		29	21	19	58.8	85	13	11.8
		30	21	19	56.8	85	13	14.1
		31	21	19	55.0	85	13	14.8
		32	21	19	48.4	85	13	11.9
		33	21	19	45.5	85	13	12.6
		34	21	19	39.4	85	13	07.3
		35	21	19	32.6	85	13	00.2
		36	21	19	33.7	85	12	52.4
		37	21	19	31.0	85	12	47.8

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		38	21	19	28.0	85	12	44.9
		39	21	19	29.8	85	12	41.1
		40	21	19	29.9	85	12	34.5
		41	21	19	28.9	85	12	33.5
		42	21	19	21.1	85	12	25.6
		43	21	19	14.8	85	12	21.0
		44	21	19	10.9	85	12	22.8
		45	21	19	07.0	85	12	25.4
		46	21	19	58.2	85	12	25.8
		47	21	18	52.5	85	12	20.6
		48	21	18	54.8	85	12	11.2
		49	21	19	59.3	85	11	55.4
		50	21	19	04.0	85	11	58.4
		51	21	19	08.8	85	11	41.8
		52	21	19	10.4	85	11	38.1
		53	21	19	11.1	85	11	26.0
		54	21	19	21.5	85	11	17.6
		55	21	19	21.0	85	11	08.1
Pallahara	Jambua R.F	1	21	13	57.5	85	08	06.3
		2	21	13	55.6	85	07	52.5
		3	21	13	54.6	85	07	43.6
		4	21	13	54.3	85	07	36.2
		5	21	13	54.1	85	07	21.3
		6	21	13	53.9	85	07	10.7
		7	21	13	53.9	85	06	59.2
		8	21	13	53.9	85	06	46.1
		9	21	13	54.5	85	06	38.0
		10	21	13	54.7	85	06	35.7
		11	21	12	02.6	85	06	33.7
		12	21	12	00.7	85	06	32.8
		13	21	12	02.5	85	06	33.5
		14	21	12	04.8	85	06	31.5
		15	21	12	09.6	85	06	31.9
		16	21	12	12.8	85	06	34.7
		17	21	12	16.3	85	06	37.0
		18	21	12	17.4	85	06	42.3
		19	21	12	18.4	85	06	44.7
		20	21	12	20.2	85	06	48.1
		21	21	12	21.6	85	06	53.7
		22	21	12	21.3	85	07	01.5
		23	21	12	20.0	85	07	19.6
		24	21	12	32.2	85	07	29.7
		25	21	12	34.7	85	07	31.9
		26	21	12	40.1	85	07	35.9

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		27	21	12	41.4	85	07	37.8
		28	21	12	42.2	85	07	39.8
		29	21	12	41.0	85	07	46.5
		30	21	12	37.5	85	07	48.1
		31	21	12	30.1	85	07	46.4
		32	21	12	25.9	85	07	45.9
		33	21	12	25.6	85	07	48.0
		34	21	12	25.1	85	07	56.4
		35	21	12	21.4	85	07	59.0
		36	21	12	17.4	85	08	08.4
		37	21	12	13.3	85	08	08.3
		38	21	12	08.0	85	08	08.1
Pallahara	Kunjam R.F	1	21	11	26.5	85	12	44.8
		2	21	11	25.5	85	12	47.2
		3	21	11	25.5	85	13	11.0
		4	21	11	28.9	85	13	12.7
		5	21	11	32.9	85	13	15.7
		6	21	11	37.0	85	13	17.3
		7	21	11	41.3	85	13	20.1
		8	21	11	51.5	85	13	25.4
		9	21	12	12.5	85	13	25.7
		10	21	12	06.6	85	13	32.5
		11	21	12	06.3	85	13	46.5
		12	21	12	13.6	85	13	44.9
		13	21	12	17.6	85	13	45.0
		14	21	12	20.5	85	13	46.3
		15	21	12	29.1	85	13	45.1
		16	21	12	36.6	85	13	46.6
		17	21	12	46.8	85	13	44.4
		18	21	12	48.7	85	13	32.2
		19	21	12	53.9	85	13	31.1
		20	21	12	51.7	85	13	09.3
		21	21	12	47.4	85	13	09.3
		22	21	12	47.4	85	13	03.1
		23	21	12	42.7	85	13	02.6
		24	21	12	42.9	85	13	10.4
		25	21	12	36.5	85	13	17.2
		26	21	12	31.5	85	13	18.0
		27	21	12	32.1	85	13	13.1
		28	21	12	31.4	85	13	05.1
		29	21	12	25.5	85	12	52.2
		30	21	12	26.4	85	12	47.0
		31	21	12	27.7	85	12	31.2
		32	21	12	31.0	85	12	30.7
		33	21	12	33.8	85	12	31.2

Scanned with OKEN Scanner

		34	21	12	35.7	85	12	30.9
		35	21	12	35.5	85	12	34.7
		36	21	12	39.6	85	12	37.3
		37	21	12	39.8	85	12	38.8
		38	21	12	44.2	85	12	40.5
		39	21	12	44.5	85	12	42.6
		40	21	12	48.3	85	12	42.6
		41	21	12	53.2	85	12	38.7
		42	21	12	58.7	85	12	31.2
		43	21	13	03.4	85	12	34.6
		44	21	13	07.7	85	12	39.3
		45	21	13	08.5	85	12	43.0
		46	21	13	09.3	85	12	46.9
		47	21	13	10.9	85	12	50.8
		48	21	13	08.4	85	12	00.4
		49	21	13	10.1	85	12	51.4
		50	21	13	23.1	85	12	48.5
		51	21	13	28.6	85	12	51.6
		52	21	13	35.8	85	12	47.1
		53	21	13	41.6	85	12	47.7
		54	21	13	43.5	85	12	43.8
		55	21	13	46.4	85	12	42.0
		56	21	13	47.4	85	12	37.2
		57	21	13	48.2	85	12	34.1
		58	21	13	49.6	85	12	31.4
		59	21	13	52.8	85	12	30.2
		60	21	13	55.6	85	12	33.7
		61	21	13	59.0	85	12	39.1
		62	21	14	00.5	85	12	45.3
		63	21	14	01.1	85	12	48.7
		64	21	14	03.1	85	12	58.6
		65	21	14	09.2	85	13	01.4
		66	21	14	12.5	85	15	57.2
		67	21	14	11.7	85	12	49.8
		68	21	14	11.6	85	12	47.6
		69	21	14	15.5	85	12	44.1
		70	21	14	19.3	85	12	41.7
		71	21	14	22.9	85	12	40.6
		72	21	14	24.8	85	12	39.2
		73	21	14	29.7	85	12	40.7
		74	21	14	31.7	85	12	37.8
		75	21	14	31.0	85	12	36.9
		76	21	14	31.4	85	12	34.5
		77	21	14	31.0	85	12	32.7
		78	21	14	41.0	85	12	33.3

Scanned with OKEN Scanner

		79	21	14	42.3	85	12	30.3
		80	21	14	44.6	85	12	21.6
		81	21	14	41.4	85	12	20.7
		82	21	14	38.6	85	12	19.9
		83	21	14	37.8	85	12	16.6
		84	21	14	35.4	85	12	12.8
		85	21	14	28.3	85	12	09.4
		86	21	14	21.2	85	11	55.3
		87	21	14	20.4	85	11	48.6
		88	21	14	15.4	85	11	46.9
		89	21	14	54.6	85	11	41.6
		90	21	14	51.1	85	11	38.0
		91	21	14	41.6	85	11	40.9
		92	21	14	34.3	85	11	46.2
		93	21	14	28.1	85	11	48.2
		94	21	13	16.4	85	11	55.6
		95	21	13	10.7	85	11	48.1
		96	21	13	18.2	85	12	09.0
		97	21	13	17.5	85	12	11.6
		98	21	13	15.5	85	12	18.1
		99	21	13	18.5	85	12	15.4
		100	21	13	11.8	85	12	14.9
		101	21	13	04.8	85	12	13.5
		102	21	12	59.2	85	12	13.8
		103	21	12	45.3	85	12	06.9
		104	21	12	36.4	85	11	53.2
		105	21	12	22.1	85	11	55.7
		106	21	12	15.1	85	11	40.2
		107	21	12	08.7	85	11	41.3
		108	21	12	01.4	85	11	43.3
		109	21	12	02.2	85	11	45.9
		110	21	12	01.8	85	11	49.6
		111	21	12	00.9	85	11	54.1
		112	21	12	01.8	85	12	00.3
		113	21	12	00.4	85	12	04.9
		114	21	12	00.5	85	12	09.4
		115	21	12	00.5	85	12	11.5
		116	21	11	59.9	85	12	14.3
		117	21	12	00.2	85	12	20.8
		118	21	11	59.8	85	12	25.5
		119	21	11	54.3	85	12	30.2

Scanned with OKEN Scanner

Pallahara	Kalam Junngasahi DPF	1	21	20	29.0	85	12	26.4
		2	21	20	30.3	85	12	25.8
		3	21	20	31.7	85	12	26.1
		4	21	20	33.6	85	12	26.4
		5	21	20	35.7	85	12	24.7
		6	21	20	38.2	85	12	24.6
		7	21	20	40.3	85	12	24.1
		8	21	20	41.5	85	12	25.1
		9	21	20	41.4	85	12	26.9
		10	21	20	40.2	85	12	26.9
		11	21	20	38.1	85	12	27.7
		12	21	20	35.9	85	12	29.3
		13	21	20	33.2	85	12	29.2
		14	21	20	32.2	85	12	30.1
		15	21	20	30.7	85	12	30.5
		16	21	20	31.0	85	12	33.3
		17	21	20	35.7	85	12	34.6
		18	21	20	38.6	85	12	34.9
		19	21	20	44.7	85	12	35.6
		20	21	20	49.0	85	12	39.8
		21	21	20	48.8	85	12	46.2
		22	21	20	52.9	85	12	48.6
		23	21	20	56.8	85	12	53.1
		24	21	21	00.3	85	12	57.8
		25	21	21	03.9	85	13	01.9
		26	21	21	10.1	85	13	06.0
		27	21	21	13.4	85	13	07.7
		28	21	21	11.0	85	12	57.0
		29	21	21	10.6	85	12	50.0
		30	21	21	05.3	85	12	41.4
		31	21	21	02.6	85	12	32.7
		32	21	20	59.3	85	12	32.2
		33	21	20	57.0	85	12	30.4
		34	21	20	52.8	85	12	26.7
		35	21	20	50.6	85	12	23.7
		36	21	20	49.9	85	12	18.6
		37	21	20	47.7	85	12	14.0
		38	21	20	46.0	85	12	00.1
		39	21	20	50.7	85	12	04.2
		40	21	20	50.1	85	12	00.7
		41	21	20	51.9	85	11	55.6
		42	21	20	50.3	85	11	56.1
		43	21	20	44.2	85	11	57.3

Scanned with OKEN Scanner

		44	21	20	41.6	85	11	57.8
		45	21	20	36.0	85	11	57.9
		46	21	20	32.1	85	11	56.9
		47	21	20	31.6	85	12	08.0
		48	21	20	29.7	85	12	22.1
Pallahara	Karada Pal DPF	1	21	21	09.8	85	09	02.6
		2	21	21	07.4	85	09	04.3
		3	21	21	06.7	85	09	07.5
		4	21	21	08.2	85	09	12.9
		5	21	21	07.3	85	09	15.7
		6	21	21	08.8	85	09	20.1
		7	21	21	11.0	85	09	23.2
		8	21	21	17.9	85	09	39.8
		9	21	21	20.1	85	09	44.3
		10	21	21	20.6	85	09	50.5
		11	21	21	24.6	85	09	51.9
		12	21	21	25.8	85	09	47.7
		13	21	21	26.8	85	09	44.3
		14	21	21	26.1	85	09	37.0
		15	21	21	26.5	85	09	34.2
		16	21	21	26.1	85	09	30.7
		17	21	21	22.3	85	09	31.4
		18	21	21	23.3	85	09	29.0
		19	21	21	24.2	85	09	27.5
		20	21	21	25.7	85	09	26.5
		21	21	21	27.0	85	09	35.0
		22	21	21	27.9	85	09	32.2
		23	21	21	29.0	85	09	25.9
		24	21	21	28.9	85	09	23.1
		25	21	21	32.4	85	09	11.8
		26	21	21	30.4	85	09	07.9
		27	21	21	29.7	85	09	05.3
		28	21	21	32.4	85	09	11.8
		29	21	21	30.4	85	09	07.9
		30	21	21	29.7	85	09	05.3
		31	21	21	25.6	85	09	06.0
		32	21	21	23.0	85	09	08.8
		33	21	21	20.0	85	09	16.9
		34	21	21	15.8	85	09	16.8
		35	21	21	13.6	85	09	21.3
		36	21	21	12.1	85	09	21.2
		37	21	21	11.2	85	09	18.4
		38	21	21	10.9	85	09	11.7
		39	21	21	11.9	85	08	59.4

