PART –I

CHAPTER – I
THE TRACT DEALT WITH

1.1 NAME AND SITUATION

1.1.1 Dhenkanal Forest division was constituted in 1948 after the merger of two ex-states of Dhenkanal and Hindol. The first working plan for the reserved forests of the ex-state of Dhenkanal was written by Dr. H. F. Mooney in 1928. This was subsequently revised by him in 1943. The third plan was prepared by Sri M. Ahmedullah for reserved forests of ex-Dhenkanal state and ex-Hindol state which was valid up to 1978. Shri S.N. Mohanty revised Ahmedullah's plan and prepared the revised working plan of Dhenkanal Forest Division for the period from 1979 to1999 subsequently extended upto 2003-04. The working plan of Smt. Uma Nanduri was in operation from 2004-05 to 2013-14 & Sri Saloram Marndi, OFS, Working Plans Officer, Angul was operation from 2016-17 to 2025-26.

1.1.2 The Dhenkanal Forest Division is co-terminus with Dhenkanal civil district, comprising three civil sub-divisions namely Dhenkanal, Kamakhyanagar and Hindol. There are eight revenue blocks, namely, Dhenkanal, Gondia, Odapada, Hindol, Kamakhyanagar, Bhuban, Kankadahada and Parjang in Dhenkanal district besides one municipality at Dhenkanal and two NACs at Kamakhyanagar and Bhuban respectively.

1.1.3 The headquarter of this division is located at Dhenkanal.The Division has originally 05 Ranges namely Dhenkanal, Sadangi, Hindol, Kamakhya Nagar (East) and Kamakhya Nagar (West) Ranges. 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 03 more Ranges namely Kapilas, Bhuban and Mohabirod have been created area carving out from the existing 05 Ranges. Now the Division is divided into eight ranges, e.g., Dhenkanal Range with its headquarters at Dhenkanal; Sadangi Range with headquarters at Sadangi; Hindol Range with headquarters at Hindol; Kamakhyanagar East and Kamakhyanagar West Ranges with their headquarters at Kamakhyanagar, Kapilas Range with headquarters at Kapilas, Odapada Range with headquarters at Mahavir Road and Bhuban Range with headquarters at Bhuban.

1.1.4 The geographical area of the Division is 4,599.00 Sq. Kms. and forest area is 30.38% of the total area. The Division is situated within 20° 35' N and 21°10' N latitudes and 85° 05' E and 86° 10' E longitudes of Greenwich. Total boundary lenth of the Division is 1379.16 Kms.It is bounded on four sides by the following Divisions:

North: Keonjhar Forest Division and Keonjhar civil district.
East: Athgarh Forest Division and Cuttack civil district.
West: Angul Forest Divisions and Angul civil district.
South: Athgarh Forest Division and Cuttack civil district.

1.1.5 **Administrative Set up of the Division** - After re-organization, the administrative set up of the Division in shape of Ranges, Sections and Beats are given in the **Table- 1.1**

Table No – 1.1 Administrative Set up of the Division			
Sl. No.	Name of administrative Set Up.	Before reorganization (No)	After reorganization (No)
1	Range	5	8
2	Section	27	37
3	Beat	104	104
4	Forest Check gates	4	4
Sources – Divisional Forest Officer, Dhenkanal.			

1.2 CONFIGURATION OF THE GROUND

1.2.1 The Division has an undulating topography covering stretches of fertile valleys to precipitous rocky peaks; the elevation measuring from 46 m in the plains to 751.941 m in the hill ranges. Geomorphologically, the Division can be divided into three distinct sub-divisions, namely, (i) the northern hill ranges, (ii) the southern hill ranges, and (iii) the intervening Brahmani river.

1.2.2 The Northern hill ranges are situated to the north of Brahmani River with a general direction of West-Northwest to East-Southeast. These hill ranges stretch over a length of about 32 Km, constituting mostly of Anantapur and Ranjagarh RF blocks. The highest peak in this range is Sarai Parbat (734.568 m) in Ranjagarh RF. Other prominent hills are Kumbharuni Parbat (668.731 m), Kolha Parbat (577.291 m), Ranjagarh Parbat (542.239 m), Bariphuljhari (524 m), Dangaragra Parbat (518.769 m) Anantapur Parbat (491.032 m), Sunderakhol (489.508), GorupanjaraParbat (458.14 m), Burha Parbat (445.008 m), Udaigiri (435.864), Amelijharan Parbat (419.1 m), Bramhandhara (397.764 m), Baruan (388.315 m), Sunajhari (358.749), Nandabir (347.472), Hunda Parbat (338.948 m), Dhuligotha Parbat (321.68 m), Kaimati Parbat (310.890 m) and Bijakhol Parbat (306.628 m). Ramial nala and Gamhariajor are the two tributaries of Brahmani, which cut across these hill ranges

1.2.3. The Southern hill ranges, running roughly in a direction of West-Northwest to East-Southeast in the Western region and to South-Southwest to East-Northeast in the eastern region, form the watershed between the Brahmani and the Mahanadi Rivers. The highest peak in this Range is Kanaka (751.941 m). Other prominent hills of the ranges are Bankamundi of Kandhara hill ranges (634.593 m), Kapilas Parbat of Kapilas hill ranges (634.593 m), Gumaria peak of Saptasajya R.F. (585.216 m), Nayagarh Parbat (529.742 m), Budhi Parbat (528.828 m), Suasui Parbat (447.751 m), Kai Parbat (446.532 m), Ambithi (445.321 m), Dalar Parbat in Aswakhola (439.826 m), Borthali Parbat (382.524 m), Aswakhola Parbat (372.465 m), Megha (371.551 m) and Nimidha (312.420 m). The common boundary of the Dhenkanal and the Athgarh forest division runs along the peak of Kanaka.

1.2.4 The River Brahmani divides the division into two almost equal halves in a semicircular manner. The central Brahmani valley has a moderately plain land to undulating topography with a few scattered hillocks.

1.2.5 The general elevation of the Brahmani valley is approximately between 46 metres and 122 metres. Reserved Forests are generally confined to the hill ranges and cover only small portions of the levelled terrain, at foothills. The RFs falling under this zone are:
Bhuban (60 m), Baliposi, Sadangi (100 m), part of Aswakhola, Raitola, Lahada, and Khalpal.

1.3 GEOLOGY, ROCK AND SOIL.

1.3.1 The division presents an interesting