Scanned with OKEN Scanner

		40	21	21	16.3	85	09	1.8
		41	21	21	22.6	85	09	2.1
		42	21	21	29.9	85	09	2.1
		43	21	21	36.4	85	08	58.3
		44	21	21	41.8	85	08	55.3
		45	21	21	43.2	85	08	48.6
		46	21	21	41.6	85	08	45.6
		47	21	21	41.9	85	08	41.7
		48	21	21	40.8	85	08	38.9
		49	21	21	39.5	85	08	32.3
		50	21	21	39.8	85	08	28.6
		51	21	21	9.1	85	08	25.6
		52	21	21	37	85	08	26
		53	21	21	35.2	85	08	29.7
		54	21	21	34.1	85	08	32.2
		55	21	21	30	85	08	36.1
		56	21	21	28.5	85	08	40.3
		57	21	21	27.2	85	08	43.9
		58	21	21	24.9	85	08	43.5
		59	21	21	24.5	85	08	39.7
		60	21	21	24.2	85	08	38
		61	21	21	24	85	08	34.8
		62	21	21	24.4	85	08	31.9
		63	21	21	23.6	85	08	30.5
		64	21	21	22.5	85	08	27.9
		65	21	21	21.5	85	08	28
		66	21	21	19.9	85	08	27.5
		67	21	21	18.8	85	08	26.4
		68	21	21	17.8	85	08	26.2
		69	21	21	17	85	08	27.5
		70	21	21	16.1	85	08	31.5
		71	21	21	15.8	85	08	33
		72	21	21	15.3	85	08	36.2
		73	21	21	15.3	85	08	39.4
		74	21	21	13.3	85	08	42.7
		75	21	21	12.2	85	08	48
		76	21	21	11.4	85	08	48.6
		77	21	21	10.7	85	08	53.4
		78	21	21	10.8	85	08	58.6
Pallahara	Badasada DPF	1	21	18	4.3	85	11	45.9
		2	21	18	0.6	85	11	43.9
		3	21	17	59.9	85	11	40.2
		4	21	17	57.3	85	11	40.1
		5	21	17	57	85	11	32.6

Scanned with OKEN Scanner

		6	21	17	49.0	85	11	32.2
		7	21	17	49.6	85	11	27.1
		8	21	17	50.4	85	11	27.2
		9	21	17	50.4	85	11	23.2
		10	21	17	51.1	85	11	21.7
		11	21	17	51.9	85	11	17.2
		12	21	17	57.6	85	11	17.0
		13	21	17	56.7	85	11	12.4
		14	21	17	56.8	85	11	10.1
		15	21	17	56.8	85	11	05.7
		16	21	18	00.6	85	11	05.8
		17	21	18	03.3	85	11	07.6
		18	21	18	06.2	85	11	04.6
		19	21	18	09.7	85	11	01.1
		20	21	18	13.4	85	11	03.2
		21	21	18	14.5	85	11	05.0
		22	21	18	20.8	85	11	05.4
		23	21	18	22.9	85	11	10.4
		24	21	18	23.3	85	11	12.0
		25	21	18	22.3	85	11	14.7
		26	21	18	25.0	85	11	15.5
		27	21	18	25.1	85	11	17.7
		28	21	18	24.5	85	11	26.0
		29	21	18	23.4	85	11	29.9
		30	21	18	22.0	85	11	36.5
		31	21	18	25.0	85	11	36.9
		32	21	18	27.8	85	11	38.1
		33	21	18	29.2	85	11	37.6
		34	21	18	30.0	85	11	35.4
		35	21	18	33.9	85	11	35.1
		36	21	18	33.7	85	11	37.2
		37	21	18	37.2	85	11	38.2
		38	21	18	46.2	85	11	37.4
		39	21	18	47.0	85	11	43.2
		40	21	18	39.0	85	11	48.1
		41	21	18	38.4	85	11	51.4
		42	21	18	36.6	85	11	56.2
		43	21	18	34.4	85	11	55.0
		44	21	18	31.6	85	11	44.1
		45	21	18	25.4	85	11	51.3
		46	21	18	25.4	85	11	48.3
		47	21	18	23.0	85	11	48.1
		48	21	18	19.3	85	11	49.6
		49	21	18	15.2	85	11	54.1

Scanned with OKEN Scanner

	Bankhuli DPF(Patch-1)	50	21	18	03.3	85	11	56.2
Pallahara		1	21	20	41.9	85	08	27.4
		2	21	20	42.1	85	08	23.9
		3	21	20	40.9	85	08	23.6
		4	21	20	39.0	85	08	24.1
		5	21	20	37.3	85	08	24.5
		6	21	20	37.8	85	08	26.6
		7	21	20	28.3	85	08	28.9
		8	21	20	24.8	85	08	28.4
		9	21	20	23.6	85	08	26.6
		10	21	20	24.5	85	08	17.8
		11	21	20	22.6	85	08	14.8
		12	21	20	22.9	85	08	11.2
		13	21	20	23.7	85	08	07.0
		14	21	20	25.6	85	08	01.4
		15	21	20	25.6	85	07	58.1
		16	21	20	20.6	85	07	54.9
		17	21	20	27.3	85	07	51.8
		18	21	20	26.4	85	07	51.9
		19	21	20	22.8	85	07	54.3
		20	21	20	23.0	85	07	42.2
		21	21	20	24.8	85	07	38.9
		22	21	20	22.9	85	07	27.3
		23	21	20	24.7	85	07	28.7
		24	21	20	25.1	85	07	25.4
		25	21	20	24.9	85	07	18.6
		26	21	20	25.2	85	07	14.9
		27	21	20	30.9	85	07	11.5
		28	21	20	24.8	85	06	51.4
		29	21	20	24.4	85	06	44.3
		30	21	20	22.1	85	06	43.1
		31	21	20	22.9	85	06	33.9
		32	21	20	25.2	85	06	25.3
		33	21	20	29.4	85	06	26.6
		34	21	20	32.0	85	06	31.7
		35	21	20	34.7	85	06	44.9
		36	21	20	34.4	85	06	46.2
		37	21	20	35.6	85	06	48.0
		38	21	20	38.4	85	06	51.0
		39	21	20	40.5	85	06	55.4
		40	21	20	39.7	85	07	04.5
		41	21	20	42.5	85	07	09.5
		42	21	20	45.5	85	07	13.4
		43	21	20	48.0	85	07	17.5

Scanned with OKEN Scanner

		44	21	20	47.0	85	07	23.8
		45	21	20	46.7	85	07	27.1
		46	21	20	42.9	85	07	30.4
		47	21	20	40.2	85	07	35.8
		48	21	20	40.7	85	07	41.1
		49	21	20	49.5	85	07	49.4
		50	21	20	47.9	85	07	51.1
		51	21	20	50.1	85	07	52.8
		52	21	20	50.8	85	08	05.3
		53	21	20	48.8	85	08	14.3
		54	21	20	49.8	85	08	16.6
		55	21	20	50.3	85	08	21.6
Pallahara	Bankhuli DPF(Patch-2)	1	21	20	43.2	85	06	43.1
		2	21	20	46.2	85	06	37.0
		3	21	20	51.2	85	06	34.6
		4	21	20	51.6	85	06	35.6
		5	21	20	50.6	85	06	32.0
		6	21	20	49.8	85	06	29.8
		7	21	20	50.8	85	06	26.0
		8	21	20	52.0	85	06	25.4
		9	21	20	55.9	85	06	20.5
		10	21	20	53.5	85	06	18.4
		11	21	20	52.0	85	06	14.1
		12	21	20	51.4	85	06	11.7
		13	21	20	48.7	85	06	09.0
		14	21	20	49.3	85	06	06.5
		15	21	20	58.4	85	06	14.9
		16	21	21	02.2	85	06	14.9
		17	21	21	04.8	85	06	10.8
		18	21	21	05.7	85	06	15.7
		19	21	21	25.7	85	05	06.0
		20	21	21	28.6	85	05	30.4
		21	21	21	12.0	85	05	27.3
		22	21	21	06.9	85	05	26.6
		23	21	21	05.1	85	05	25.6
		24	21	20	59.3	85	05	22.1
		25	21	21	00.5	85	05	18.5
		26	21	20	59.7	85	05	16.4
		27	21	20	52.4	85	05	10.4
		28	21	20	46.7	85	05	16.4
		29	21	20	39.1	85	05	29.7
		30	21	20	39.8	85	05	34.6
		31	21	20	40.2	85	05	37.0
		32	21	20	40.4	85	05	41.8

Scanned with OKEN Scanner

		33	21	20	43.3	85	05	42.8
		34	21	20	45.7	85	05	43.7
		35	21	20	44.1	85	05	44.7
		36	21	20	39.1	85	05	50.7
		37	21	20	36.8	85	05	53.1
		38	21	20	43.6	85	06	01.0
		39	21	20	43.7	85	06	05.0
		40	21	20	37.0	85	06	05.6
		41	21	20	37.7	85	06	07.4
		42	21	20	34.5	85	06	15.5
		43	21	20	35.0	85	06	26.2
		44	21	20	33.9	85	06	28.2
		45	21	20	32.0	85	06	31.7
		46	21	20	34.7	85	06	40.9
		47	21	20	34.4	85	06	46.2
		48	21	20	35.6	85	06	48.0
Pallahara	Bhulaka DPF	1	21	11	09.2	85	17	09.4
		2	21	11	09.3	85	17	12.6
		3	21	11	05.8	85	17	17.2
		4	21	11	03.8	85	17	17.4
		5	21	11	02.2	85	17	18.3
		6	21	11	00.8	85	17	18.9
		7	21	11	02.4	85	17	22.1
		8	21	11	03.1	85	17	23.5
		9	21	11	03.4	85	17	25.6
		10	21	11	04.0	85	17	29.5
		11	21	11	03.5	85	17	31.7
		12	21	11	01.5	85	17	35.1
		13	21	10	59.9	85	17	36.9
		14	21	10	57.1	85	17	40.5
		15	21	10	55.0	85	17	43.3
		16	21	10	47.5	85	18	01.0
		17	21	10	50.4	85	17	47.9
		18	21	10	46.0	85	18	01.2
		19	21	10	44.0	85	18	00.4
		20	21	10	43.5	85	18	01.7
		21	21	10	42.6	85	18	04.2
		22	21	10	40.4	85	18	07.5
		23	21	10	40.5	85	18	09.6
		24	21	10	40.6	85	18	11.8
		25	21	10	40.3	85	18	14.0
		26	21	10	41.1	85	18	20.1
		27	21	10	40.0	85	18	23.4
		28	21	10	38.5	85	18	25.1

Scanned with OKEN Scanner

		29	21	10	37.4	85	18	26.2
		30	21	10	37.0	85	18	27.6
		31	21	10	35.6	85	18	28.9
		32	21	10	34.2	85	18	29.9
		33	21	10	33.9	85	18	30.2
		34	21	10	33.1	85	18	30.5
		35	21	10	30.5	85	18	32.0
		36	21	10	29.0	85	18	32.7
		37	21	10	27.5	85	18	33.2
		38	21	10	27.1	85	18	34.0
		39	21	10	26.7	85	18	34.5
		40	21	10	24.9	85	18	35.7
		41	21	10	23.0	85	18	37.0
		42	21	10	20.6	85	18	39.4
		43	21	10	19.1	85	18	41.6
		44	21	10	18.1	85	18	42.5
		45	21	10	15.4	85	18	44.5
		46	21	10	14.0	85	18	45.0
		47	21	10	07.5	85	18	50.4
		48	21	10	03.9	85	18	53.5
		49	21	10	01.1	85	18	55.7
		50	21	9	59.3	85	18	56.6
		51	21	9	58.0	85	18	58.0
		52	21	9	54.0	85	19	01.3
		53	21	9	53.4	85	19	1.8
		54	21	9	52.4	85	19	01.3
		55	21	9	50.0	85	19	00.6
		56	21	9	45.0	85	19	00.8
		57	21	9	43.6	85	19	01.8
		58	21	9	41.2	85	19	02.1
		59	21	9	39.8	85	19	02.9
		60	21	9	38.9	85	18	55.4
		61	21	9	45.6	85	18	49.8
		62	21	9	51.9	85	18	43.3
		63	21	9	57.8	85	18	57.3
Pallahara	Ranjo DPF	1	21	24	19.3	85	08	37.2
		2	21	24	23.0	85	08	37.5
		3	21	24	24.5	85	08	43.2
		4	21	24	28.9	85	08	43.1
		5	21	24	35.6	85	08	43.0
		6	21	24	37.2	85	08	40.8
		7	21	24	40.3	85	08	40.9
		8	21	24	43.0	85	08	38.7
		9	21	24	43.9	85	08	29.8

Scanned with OKEN Scanner

		10	21	24	44.9	85	08	22.4
		11	21	24	45.5	85	08	15.2
		12	21	24	50.3	85	08	15.1
		13	21	24	53.5	85	08	19.6
		14	21	24	58.0	85	08	25.6
		15	21	25	00.3	85	08	26.2
		16	21	25	06.9	85	08	26.7
		17	21	25	09.1	85	08	29.9
		18	21	25	16.7	85	08	33.1
		19	21	25	20.6	85	08	30.8
		20	21	25	20.4	85	08	29.5
		21	21	25	20.1	85	08	24.6
		22	21	25	17.8	85	08	19.5
		23	21	25	17.3	85	08	14.1
		24	21	25	16.6	85	08	13.0
		25	21	25	14.9	85	08	09.8
		26	21	25	11.9	85	08	12.3
		27	21	25	11.5	85	08	13.9
		28	21	25	11.2	85	08	15.5
		29	21	25	07.4	85	08	18.5
		30	21	25	06.8	85	08	19.4
		32	21	24	54.6	85	08	14.2
		33	21	24	54.7	85	08	13.2
		34	21	25	55.1	85	08	11.5
		35	21	25	00.4	85	08	13.1
		36	21	25	06.1	85	08	13.3
		37	21	25	08.0	85	08	10.6
		38	21	25	10.1	85	08	08.9
		39	21	25	10.4	85	08	05.8
		40	21	25	10.1	85	08	03.0
		41	21	25	10.3	85	08	01.9
		42	21	25	11.3	85	08	00.6
		43	21	25	12.7	85	07	59.4
		44	21	25	13.0	85	07	57.2
		45	21	25	13.0	85	07	53.4
		46	21	25	12.2	85	07	49.4
		50	21	25	09.3	85	07	39.3
		51	21	25	06.9	85	07	37.7
		52	21	25	04.8	85	07	37.0
		53	21	25	04.0	85	07	34.4
		54	21	25	01.3	85	07	37.5
		55	21	25	01.6	85	07	32.5
		56	21	24	58.6	85	07	39.4
		57	21	24	57.9	85	07	42.9

Scanned with OKEN Scanner

		58	21	24	57.3	85	07	47.2
		59	21	24	57.5	85	07	51.1
		60	21	24	59.8	85	07	53.8
		61	21	24	01.4	85	07	55.4
		62	21	24	57.4	85	07	59.1
		63	21	24	50.8	85	08	02.8
		64	21	24	58.4	85	08	02.7
		65	21	24	56.7	85	08	01.5
		66	21	24	56.4	85	07	57.8
		67	21	24	55.7	85	07	53.9
		68	21	24	58.6	85	07	44.3
		69	21	24	58.5	85	07	39.6
		70	21	24	58.7	85	07	34.2
		71	21	24	40.4	85	07	32.7
		72	21	24	45.0	85	07	34.1
		73	21	24	42.9	85	07	36.2
		74	21	24	40.9	85	07	35.2
		75	21	24	38.6	85	07	35.4
		76	21	24	35.8	85	07	35.6
		77	21	24	34.6	85	07	36.9
		78	21	24	38.6	85	07	40.3
		79	21	24	41.9	85	07	43.5
		80	21	24	41.7	85	07	47.3
		81	21	24	38.3	85	07	45.4
		82	21	24	37.0	85	07	44.2
		83	21	24	33.0	85	07	47.9
		84	21	24	27.0	85	07	44.7
		85	21	24	26.6	85	07	49.5
		86	21	24	24.9	85	07	53.1
		87	21	24	27.0	85	07	55.0
		88	21	24	26.2	85	07	58.7
		89	21	24	31.8	85	07	58.9
		90	21	24	31.0	85	08	04.5
		91	21	24	31.3	85	08	09.9
		92	21	24	34.3	85	08	10.7
		93	21	24	36.6	85	08	13.6
		94	21	24	37.4	85	08	15.3
		95	21	24	32.1	85	08	16.5
		96	21	24	29.2	85	08	17
		97	21	24	27.8	85	08	12.7
		98	21	24	24.5	85	08	12.2
		99	21	24	22.6	85	08	19.7
		100	21	24	19.3	85	08	20.5
		101	21	24	15.6	85	08	21.9
		102	21	24	13.6	85	08	22.6

Scanned with OKEN Scanner

		103	21	24	14.3	85	08	30.4
Pallahara	TiMi DPF	1	21	29	07.8	85	14	20.8
		2	21	29	08.1	85	14	18.3
		3	21	29	09.7	85	13	50.5
		4	21	29	09.1	85	13	44.5
		5	21	29	04.8	85	13	42.5
		6	21	29	00.3	85	13	41.9
		7	21	28	55.9	85	13	37.5
		8	21	29	05.7	85	13	17.2
		9	21	30	16.7	85	13	57.5
		10	21	30	16.7	85	13	01.3
		11	21	30	16.7	85	14	05.0
		12	21	30	16.3	85	14	09.8
		13	21	30	07.0	85	14	36.6
		14	21	30	09.1	85	14	39.1
Pallahara	Old Pauri RF	1	21	33	21.5	85	27	35.3
		2	21	33	17.9	85	27	29.9
		3	21	33	10.5	85	27	27.1
		4	21	33	03.3	85	27	24.0
		5	21	32	59.6	85	27	22.1
		6	21	32	51.1	85	27	21.1
		7	21	32	46.0	85	27	21.1
		8	21	32	40.4	85	27	21.4
		9	21	32	36.3	85	27	18.2
		10	21	32	31.7	85	27	12.3
		11	21	32	24.9	85	27	13.3
		12	21	32	16.4	85	27	15.0
		13	21	32	10.8	85	27	19.3
		14	21	32	03.8	85	27	25.0
		15	21	31	57.9	85	27	27.9
		16	21	31	51.1	85	27	26.5
		17	21	31	43.9	85	27	24.1
		18	21	31	37.5	85	27	21.8
		19	21	31	26.1	85	27	23.2
		20	21	31	17.2	85	27	25.4
		21	21	31	14.5	85	27	26.4
		22	21	31	11.1	85	27	22.6
		23	21	31	40.8	85	27	14.3
		24	21	31	05.1	85	27	09.5
		25	21	31	05.6	85	27	04.7
		26	21	31	04.3	85	27	02.4
		27	21	31	03.8	85	27	01.2
		28	21	31	01.6	85	16	56.4
		29	21	31	01.2	85	16	53.6
		30	21	31	01.8	85	16	49.3

Scanned with OKEN Scanner

		31	21	31	02.0	85	16	46.2
		32	21	30	57.8	85	16	43.2
		33	21	30	56.5	85	16	41.1
		34	21	30	32.8	85	16	38.7
		35	21	30	43.6	85	16	42.5
		36	21	30	50.3	85	16	34.5
		37	21	30	50.7	85	16	29.3
		38	21	30	41.5	85	16	25.2
		39	21	30	52.5	85	16	16.2
		40	21	30	59.5	85	16	06.5
		41	21	31	00.1	85	16	00.6
		42	21	31	02.0	85	15	57.6
		43	21	31	03.8	85	15	55.2
		44	21	31	05.0	85	15	46.7
		45	21	31	06.8	85	15	42.6
		46	21	31	06.8	85	15	39.4
		47	21	31	05.5	85	15	30.9
		48	21	31	04.6	85	15	26.2
		49	21	31	04.4	85	15	22.2
		50	21	31	06.2	85	15	15.6
		51	21	31	02.5	85	15	13.9
		52	21	30	00.2	85	15	10.5
		53	21	31	58.9	85	15	08.3
		54	21	31	00.9	85	15	01.8
		55	21	31	02.5	85	14	57.4
		56	21	31	05.5	85	14	56.4
		57	21	31	10.1	85	14	55.3
		58	21	31	12.5	85	14	50.1
		59	21	31	14.0	85	14	50.3
		60	21	31	15.9	85	14	57.5
		61	21	31	15.6	85	14	44.6
		62	21	31	12.2	85	14	35.4
		63	21	31	08.1	85	14	32.2
		64	21	31	05.1	85	14	27.5
		65	21	31	02.8	85	14	23.2
		66	21	31	06.4	85	14	21.6
		67	21	31	10.7	85	14	12.8
		68	21	31	15.9	85	14	08.4
		69	21	31	17.6	85	14	08.8
		70	21	31	21.6	85	14	09.4
		71	21	31	25.3	85	14	08.2
		72	21	31	29.1	85	14	06.9
		73	21	31	32.8	85	14	07.7
		74	21	31	35.1	85	14	02.9

Scanned with OKEN Scanner

		75	21	31	41.0	85	14	56.0
		76	21	31	44.0	85	14	55.3
		77	21	31	49.3	85	14	57.5
		78	21	31	51.9	85	14	0.00
		79	21	31	57.3	85	14	01.5
		80	21	32	00.3	85	14	01.0
		81	21	32	02.3	85	13	59.2
		82	21	32	04.8	85	13	58.2
		83	21	32	07.3	85	13	58.0
		84	21	32	10.0	85	13	56.8
		85	21	32	10.0	85	13	52.2
		86	21	32	10.7	85	13	58.4
		87	21	32	15.3	85	13	58.8
		88	21	32	18.4	85	13	46.7
		89	21	32	22.3	85	13	46.5
		90	21	32	26.7	85	13	47.5
		91	21	32	32.3	85	13	56.3
		92	21	32	38.2	85	13	50.7
		93	21	32	40.0	85	13	57.0
		94	21	32	45.5	85	13	55.4
		95	21	32	49.0	85	13	54.2
		96	21	32	52.7	85	14	00.6
		97	21	32	59.2	85	13	48.3
		98	21	33	00.9	85	13	46.0
		99	21	33	02.6	85	13	41.4
		100	21	33	02.2	85	13	39.4
		101	21	33	04.6	85	13	35.0
		102	21	33	04.3	85	13	39.9
		103	21	33	06.9	85	13	37.2
		104	21	33	13.0	85	13	24.6
		105	21	33	12.8	85	13	15.1
		106	21	33	11.1	85	13	17.3
		107	21	33	16.6	85	12	57.1
		109	21	33	17.3	85	12	53.5
		110	21	33	20.5	85	12	48.7
		111	21	33	25.1	85	12	48.2
		112	21	33	33.3	85	12	46.0
		113	21	33	38.0	85	12	45.2
		114	21	33	24.9	85	17	36.5
		115	21	33	24.2	85	17	28.6
		116	21	33	23.7	85	17	24.8
		117	21	33	21.3	85	17	20.2
		118	21	33	21.7	85	17	17.9
		119	21	33	20.0	85	17	16.1
		120	21	33	21.4	85	17	13.0

Scanned with OKEN Scanner

		121	21	33	26.7	85	17	11.9
		122	21	33	30.9	85	17	10.1
		123	21	33	36.9	85	17	08.3
		124	21	33	39.7	85	17	00.1
		125	21	33	43.3	85	16	56.2
		126	21	33	46.2	85	16	53.9
		127	21	33	49.9	85	16	51.6
		128	21	33	51.1	85	16	44.8
		129	21	33	56.3	85	16	31.6
		130	21	33	59.1	85	16	27.7
		131	21	34	09.0	85	16	23.8
		132	21	34	01.0	85	16	20.6
		133	21	33	58.9	85	16	13.7
		134	21	33	57.9	85	16	08.7
		135	21	33	58.2	85	16	05.4
		136	21	33	59.4	85	15	59.7
		137	21	33	01.0	85	15	55.8
		138	21	34	02.4	85	15	52.1
		139	21	34	04.4	85	15	47.6
		140	21	34	08.0	85	15	41.6
		141	21	34	09.5	85	15	38.3
		142	21	34	16.5	85	15	30.6
		143	21	34	24.9	85	15	26.6
		144	21	34	27.4	85	15	27.1
		145	21	34	30.4	85	15	28.0
		146	21	34	35.2	85	15	29.4
		147	21	34	48.4	85	15	33.5
		148	21	34	03.0	85	15	38.2
		149	21	35	23.8	85	15	40.8
		150	21	35	27.5	85	15	40.6
		151	21	35	29.0	85	15	35.1
		152	21	35	41.6	85	15	26.8
		153	21	35	43.9	85	15	26.0
		154	21	35	56.0	85	15	21.3
		155	21	35	04.1	85	15	17.2
		156	21	36	09.6	85	15	04.4
		157	21	36	12.2	85	14	56.8
		158	21	36	17.2	85	14	45.3
		159	21	36	13.4	85	14	45.3
		160	21	36	03.5	85	14	40.2
		161	21	36	00.5	85	14	29.1
		162	21	36	02.2	85	14	15.3
		163	21	36	01.2	85	14	01.9
		164	21	36	01.2	85	13	53.9
		165	21	36	01.1	85	13	50.5

Scanned with OKEN Scanner

		165	21	36	01.9	85	13	47.3
		166	21	36	16.8	85	13	37.6
		167	21	36	20.9	85	13	34.1
		168	21	36	31.1	85	13	25.2
		169	21	36	47.4	85	12	46.7
		170	21	33	45.0	85	12	38.7
		171	21	33	47.2	85	12	39.0
		172	21	33	56.6	85	12	43.5
		173	21	34	01.5	85	12	41.3
		174	21	34	05.5	85	12	38.8
		175	21	34	13.8	85	12	38.2
		176	21	34	19.5	85	12	33.7
		177	21	34	33.6	85	12	27.5
		178	21	34	36.3	85	12	22.3
		179	21	34	38.7	85	12	18.7
		180	21	34	42.4	85	12	10.8
		181	21	34	46.8	85	12	03.7
		182	21	34	48.8	85	11	57.8
		183	21	34	49.7	85	11	54.3
		184	21	34	50.1	85	11	53.2
		185	21	34	51.8	85	11	50.1
		186	21	34	54.0	85	11	45.8
		187	21	34	55.1	85	11	43.9
		188	21	34	55.5	85	11	43.0
		189	21	34	58.5	85	11	39.3
		190	21	34	59.5	85	11	38.3
		191	21	35	00.2	85	11	37.5
		192	21	35	01.8	85	11	36.0
		193	21	35	03.4	85	11	35.1
		194	21	35	04.9	85	11	33.2
		195	21	35	06.0	85	11	32.1
		196	21	35	07.1	85	11	30.9
		197	21	35	08.0	85	11	30.0
		198	21	35	04.6	85	11	21.7
		199	21	35	06.7	85	11	21.1
		200	21	35	11.8	85	11	20.3
		201	21	35	14.7	85	11	17.3
		202	21	35	16.1	85	11	15.1
		203	21	35	18.4	85	11	13.0
		204	21	35	21.3	85	11	12.0
		205	21	35	23.8	85	11	10.7
		206	21	35	24.0	85	11	08.2
		207	21	35	24.9	85	11	03.7
		208	21	35	24.6	85	11	01.3
		209	21	35	24.8	85	11	58.2

Scanned with OKEN Scanner

		210	21	35	23.8	85	10	55.4
		211	21	35	23.6	85	10	52.9
		212	21	35	24.1	85	10	49.5
		213	21	35	23.7	85	10	46.8
		214	21	35	24.0	85	10	42.8
		215	21	35	24.4	85	10	41.5
		216	21	35	22.9	85	10	38.7
		217	21	35	22.0	85	10	35.3
		218	21	35	21.5	85	10	34.7
Pallahara	Old Pauri RF(Tabapal)	1	21	31	26.6	85	12	33.3
		2	21	31	38.9	85	13	25.7
		3	21	31	36.5	85	13	27.5
		4	21	31	55.0	85	12	51.5
		5	21	31	55.1	85	12	50.1
		6	21	31	55.5	85	12	48.8
		7	21	31	00.7	85	12	46.3
		8	21	31	04.7	85	12	39.6
		9	21	31	05.7	85	12	38.1
		10	21	31	07.2	85	12	34.7
		11	21	31	05.6	85	12	33.3
		12	21	31	04.1	85	12	28.7
		13	21	31	09.1	85	12	30.3
		14	21	31	11.1	85	12	34.8
		15	21	31	12.2	85	12	37.2
		16	21	31	17.1	85	12	43.1
Pallahara	New Pauri	1	21	37	22.5	85	14	47.3
		2	21	37	24.2	85	14	43.3
		3	21	37	28.2	85	14	42.1
		4	21	37	35.1	85	14	40.9
		5	21	37	35.7	85	14	29.3
		6	21	37	33.8	85	14	25.5
		7	21	37	39.4	85	14	27.3
		8	21	39	06.6	85	13	11.7
		9	21	39	10.6	85	13	07.8
		10	21	39	17.7	85	13	01.3
		11	21	39	25.4	85	12	56.1
		12	21	38	06.4	85	14	12.6
		13	21	38	12.6	85	14	23.7
		14	21	38	17.7	85	14	31.8
		15	21	38	20.5	85	14	33.9
		16	21	38	25.7	85	14	38.8
		17	21	38	28.3	85	14	40.3
		18	21	38	29.3	85	14	41.2
		19	21	38	32.4	85	14	44.5

Scanned with OKEN Scanner

Deogarh	Prabhasuni RF	1	21	33	59.7	84	31	27.1
		2	21	33	59.7	84	31	18.9
		3	21	33	59.3	84	31	10.7
		4	21	33	55.7	84	31	05.3
		5	21	33	52.4	84	31	00.8
		6	21	33	47.1	84	30	54.7
		7	21	33	42.7	84	30	55.6
		8	21	33	40.4	84	30	55.5
		9	21	33	37.9	84	30	58.1
		10	21	33	33.2	84	30	59.8
		11	21	33	31.2	84	30	59.8
		12	21	33	27.8	84	31	00.1
		13	21	33	22.7	84	30	57.8
		14	21	33	41.9	84	30	56.6
		15	21	33	08.6	84	30	57.6
		16	21	33	05.1	84	31	00.2
		17	21	33	00.3	84	31	01.7
		18	21	32	55.4	84	31	04.4
		19	21	32	53.9	84	31	01.6
		20	21	33	57.2	84	30	59.2
		21	21	33	00.6	84	30	52.8
		22	21	33	01.8	84	30	59.3
		23	21	33	03.7	84	30	47.2
		24	21	33	03.8	84	30	43.3
		25	21	32	49.9	84	30	56.0
		26	21	32	43.4	84	30	59.0
		27	21	32	40.2	84	30	59.0
		28	21	32	40.2	84	31	04.1
		29	21	32	37.9	84	31	12.4
		30	21	32	36.1	84	31	16.5
		31	21	32	34.8	84	31	25.6
		32	21	32	32.0	84	31	33.2
		33	21	32	30.8	84	31	39.2
		34	21	32	28.0	84	31	47.4
		35	21	32	25.5	84	31	46.6
		36	21	32	25.0	84	31	50.1
		37	21	32	22.5	84	31	48.9
		38	21	32	21.2	84	31	52.2
		39	21	32	18.8	84	31	56.7
		40	21	32	17.0	84	31	01.2
		41	21	32	12.9	84	32	09.5
		42	21	32	02.0	84	32	15.7
		43	21	32	03.4	84	32	20.0

Scanned with OKEN Scanner

		44	21	32	03.3	84	32	34.3
		45	21	32	01.3	84	32	42.0
		46	21	32	58.9	84	32	46.5
		47	21	32	49.2	84	32	03.7
		48	21	31	41.8	84	33	08.6
		49	21	31	35.6	84	33	18.2
		50	21	31	31.8	84	33	17.4
		51	21	31	28.8	84	33	16.6
		52	21	31	25.5	84	33	16.2
		53	21	31	22.9	84	33	20.1
		54	21	31	22.3	84	33	22.1
		55	21	31	21.1	84	33	23.6
		56	21	31	19.3	84	33	24.2
		57	21	31	14.4	84	33	27.5
		58	21	31	11.9	84	32	31.3
		59	21	31	12.3	84	33	34.1
		60	21	31	13.0	84	33	38.1
		61	21	31	11.8	84	33	42.0
		62	21	31	13.5	84	33	45.1
		63	21	31	16.7	84	33	49.1
		64	21	31	17.9	84	34	53.7
		65	21	31	18.9	84	34	55.9
		66	21	31	18.5	84	34	01.8
		67	21	31	20.5	84	34	00.1
		68	21	31	21.9	84	34	56.2
		69	21	31	25.7	84	33	52.5
		70	21	31	26.2	84	33	54.8
		71	21	31	25.8	84	33	58.9
		72	21	31	26.5	84	34	02.2
		73	21	31	27.5	84	34	06.4
		74	21	31	26.6	84	34	11.7
		75	21	31	27.8	84	34	17.2
		76	21	31	28.4	84	34	20.2
		77	21	31	28.7	84	34	24.7
		78	21	31	29.0	84	34	25.7
		79	21	31	29.6	84	34	30.3
		80	21	31	28.7	84	34	35.1
		81	21	31	27.6	84	34	37.1
		82	21	31	26.4	84	34	41.2
		83	21	31	23.0	84	34	43.8
		70	21	31	22.4	84	34	48.1
		71	21	31	24.6	84	34	47.8
		72	21	31	25.7	84	34	46.6
		73	21	31	26.9	84	34	46.4
		74	21	31	30.0	84	34	54.1

Scanned with OKEN Scanner

		75	21	31	33.1	84	34	53.8
		76	21	31	36.4	84	34	53.5
		77	21	31	27.4	84	34	41.6
		78	21	31	37.2	84	34	44.8
		79	21	31	38.1	84	34	41.8
		80	21	31	39.6	84	34	39.1
		81	21	31	44.2	84	34	38.0
		82	21	31	46.2	84	34	40.0
		83	21	31	48.6	84	34	41.2
		84	21	31	50.4	84	34	41.7
		85	21	31	51.8	84	34	40.1
		86	21	31	53.7	84	34	37.3
		87	21	31	53.0	84	34	36.7
		88	21	31	51.7	84	34	35.0
		89	21	31	54.5	84	34	31.0
		90	21	31	58.5	84	34	35.0
		91	21	31	59.5	84	34	33.0
		92	21	32	01.9	84	34	29.7
		93	21	32	03.1	84	34	28.9
		94	21	32	08.1	84	34	30.5
		95	21	32	11.1	84	34	31.5
		96	21	32	15.0	84	34	33.9
		97	21	32	16.7	84	34	35.3
		98	21	32	20.6	84	35	44.7
		99	21	32	14.7	84	35	47.8
		100	21	32	11.8	84	35	55.0
		101	21	32	15.6	84	35	07.3
		102	21	32	15.1	84	35	24.2
		103	21	32	13.3	84	35	36.6
		104	21	32	07.8	84	35	51.4
		105	21	32	04.0	84	36	00.2
		106	21	32	02.3	84	36	07.6
		107	21	32	01.5	84	36	13.2
		109	21	32	00.7	84	36	17.8
		110	21	32	01.0	84	36	19.4
		111	21	32	13.9	84	36	29.4
		112	21	32	04.9	84	36	38.2
		113	21	32	08.3	84	36	25.7
		114	21	32	11.2	84	36	47.3
		115	21	32	13.7	84	36	50.9
		116	21	32	17.4	84	36	50.5
		117	21	32	22.0	84	36	51.3
		118	21	32	20.1	84	37	20.1
		119	21	32	20.3	84	37	10.6
		120	21	32	21.5	84	37	20.0

Scanned with OKEN Scanner

		121	21	32	20.6	84	37	28.1
		122	21	32	19.2	84	37	30.5
		123	21	32	18.2	84	37	33.9
		124	21	32	14.8	84	37	36.0
		125	21	32	12.0	84	37	41.2
		126	21	32	11.3	84	37	46.4
		127	21	32	11.2	84	37	49.3
		128	21	30	43.5	84	38	02.0
		129	21	30	35.8	84	37	59.6
		130	21	30	32.9	84	37	58.1
		131	21	30	30.7	84	37	57.0
		132	21	30	29.7	84	37	53.8
		133	21	30	29.0	84	37	50.0
		134	21	30	16.5	84	37	24.6
		135	21	30	14.2	84	37	27.0
		136	21	30	15.5	84	37	20.5
		137	21	30	18.7	84	37	05.4
		138	21	30	21.1	84	37	03.5
		139	21	30	27.1	84	36	59.1
		140	21	30	27.7	84	36	54.1
		141	21	30	28.3	84	36	45.1
		142	21	30	24.0	84	36	40.1
		143	21	30	15.9	84	36	34.1
		144	21	30	16.0	84	36	29.7
		145	21	30	15.5	84	36	17.9
		146	21	30	15.4	84	36	02.0
		147	21	30	15.7	84	35	56.6
		148	21	30	15.4	84	35	49.0
		149	21	30	15.3	84	35	45.4
		150	21	30	15.0	84	35	40.5
		151	21	30	15.2	84	35	38.8
		152	21	30	20.1	84	35	32.4
		153	21	30	26.2	84	35	21.8
		154	21	30	27.4	84	35	18.7
		155	21	30	27.8	84	35	08.2
		156	21	30	30.2	84	35	03.4
		157	21	30	33.5	84	34	58.4
		158	21	30	36.6	84	34	58.4
		159	21	30	41.9	84	34	58.6
		160	21	30	47.0	84	34	53.2
		161	21	30	47.4	84	34	44.6
		162	21	30	48.0	84	34	34.4
		163	21	30	48.3	84	34	27.7
		164	21	30	38.0	84	34	29.8
		165	21	30	06.5	84	34	21.4

Scanned with OKEN Scanner

165	21	30	32.8	84	34	06.9
166	21	30	28.7	84	34	03.9
167	21	30	22.2	84	34	59.3
168	21	30	23.2	84	33	55.5
169	21	30	25.3	84	33	49.4
170	21	30	26.7	84	33	44.3
171	21	30	33.3	84	33	23.9
172	21	30	34.4	84	33	14.0
173	21	30	36.2	84	33	14.3
174	21	30	36.3	84	33	11.5
175	21	30	40.1	84	33	13.2
176	21	30	40.1	84	33	30.1
177	21	30	37.6	84	33	08.3
178	21	30	35.8	84	33	01.6
179	21	30	37.4	84	32	57.7
180	21	30	39.2	84	32	53.9
181	21	30	41.4	84	32	54.6
182	21	30	42.8	84	32	57.0
183	21	30	43.6	84	33	00.3
184	21	30	43.6	84	33	02.8
185	21	30	43.1	84	33	06.9
186	21	30	44.5	84	33	10.2
187	21	30	46.5	84	33	11.2
188	21	30	50.1	84	33	13.1
189	21	30	54.7	84	33	15.2
190	21	30	55.5	84	33	10.6
191	21	30	56.5	84	33	07.8
192	21	30	53.8	84	33	06.2
193	21	30	53.9	84	33	02.4
194	21	30	54.2	84	33	01.1
195	21	30	54.8	84	32	58.0
196	21	30	43.3	84	32	50.8
197	21	30	46.2	84	32	50.9
198	21	30	48.8	84	32	47.9
199	21	30	52.3	84	32	42.8
200	21	30	55.4	84	32	41.6
201	21	30	57.0	84	32	52.3
202	21	31	01.3	84	32	50.0
203	21	31	05.9	84	32	51.5
204	21	30	57.4	84	32	28.3
205	21	31	17.0	84	31	20.8
206	21	31	33.5	84	31	16.8
207	21	31	29.0	84	31	18.3
208	21	31	37.9	84	31	04.5
209	21	31	43.0	84	31	59.6

Scanned with OKEN Scanner

		210	21	31	52.3	84	31	45.0
		211	21	31	53.4	84	31	04.5
		212	21	31	53.7	84	30	36.7
		213	21	31	54.1	84	30	30.0
		214	21	31	54.9	84	30	26.3
		215	21	31	55.9	84	30	23.1
		216	21	31	58.0	84	30	18.9
		217	21	32	05.4	84	30	12.2
		218	21	32	07.6	84	30	10.2
		219	21	32	11.3	84	30	05.2
		220	21	32	14.6	84	30	03.2
		221	21	32	18.3	84	30	02.0
		222	21	32	23.3	84	29	59.6
		223	21	32	24.4	84	29	58.8
		224	21	32	26.4	84	29	57.1
		225	21	32	29.1	84	29	53.9
		226	21	32	32.9	84	29	48.0
		227	21	32	37.3	84	29	42.1
		228	21	32	39.7	84	29	53.8
		229	21	32	42.3	84	29	54.6
		230	21	32	47.4	84	29	56.5
		231	21	32	47.9	84	29	58.1
		232	21	32	53.3	84	29	59.9
		233	21	32	56.8	84	30	01.0
		234	21	33	00.5	84	30	01.8
		235	21	33	02.9	84	30	02.9
		236	21	33	11.1	84	30	07.7
		237	21	33	13.7	84	30	09.7
		238	21	33	19.4	84	30	12.7
		239	21	34	25.6	84	29	41.3
		240	21	34	44.0	84	29	27.3
		241	21	34	41.8	84	29	44.0
		242	21	34	38.5	84	29	53.0
		243	21	34	35.5	84	30	00.8
		244	21	34	32.8	84	30	04.3
		245	21	34	31.4	84	30	15.4
		246	21	34	29.5	84	30	29.7
		247	21	34	26.3	84	30	26.4
		248	21	34	23.9	84	30	31.1
		249	21	34	20.4	84	30	35.3
		250	21	34	18.7	84	30	41.1
		251	21	34	22.2	84	30	43.0
		252	21	39	15.0	84	30	27.5
		253	21	39	13.7	84	30	33.7
		254	21	39	10.7	84	30	37.6

Scanned with OKEN Scanner

255	21	39	08.9	84	30	44.9
256	21	39	05.6	84	30	53.7
257	21	39	01.2	84	31	07.5
258	21	38	57.2	84	31	12.2
259	21	38	50.5	84	31	19.0
260	21	38	49.6	84	31	20.3
261	21	38	46.5	84	31	27.9
262	21	38	40.0	84	31	37.0
263	21	38	33.9	84	31	45.4
264	21	38	26.5	84	31	55.9
265	21	38	19.7	84	32	07.8
266	21	38	12.6	84	32	13.3
267	21	38	11.1	84	32	37.6
268	21	38	09.6	84	32	45.7
269	21	38	07.9	84	32	51.4
270	21	38	05.8	84	33	04.8
271	21	37	28.5	84	34	47.8
272	21	37	24.1	84	34	48.2
273	21	37	14.6	84	34	42.0
274	21	37	09.7	84	34	46.7
275	21	31	58.1	84	34	48.6
276	21	31	54.6	84	34	43.7
277	21	31	58.4	84	34	38.1
278	21	37	02.7	84	34	31.6
279	21	37	08.5	84	34	32.1
280	21	37	14.3	84	34	13.9
281	21	37	19.8	84	34	06.2
282	21	37	23.8	84	34	01.0
283	21	37	27.8	84	33	54.9
284	21	37	28.3	84	33	48.4
285	21	37	28.4	84	33	46.3
286	21	37	28.8	84	33	34.3
287	21	37	30.4	84	33	29.5
288	21	37	37.1	84	33	19.6
289	21	37	40.8	84	33	13.7
290	21	37	43.6	84	33	10.9
291	21	37	49.4	84	33	07.0
292	21	37	59.6	84	33	00.3
293	21	38	06.6	84	32	59.1
294	21	36	37.2	84	32	13.0
295	21	36	40.8	84	32	12.2
296	21	36	46.1	84	32	11.2
297	21	36	46.6	84	32	01.1
298	21	36	57.4	84	36	48.2
299	21	36	56.1	84	36	39.6

Scanned with OKEN Scanner

		300	21	36	52.8	84	36	31.4
		301	21	36	51.1	84	36	27.3
		302	21	36	48.8	84	36	24.9
		303	21	36	48.0	84	36	17.2
		304	21	36	45.8	84	36	10.2
		305	21	36	51.8	84	36	06.4
		306	21	36	54.4	84	35	58.1
		307	21	36	55.8	84	35	52.0
		308	21	36	56.0	84	35	43.4
		309	21	36	55.6	84	35	36.1
		310	21	37	03.2	84	35	27.0
		311	21	37	04.7	84	35	25.6
		312	21	37	07.7	84	35	22.6
		313	21	37	10.7	84	35	21.5
		314	21	37	16.1	84	35	18.5
		315	21	37	22.3	84	35	16.2
		316	21	37	32.3	84	35	11.7
		317	21	37	34.1	84	35	07.8
		318	21	37	39.4	84	35	00.4
		319	21	37	42.2	84	34	59.0
		320	21	34	11.5	84	37	59.4
		321	21	34	12.3	84	38	08.6
		322	21	34	12.9	84	38	15.0
		323	21	34	40.6	84	38	17.4
		324	21	34	20.8	84	38	18.3
		325	21	34	25.2	84	38	17.7
		326	21	34	27.8	84	38	19.5
		327	21	34	29.6	84	38	21.1
		328	21	34	32.8	84	38	24.4
		329	21	34	34.2	84	38	28.4
		330	21	34	37.2	84	38	32.7
		331	21	34	39.7	84	38	37.2
		332	21	34	41.7	84	38	42.8
		333	21	34	43.9	84	38	44.3
		334	21	34	45.6	84	38	43.6
		335	21	34	48.5	84	38	41.9
		336	21	35	00.3	84	38	10.0
		337	21	34	59.2	84	38	00.1
		338	21	34	57.0	84	37	56.8
		339	21	35	00.6	84	37	48.3
		340	21	35	00.1	84	37	39.5
		341	21	35	01.0	84	37	36.2
		342	21	35	04.3	84	37	33.9
		343	21	35	06.5	84	37	27.8
		344	21	35	09.7	84	37	25.0

Scanned with OKEN Scanner

		345	21	35	10.9	84	37	18.8
		346	21	35	11.6	84	37	15.0
		347	21	35	14.4	84	37	11.8
		348	21	35	16.6	84	37	08.6
		349	21	35	18.9	84	37	06.6
		350	21	35	24.7	84	37	02.8
		351	21	35	28.1	84	36	55.7
		352	21	35	32.4	84	36	50.8
		353	21	35	39.6	84	36	36.2
		354	21	35	39.8	84	36	47.9
		355	21	35	46.4	84	36	52.0
		356	21	35	46.7	84	36	54.6
		357	21	35	49.1	84	36	57.2
		358	21	35	49.3	84	37	02.0
		359	21	35	51.4	84	37	07.5
		360	21	35	54.4	84	37	12.4
		361	21	35	55.4	84	37	14.4
		362	21	36	03.2	84	37	15.6
		363	21	36	06.2	84	37	15.1
		364	21	36	08.8	84	37	13.8
		365	21	36	11.5	84	37	15.3
		366	21	36	15.2	84	37	15.3
		367	21	36	17.1	84	37	15.4
		368	21	36	20.8	84	37	15.1
		369	21	36	27.4	84	37	15.1
		370	21	34	11.5	84	37	59.6
		371	21	34	10.7	84	37	52.4
		372	21	34	10.9	84	37	47.2
		373	21	34	12.5	84	37	42.5
		374	21	34	13.3	84	37	36.3
		375	21	34	11.8	84	37	31.0
		376	21	34	07.2	84	37	27.6
		377	21	34	02.7	84	37	23.8
		378	21	34	02.3	84	37	20.0
		379	21	34	00.0	84	37	14.4
		380	21	33	58.0	84	37	08.5
		381	21	33	54.5	84	37	02.3
		382	21	33	52.0	84	36	55.7
		383	21	33	51.9	84	36	49.5
		384	21	33	51.8	84	36	45.3
		385	21	33	52.4	84	36	40.6
		386	21	33	51.1	84	36	33.7
		387	21	33	50.5	84	36	30.4
		388	21	33	48.3	84	36	21.3
		389	21	33	46.6	84	36	17.1

Scanned with OKEN Scanner

		390	21	33	44.7	84	36	09.6
		391	21	33	44.7	84	36	04.4
		392	21	33	44.1	84	35	59.9
		393	21	33	45.4	84	35	52.4
		394	21	33	46.6	84	35	46.6
		395	21	33	48.6	84	35	41.2
		396	21	33	49.4	84	35	37.6
		397	21	33	52.6	84	35	26.0
		398	21	33	51.4	84	35	19.6
		399	21	33	50.5	84	35	11.3
		400	21	33	49.1	84	35	04.7
		401	21	33	47.9	84	34	59.5
		402	21	33	47.3	84	34	56.9
		403	21	33	46.5	84	34	54.5
		404	21	33	44.5	84	34	44.1
		405	21	33	42.7	84	34	35.8
		406	21	33	40.9	84	34	28.5
		407	21	33	40.8	84	34	25.4
		408	21	33	38.9	84	34	16.5
		409	21	33	37.8	84	34	09.1
		410	21	33	38.5	84	34	01.8
		411	21	33	38.5	84	34	52.7
		412	21	33	40.2	84	33	42.5
		413	21	33	40.8	84	33	33.1
		414	21	33	40.2	84	33	21.7
		415	21	33	40.2	84	33	20.4
		416	21	33	40.1	84	33	16.4
		417	21	33	39.4	84	33	13.5
		418	21	33	39.5	84	33	09.5
		419	21	33	37.4	84	33	02.5
		420	21	33	34.2	84	32	55.3
		421	21	33	33.3	84	32	47.5
		422	21	33	32.0	84	32	38.5
		423	21	33	31.2	84	32	30.6
		424	21	33	30.0	84	32	24.4
		425	21	33	31.1	84	32	19.2
		426	21	33	37.2	84	32	12.7
		427	21	33	40.0	84	32	09.1
		428	21	33	47.9	84	31	52.1
		429	21	33	53.4	84	31	42.5
		430	21	31	54.9	84	33	36.1
		431	21	31	54.0	84	33	33.9
		432	21	31	54.7	84	33	23.2
		433	21	31	53.0	84	33	21.2
		434	21	31	53.4	84	33	18.0

Scanned with OKEN Scanner

		435	21	31	54.9	84	33	10.9
		436	21	31	58.6	84	33	11.1
		437	21	32	03.5	84	33	04.6
		438	21	32	06.0	84	33	02.6
		439	21	32	11.2	84	33	03.5
		440	21	32	15.5	84	33	17.3
		441	21	32	18.2	84	33	27.3
		442	21	32	15.8	84	32	54.4
		443	21	32	21.2	84	32	41.6
		444	21	32	30.4	84	32	28.5
		445	21	32	33.2	84	32	22.7
		446	21	32	41.3	84	32	14.5
		447	21	32	43.0	84	32	11.0
		448	21	32	44.6	84	32	13.7
		449	21	32	45.1	84	32	15.5
		450	21	32	45.5	84	32	17.5
		451	21	32	55.3	84	32	27.4
		452	21	32	57.6	84	32	37.5
		453	21	32	40.8	84	32	31.7
		454	21	32	36.9	84	32	37.5
		455	21	32	39.2	84	32	39.9
		456	21	32	43.8	84	32	49.2
		457	21	32	27.7	84	33	01.9
		458	21	32	25.1	84	33	04.4
		459	21	32	22.6	84	33	09.5
		460	21	32	20.2	84	33	16.4
		461	21	32	18.7	84	33	19.7
		462	21	32	14.3	84	33	27.1
		463	21	32	12.5	84	33	28.5
		464	21	32	10.1	84	33	29.7
		465	21	32	07.8	84	33	31.3
		466	21	32	03.8	84	33	34.1
		467	21	32	01.4	84	33	38.6
		468	21	31	59.0	84	33	39.5
		469	21	31	56.4	84	33	39.2
		470	21	31	54.1	84	33	38.2
		471	21	34	33.3	84	30	48.3
		472	21	34	36.5	84	30	49.3
		473	21	34	38.9	84	30	51.1
		474	21	34	41.3	84	30	52.4
		475	21	34	43.9	84	30	50.3
		476	21	34	47.2	84	30	54.7
		477	21	34	41.3	84	31	06.5
		478	21	34	33.8	84	31	23.0
		479	21	34	29.8	84	31	31.2

Scanned with OKEN Scanner

		480	21	34	25.5	84	31	39.5
		481	21	34	11.1	84	32	1.5
Deogarh	Pravasuni RF	1	21	31	53.5	84	34	23.3
	(Niranjanhudi)	2	21	31	56.3	84	34	20.8
		3	21	31	58.3	84	34	20.5
		4	21	32	0.7	84	34	19.8
	Kapasiru Teak Plantation	5	21	31	53.6	84	33	87
Deogarh	Pravasuni RF	1	21	31	46.7	84	33	59.3
	Jhadeswar DPF	1	21	32	12	84	37	41.3
		2	21	32	11.9	84	37	42.2
		3	21	32	11.5	84	37	44.5
		4	21	32	11.4	84	37	49.7
		5	21	32	14.5	84	38	2.1
		6	21	32	11.2	84	38	19.7
		7	21	32	9.1	84	38	34.1
		8	21	32	5.8	84	38	44
		9	21	31	53	84	38	42.3
		10	21	31	58.3	84	38	45.8
		11	21	31	53.5	84	38	47.5
		12	21	31	57.2	84	38	52.1
		13	21	31	56.7	84	39	34.4
		14	21	31	55.1	84	39	38.2
		15	21	31	48.9	84	39	49.8
		16	21	31	49.2	84	40	17.7
		17	21	31	41.6	84	40	35.9
		18	21	31	38.9	84	40	40.1
		19	21	31	36.3	84	40	48.7
		20	21	31	29.3	84	41	5.6
		21	21	31	27.7	84	41	9.1
		22	21	31	27.1	84	41	11.9
		23	21	31	25.9	84	41	19.9
		24	21	31	25.3	84	41	24.5
		25	21	31	25.5	84	41	30.6
		26	21	31	26.5	84	41	37.2
		27	21	31	26.3	84	41	41.6
		28	21	31	22	84	41	48.8
		29	21	31	19.6	84	41	51.6
		30	21	31	17.9	84	41	54
		31	21	31	14.6	84	41	58.6
		32	21	31	12.2	84	41	56.6
		33	21	31	9.9	84	41	56.2
		34	21	31	8.2	84	42	1.3
		35	21	31	2.1	84	42	17.9
		36	21	31	0.7	84	42	22.4

Scanned with OKEN Scanner

		37	21	30	56.2	84	42	33.2
		38	21	30	55.8	84	42	36.1
		39	21	30	55.1	84	42	39.3
		40	21	30	54.2	84	42	43.3
		41	21	30	52.3	84	42	52.1
		42	21	30	57.6	84	42	55.2
		43	21	30	52.6	84	43	2
		44	21	30	26.2	84	43	12.4
		45	21	30	20.7	84	43	18
		46	21	30	16.3	84	43	20.6
		47	21	30	13.8	84	43	25.2
		48	21	30	30.2	84	43	26.6
		49	21	32	11.4	84	37	49.4
		50	21	32	5.3	84	37	48
		51	21	31	56.9	84	37	45.5
		52	21	31	56.6	84	37	45.7
		53	21	31	44.4	84	37	50.5
		54	21	31	41.6	84	37	54.9
Pallahara	Atonaka	1	21	30	20.3	85	16	34.6
		2	21	30	20.5	85	16	25.9
		3	21	30	24.6	85	16	24.4
		4	21	30	47.5	85	16	32
		5	21	30	54.5	85	16	51.8
		6	21	30	45.4	85	16	57.4
		7	21	30	25.1	85	16	50
Pallahara	Saida	1	21	28	58	85	16	48.4
		2	21	28	53.5	85	16	44.8
		3	21	28	48	85	16	41.2
		4	21	28	44.8	85	16	35.2
		5	21	28	41.6	85	16	34.5
		6	21	28	36.7	85	16	34.3
		7	21	28	29.5	85	16	34.5
		8	21	28	23.5	85	16	43.2
		9	21	28	23.3	85	16	41.2
		10	21	28	21.7	85	16	30.7
		11	21	28	16.3	85	16	21.2
		12	21	27	58.8	85	16	18.2
		13	21	27	54.5	85	16	12.6
		14	21	27	52.1	85	16	12.7
		15	21	27	49	85	15	58
		16	21	27	42.1	85	15	58.2
		17	21	27	45.1	85	15	57.8
		18	21	27	45.6	85	16	10.1
		19	21	27	47.7	85	16	14.2
		20	21	27	52.4	85	16	26.4

Scanned with OKEN Scanner

		21	21	27	55.3	85	16	54.1
		22	21	27	58.8	85	17	4.1
		23	21	27	11.5	85	17	6.3
		24	21	28	18.2	85	17	8.6
		25	21	28	23.3	85	17	5.1
		26	21	28	31.9	85	17	58.6
		27	21	28	34.4	85	17	2
		28	21	28	37.5	85	17	2.5
		29	21	28	45.1	85	17	11.5
		30	21	28	51.7	85	17	16
		31	21	28	56.6	85	17	10.8
		32	21	29	0	85	17	1.1
		33	21	28	57	85	17	9.4
		34	21	29	2.1	85	17	7
		35	21	29	2.9	85	17	10.5
		36	21	29	6.1	85	17	11.5
		37	21	29	11.9	85	17	7
		38	21	29	14.2	85	17	4.9
		39	21	29	18.6	85	17	6.2
		40	21	29	21	85	17	6.3
		41	21	29	24.3	85	17	0.5
		42	21	29	26.3	85	17	20.1
		43	21	29	30.6	85	17	8.3
		44	21	29	33.2	85	17	12
		45	21	29	36	85	17	13.7
		46	21	29	36.1	85	17	14.3
		47	21	29	39.2	85	17	17.3
		48	21	29	40.9	85	17	24.9
		49	21	30	38.3	85	17	34.5
		50	21	30	51.1	85	17	40.1
		51	21	30	30	85	17	15.8
		52	21	30	25.3	85	16	56.5
		53	21	30	24.1	85	16	51.8
		54	21	28	58.8	85	16	57.6
		55	21	29	2.5	85	16	56.6
		56	21	29	8.6	85	16	59.4
		57	21	29	11.7	85	16	59.4
		58	21	29	18.3	85	16	56.9
		59	21	29	21.1	85	17	58.1
		60	21	29	24.2	85	17	0.6
		61	21	29	26.3	85	17	2.2
		62	21	29	30.7	85	17	4
		63	21	29	33.1	85	17	8.2
		64	21	29	36	85	17	11.8

Scanned with OKEN Scanner

		65	21	29	36.3	85	17	13.8
		66	21	29	37.6	85	17	14.3
		67	21	29	39.2	85	17	17.5
		68	21	29	40.8	85	17	21.8
		69	21	29	40.9	85	17	24.9
		70	21	29	41.3	85	17	28.5
		71	21	29	48.3	85	16	30.4
		72	21	29	54.2	85	16	24.1
		73	21	29	58.2	85	16	23.2
		74	21	30	0.9	85	16	24.4
		75	21	30	4.9	85	16	30.7
		76	21	30	4.6	85	16	36.5
		77	21	30	2.9	85	16	38.9
		78	21	30	4.5	85	16	45.6
		79	21	30	10.9	85	16	49
		80	21	30	19	85	16	46.1
		81	21	30	20.4	85	16	48.2
Deogarh	Bangalimunda DPF	1	21	28	26	84	31	26.3
		2	21	28	24.9	84	31	29.7
		3	21	28	23.3	84	31	34.1
		4	21	28	22.8	84	31	36.4
		5	21	28	20.6	84	31	36.8
		6	21	28	18	84	31	37.1
		7	21	28	15.6	84	31	38.7
		8	21	28	16.8	84	31	40.2
		9	21	28	18.8	84	31	42.1
		10	21	28	19.2	84	31	47.3
		11	21	28	27.6	84	31	49.5
		12	21	28	36.5	84	31	58.2
		13	21	28	25.8	84	32	1.5
		14	21	28	19.7	84	32	0.5
		15	21	28	16.2	84	31	58.4
		16	21	28	15.2	84	31	53.9
		17	21	28	7.8	84	31	50.2
		18	21	28	6	84	31	52
		19	21	28	4.1	84	31	58.5
		20	21	28	1.9	84	31	57.5
		21	21	27	57.7	84	31	55.3
		22	21	27	52.8	84	31	53.9
		23	21	27	52.4	84	31	48.5
		24	21	27	85.4	84	31	43.3
		25	21	27	56.9	84	31	43.4
		26	21	27	58.7	84	31	43.9
		27	21	28	1.2	84	31	42.7

Scanned with OKEN Scanner

		28	21	28	4.9	84	31	41.2
		29	21	28	6.2	84	31	39.6
		30	21	28	11	84	31	36.4
		31	21	28	12.2	84	31	34
		32	21	28	14.2	84	31	29.5
		33	21	28	17.3	84	31	35.6
		34	21	28	15	84	31	16.5
		35	21	28	13.9	84	31	15.1
		36	21	28	12.6	84	31	15.3
		37	21	28	9.4	84	31	16.4
		38	21	28	6	84	31	17.3
		39	21	28	3.9	84	31	20
		40	21	28	1.9	84	31	23.9
		41	21	28	1.4	84	31	29
		42	21	27	56.4	84	31	29.4
		43	21	27	51.7	84	31	31.4
		44	21	27	52.9	84	31	24
		45	21	27	53.8	84	31	21.7
		46	21	27	55.2	84	31	19.5
		47	21	27	57.7	84	31	16.7
		48	21	27	57.8	84	31	13.8
		49	21	28	2.8	84	31	7.4
		50	21	28	3.9	84	31	5.5
		51	21	28	3.0	84	31	3.2
		52	21	28	1.1	84	31	0.9
		53	21	27	56.1	84	31	1.6
		54	21	27	50.5	84	30	58
		55	21	27	53.9	84	30	54.3
		56	21	27	55.3	84	30	53
		57	21	27	54.9	84	30	51.5
		58	21	27	54.6	84	30	45.1
		59	21	28	0.5	84	30	45.4
		60	21	28	3.0	84	30	41.8
		61	21	27	55.6	84	30	45.3
		62	21	27	51.9	84	30	44.3
		63	21	27	48.1	84	30	43.3
		64	21	27	48.1	84	30	37.9
		65	21	27	50.9	84	30	36.2
		66	21	27	57.3	84	30	34.7
		67	21	28	3.2	84	30	30.5
		68	21	28	8.3	84	30	29.5
		69	21	28	15	84	30	30.5
		70	21	28	19.9	84	30	35.8
		71	21	28	23.1	84	30	41.3

Scanned with OKEN Scanner

		72	21	28	27.2	84	30	43.5
		73	21	28	30.7	84	30	48.9
		74	21	28	34.6	84	30	36.9
		75	21	28	36.3	84	30	37.9
		76	21	28	10.6	84	30	37.1
		77	21	28	45.8	84	30	35.9
		78	21	28	46.6	84	30	38.9
		79	21	28	47.5	84	30	44.1
		80	21	28	48.6	84	30	47.6
		81	21	28	49.9	84	30	55.3
		82	21	28	47.7	84	30	54.9
		83	21	28	42.2	84	30	50
		84	21	28	41.6	84	30	53.4
		85	21	28	43.2	84	30	56.8
		86	21	28	41.8	84	31	0.3
		87	21	28	40.7	84	31	3.5
		88	21	28	39.5	84	31	8.7
		89	21	28	37.5	84	31	10.5
		90	21	28	35.5	84	31	12.1
		91	21	28	30.1	84	31	10
		92	21	28	25	84	31	6.3
		93	21	28	21.5	84	31	12.6
		94	21	28	21.4	84	31	16.8
		95	21	28	21.6	84	31	23.1
		96	21	28	21.4	84	31	25.4
		97	21	28	24.6	84	31	29.9
Pallahara	Bhaluhudi DPF	1	21	27	49.5	85	10	23.5
		2	21	27	52.4	85	10	37.8
		3	21	27	55.4	85	10	37.1
		4	21	27	57.5	85	10	35.1
		5	21	27	57.1	85	10	27.9
		6	21	27	55.3	85	10	21.8
		7	21	27	55.8	85	10	20.9
		8	21	27	57.8	85	10	22.6
		9	21	27	0.9	85	10	22.8
		10	21	28	5.3	85	10	22.3
		11	21	28	7.4	85	10	22.1
		12	21	28	7.7	85	10	21.2
		13	21	28	19.1	85	10	13.2
		14	21	28	20.3	85	10	11.2
		15	21	28	26	85	10	9.7
		16	21	28	29.3	85	10	7.6
		17	21	28	31.2	85	10	5.5
		18	21	28	33	85	9	51.2

Scanned with OKEN Scanner

		19	21	28	36.4	85	9	43.8
		20	21	28	21.4	85	9	36.4
		21	21	28	18.3	85	9	35.7
		22	21	28	14.5	85	9	39.3
		23	21	28	13.1	85	9	42.5
		24	21	28	1.6	85	9	46.8
		25	21	27	58.9	85	9	49.3
		26	21	27	53.5	85	9	48.3
		27	21	27	53.6	85	9	54.4
		28	21	27	52.5	85	9	59.9
		29	21	27	52.1	85	10	5.2
		30	21	27	50.2	85	10	17.2
		31	21	27	52.2	85	10	19
		32	21	27	52.1	85	10	21.4
Pallahara	Jalanda Jokapari	1	21	28	56.1	85	17	53.1
		2	21	28	58.9	85	17	51.2
		3	21	29	0.4	85	17	49.1
		4	21	29	4.6	85	17	47.2
		5	21	29	15.7	85	17	50.8
		6	21	29	23.3	85	17	51.8
		7	21	29	28.2	85	17	51.1
		8	21	29	34	85	17	51.1
		9	21	29	39	85	17	57
		10	21	29	39.9	85	17	58
		11	21	29	40.9	85	18	2.9
		12	21	29	39.9	85	17	58.1
		13	21	29	33.1	85	18	27.9
		14	21	29	26.5	85	18	27.2
		15	21	29	26.8	85	18	24.3
		16	21	29	16	85	18	12.6
Pallahara	Kakharua DPF	1	21	28	46.5	85	16	2.8
		2	21	28	52.1	85	15	52.1
		3	21	28	59.5	85	15	57.4
		4	21	29	4.9	85	15	59.6
		5	21	29	23.2	85	16	26.2
		6	21	29	16	85	16	18.9
		7	21	29	5.2	85	16	23.2
		8	21	29	0.6	85	16	24.2
		9	21	28	53.8	85	16	25.3
		10	21	28	47.5	85	16	30.4
		11	21	28	44.6	85	16	30.8
		12	21	28	23.4	85	16	17.9
		13	21	28	20.8	85	16	17.3
		14	21	28	18.3	85	16	14

Scanned with OKEN Scanner

		15	21	28	18.2	85	16	4.5
		16	21	28	25.9	85	16	6.7
Deogarh	Budhiketan	1	21	39	20.6	84	30	11.9
		2	21	39	22.4	84	30	3.2
		3	21	39	22.5	84	30	1.7
		4	21	39	22.9	84	29	53.1
		5	21	39	26.9	84	29	43.9
		6	21	39	27.2	84	29	39.5
		7	21	39	28.5	84	29	31.5
		8	21	39	34.1	84	29	27
		9	21	39	36	84	29	22
		10	21	39	36.7	84	29	14.8
Pallahara	Nizgarh (A)	1	21	24	47.5	85	10	32.8
		2	21	24	46	85	10	48.6
		3	21	24	45.5	85	10	53.2
		4	21	24	48.3	85	10	56.6
		5	21	24	48.5	85	11	1.2
		6	21	24	49.4	85	11	6.7
		7	21	24	49.9	85	11	13.5
		8	21	24	48.8	85	11	20.2
		9	21	24	45.9	85	11	32.9
		10	21	24	54.3	85	11	36
		11	21	24	57.8	85	11	24.9
		12	21	25	9.3	85	11	21.5
		13	21	25	12.6	85	11	12.2
		14	21	25	19.1	85	11	9.1
		15	21	25	16.2	85	10	36.6
		16	21	25	12.7	85	10	36.7
		17	21	25	7.4	85	10	35.7
Pallahara	Nizgarh (B)	1	21	25	50.3	85	12	5.7
		2	21	25	25.1	85	12	5
		3	21	25	52.7	85	12	0.6
		4	21	25	53.7	85	12	0.1
		5	21	25	2	85	12	0.6
		6	21	25	3.8	85	12	0.6
		7	21	25	4.7	85	12	1.9
		8	21	25	5.6	85	12	3.8
		9	21	25	7.4	85	12	6.7
		10	21	25	8.6	85	12	8.1
		11	21	25	8	85	12	11.3
		12	21	25	7	85	12	18.4
		13	21	25	10.1	85	12	24.5
		14	21	25	3.9	85	12	34.4
		15	21	25	4.3	85	12	31.4

Scanned with OKEN Scanner

		16	21	25	1.6	85	12	31.4
		17	21	25	0.9	85	12	25.8
		18	21	25	58.1	85	12	25.9
		19	21	25	55.5	85	12	26.2
		20	21	25	57.2	85	12	33
		21	21	25	51.4	85	12	34.3
		22	21	25	52	85	12	38.7
		23	21	25	53	85	12	43.5
		24	21	25	53.2	85	12	47.5
		25	21	25	48.7	85	12	44.7
		26	21	25	46.8	85	12	43.5
		27	21	25	35.7	85	12	36.5
		28	21	25	39.4	85	12	31.7
		29	21	25	42.4	85	12	26.9
		30	21	25	44	85	12	20.6
		31	21	25	45	85	12	16.7
		32	21	25	46.3	85	12	12.2
		33	21	25	46.8	85	12	9.3
	Sardeva	1	21	27	57.9	85	18	10
		2	21	27	59.1	85	18	15.1
		3	21	27	59.4	85	18	23.6
		4	21	27	58.1	85	18	26.6
		5	21	27	57.5	85	18	28.8
		6	21	27	57.2	85	18	32.4
		7	21	27	52.5	85	18	35.9
		8	21	27	52	85	18	38.1
		9	21	27	53	85	18	41.2
		10	21	27	54.8	85	18	43.5
		11	21	27	59.8	85	18	43.5
		12	21	28	1.5	85	18	47.9
		13	21	28	1.2	85	18	51.9
		14	21	28	3.4	85	18	53.8
		15	21	28	3.8	85	18	56.2
		16	21	28	5.6	85	19	0.6
		17	21	28	6.4	85	19	4.4
		18	21	28	9.1	85	19	6.7
		19	21	28	11.7	85	19	4.7
		20	21	28	14	85	19	3.4
		21	21	28	15.7	85	19	2.4
		22	21	28	14.4	85	19	0.8
		23	21	28	21.5	85	18	54.2
		24	21	28	16.9	85	18	51.8
		25	21	28	17.4	85	18	47.7
		26	21	28	18.1	85	18	45.4

Scanned with OKEN Scanner

27	21	28	22	85	18	44.1
28	21	28	27.8	85	18	45.8
29	21	28	32.3	85	18	52.1
30	21	28	34.7	85	18	55.1
31	21	28	42	85	18	58.7
32	21	28	44.1	85	18	57.4
33	21	28	44.7	85	18	56
34	21	28	48.5	85	18	54.7
35	21	28	51.2	85	18	55.1
36	21	28	53.1	85	18	55.4
37	21	28	54.2	85	18	53.8
38	21	28	54.4	85	18	52.1
39	21	28	55.3	85	18	50.8
40	21	28	55.2	85	18	49.2
41	21	27	59.4	85	18	16.6
42	21	27	59.4	85	18	13.5
43	21	27	57.4	85	18	11.8
44	21	27	54.5	85	18	10.8
45	21	27	52.8	85	18	7.6
46	21	27	52.7	85	18	5.3
47	21	27	53	85	18	1.1
48	21	27	54.9	85	18	0.6
49	21	27	58.2	85	18	0
50	21	27	58.3	85	17	58.4
51	21	28	4.1	85	17	58.5
52	21	28	7.5	85	18	0.6
53	21	28	10.2	85	18	3.6
54	21	28	7.7	85	18	7.9
55	21	28	8.6	85	18	13.3
56	21	28	6.8	85	18	14.8
57	21	28	7.3	85	18	18.4
58	21	28	9.4	85	18	20.4
59	21	28	9.4	85	18	22.8
60	21	28	11.1	85	18	26.2
61	21	28	16.1	85	18	27.1
62	21	28	18.5	85	18	32.6
63	21	28	22.1	85	18	33.3
64	21	28	27.4	85	18	34.8
65	21	28	26.4	85	18	39.3
66	21	28	26.4	85	18	42.3
67	21	28	27.2	85	18	45
68	21	28	26.7	85	18	47.7
69	21	28	33.9	85	18	53.7
72	21	28	22	85	18	29.2

Scanned with OKEN Scanner

		73	21	28	28.9	85	18	25
		74	21	28	31.9	85	18	22.3
		75	21	28	36.2	85	18	17.8
		76	21	28	37.8	85	18	14.5
		77	21	28	41.5	85	18	14.6
		78	21	28	45.2	85	18	14.6
		79	21	28	51.6	85	18	16.7
		80	21	28	46.8	85	18	50.9
		81	21	28	52.7	85	18	44.3
		82	21	28	53.1	85	18	42.7
		83	21	28	53.2	85	18	37.1
Deogarh	Pradhanpat RF	1	21	34	5.8	84	37	59.7
		2	21	34	0.7	84	37	59.9
		3	21	33	57.4	84	37	59.6
		4	21	33	55.7	84	37	59.4
		5	21	33	47.1	84	38	0.7
		6	21	33	44.5	84	38	5.7
		7	21	33	42.4	84	38	11.5
		8	21	33	33.9	84	38	9.8
		9	21	33	37.2	84	38	6.8
		10	21	33	33.9	84	38	1.4
		11	21	33	31.5	84	37	58.7
		12	21	33	29	84	37	55.8
		13	21	33	24	84	37	51.6
		14	21	33	17.5	84	37	48.6
		15	21	33	12.4	84	37	46.6
		16	21	33	2.3	84	37	45.1
		17	21	32	57.9	84	37	40
		18	21	32	57.7	84	37	35.1
		19	21	32	55	84	37	29.8
		20	21	32	47.2	84	37	26.2
		21	21	32	40	84	37	27.5
		22	21	32	36.13	84	37	29.1
		23	21	32	26.7	84	37	42.7
		24	21	32	26.5	84	37	47.4
		25	21	32	33.1	84	38	0.8
		26	21	32	36.1	84	38	3.2
		27	21	32	36.9	84	38	11.7
		28	21	32	37.5	84	38	16.5
		29	21	32	41.5	84	38	34.3
		30	21	32	44.7	84	38	38.3
		31	21	32	49.2	84	38	41.7
		32	21	32	53.1	84	38	49.5
		33	21	32	59.2	84	38	54.9

Scanned with OKEN Scanner

		34	21	33	0.8	84	38	57.9
		35	21	33	4.2	84	38	59.3
		36	21	33	9.7	84	38	59.9
		37	21	33	11	84	39	3.5
		38	21	33	14.3	84	39	7.3
		39	21	33	15.7	84	39	14.9
		40	21	32	50.9	84	39	45.5
		41	21	32	51.4	84	39	52.5
		42	21	32	51.8	84	40	0.2
		43	21	32	52.9	84	40	4.3
		44	21	33	52.1	84	40	17.3
		45	21	33	43.1	84	40	23.2
		46	21	33	40.4	84	40	25.7
		47	21	33	38.6	84	40	30.8
		48	21	33	37.6	84	40	34.2
		49	21	33	40.8	84	40	38.2
		50	21	33	41	84	40	47.1
		51	21	33	43.3	84	40	53.7
		52	21	33	43.3	84	41	3.1
		53	21	33	39	84	41	8.9
		54	21	33	36.8	84	41	11.4
		55	21	33	36	84	41	17.5
		56	21	33	36.8	84	41	29
		57	21	33	37.3	84	41	38.6
		58	21	33	37.9	84	41	49.6
		59	21	33	38.5	84	41	0.9
		60	21	33	38.8	84	41	6.8
		61	21	33	39.1	84	41	12.7
	Saraveda	1	21	28	55.2	85	18	49.2
		2	21	28	55.3	85	18	50.8
		3	21	28	54.4	85	18	52.1
		4	21	28	54.2	85	18	53.8
		5	21	28	53.1	85	18	55.4
		6	21	28	51.2	85	18	55.1
		7	21	28	48.5	85	18	54.7
		8	21	28	44.7	85	18	56
		9	21	28	44.1	85	18	57.4
		10	21	28	42	85	18	58.7
		11	21	28	34.7	85	18	55.1
		12	21	28	32.3	85	18	52.1
		13	21	28	27.8	85	18	45.8
		14	21	28	22	85	18	44.1
		15	21	28	18.1	85	18	45.4
		16	21	28	17.4	85	18	47.7

Scanned with OKEN Scanner

		17	21	28	16.9	85	18	51.8
		18	21	28	21.5	85	18	54.2
		19	21	28	19.4	85	19	0.8
		20	21	28	15.7	85	19	2.4
		21	21	28	14	85	19	3.4
		22	21	28	11.7	85	19	4.7
		23	21	28	9.1	85	19	6.7
		24	21	28	6.4	85	19	4.4
		25	21	28	5.6	85	19	0.6
		26	21	28	3.8	85	18	56.2
		27	21	28	3.4	85	18	53.8
		28	21	28	1.2	85	18	51.9
		29	21	28	1.5	85	18	47.9
		30	21	27	59.8	85	18	43.5
		31	21	27	54.8	85	18	43.5
		32	21	27	53	85	18	41.2
		33	21	27	52	85	18	38.1
		34	21	27	52.5	85	18	35.9
		35	21	27	57.2	85	18	32.4
		36	21	27	57.5	85	18	28.8
		37	21	27	58.1	85	18	26.6
		38	21	27	59.4	85	18	16.6
		39	21	27	59.1	85	18	13.5
		40	21	27	57.9	85	18	11.8
		41	21		59.4	85	18	10.8
		42	21	27	59.4	85	18	7.6
		43	21	27	57.4	85	18	5.3
		44	21	27	54.5	85	18	1.1
		45	21	27	52.8	85	18	0.6
		46	21	27	52.7	85	18	0
		47	21	27	53	85	17	58.4
		48	21	27	54.9	85	17	58.5
		49	21	27	58.2	85	18	0.6
		50	21	27	58.3	85	18	3.6
		51	21	28	4.1	85	18	7.9
		52	21	28	7.5	85	18	13.3
		53	21	28	10.3	85	18	14.8
		54	21	28	7.7	85	18	18.4
		55	21	28	8.6	85	18	20.4
		56	21	28	6.8	85	18	22.8
		57	21	28	7.3	85	18	26.2
		58	21	28	9.4	85	18	27.1
		59	21	28	9.4	85	18	32.1
		60	21	28	11.1	85	18	33.3
		61	21	28	16.2	85	18	34.8

Scanned with OKEN Scanner

		62	21	28	18.5	85	18	39.3
		63	21	28	22.1	85	18	42.3
		64	21	28	27.4	85	18	45
		65	21	28	26.7	85	18	47.7
		66	21	28	33.9	85	18	53.7
		67	21	28	22	85	18	29.2
		68	21	28	28.9	85	18	25
		69	21	28	31.9	85	18	22.3
		70	21	28	36.2	85	18	17.8
		71	21	28	37.8	85	18	14.5
		72	21	28	41.5	85	18	14.6
		73	21	28	45.2	85	18	14..6
		74	21	28	51.6	85	18	16.7
	Charigochhia	1	21	19	21.5	85	10	58.3
		2	21	19	27.6	85	10	55.6
		3	21	19	27.2	85	10	59.8
		4	21	19	28.1	85	11	3.2
		5	21	19	31.8	85	11	8.6
		6	21	19	36.3	85	11	17.8
		7	21	19	40.4	85	11	36.3
		8	21	19	43.2	85	11	27
		9	21	19	46.1	85	11	27.9
		10	21	19	50.1	85	11	34.7
		11	21	19	51.9	85	11	40.5
		12	21	19	55.9	85	11	50
		13	21	20	2.5	85	11	52
		14	21	20	5.4	85	11	53.5
		15	21	20	9.6	85	11	59.6
		16	21	20	15	85	12	7.3
		17	21	20	15.9	85	12	12.6
		18	21	20	18.7	85	12	18.7
		19	21	20	22.7	85	12	27.2
		20	21	20	25.1	85	12	34
		21	21	20	24.9	85	12	36.3
		22	21	20	22.7	85	12	40.1
		23	21	20	20.2	85	12	42.5
		24	21	20	16.6	85	12	49.2
		25	21	20	11.1	85	12	53.4
		26	21	20	9	85	12	56.2
		27	21	20	6.3	85	12	57.1
		28	21	20	2.9	85	13	2.3
		29	21	19	58.8	85	13	11.8
		30	21	19	56.8	85	13	14.1
		31	21	19	55	85	13	14.8
		32	21	19	48.4	85	13	11.9

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		33	21	19	45.8	85	13	12.6
		34	21	19	39.4	85	13	7.3
		35	21	19	32.6	85	13	0.2
		36	21	19	33.7	85	12	52.4
		37	21	19	31	85	12	47.8
		38	21	19	31.5	85	12	58.5
		39	21	19	28	85	12	44.9
		40	21	19	29.8	85	12	41.1
		41	21	19	29.9	85	12	34.5
		42	21	19	28.9	85	12	33.5
		43	21	19	21.1	85	12	25.6
		44	21	19	14.8	85	12	21
		45	21	19	10.9	85	12	22.8
		46	21	19	7	85	12	25.4
		47	21	18	58.2	85	12	25.8
		48	21	18	52.5	85	12	20.6
		49	21	18	54.8	85	12	11.2
		50	21	18	59.3	85	11	55.4
		51	21	19	4	85	11	48.4
		52	21	19	8.8	85	11	41.8
		53	21	19	10.4	85	11	38.1
		54	21	19	11.1	85	11	26
		55	21	19	21.5	85	11	17.6
		56	21	19	21	85	11	8.1

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F. LIST OF BUILDING AND WELL

Appendix I				
List of existing building and well				
S. No	Name of building	Type of building	Year of construction	Cost of construction in Rs.
1	Depot Nahorir shed at Pravasuni	Kacha	1950	100.00
2	L.D.C. Quarter at Deogarh	Pucca	1951	7825.00
3	F.G. shed at Amgaon	Pucca	1950	3460.00
4	Second shed of LDC Quarter at Deogarh	Pucca	1955	6875.00
5	F.G. shed at Kansar	Kacha	1955-56	1000.00
6	FG shed at Jamardihi	Kacha	1959-60	1000.00
7	Depot Forester quarter at Parmagarh	Pucca	1960-61	4400.00
8	FG shed at Khulundikudar	Pucca	1963-64	3460.00
9	Forester Quarter at Mardang	Pucca	1963-65	5664.00
10	Forester quarter at Kantiaposi	Pucca	1962-64	5000.00
11	Forester Quarter at Deogarh	Pucca	1961-63	4999.48
12	Depot Forester quarter at Deogarh	Pucca & tile roof	1961-63	5000.00
13	3rd LDC quarter at Deogarh	Pucca	1962-64	4970.00
14	Forester quarter at Nuagon	Pucca	1963-65	5665.00
Sources - Old working plan.				

Appendix II				
List of Well				
Sl. No	Name of place	No of Well	Year of construction	Cost of construction in Rs.
1	Range Office colony	1	1964-65	1400.00
2	Range Office colony	1	x	x
3	DFO's residence	1	x	x
4	Forest Second colony	1	x	x
5	Barkote range office camps	1	1987	5068.85
6	Range office compound at Pallahara	1	1961-63	1600.00
7	Forester quarter at Jamardihi	1	1953-54	1000.00
Sources - Old working plan.				

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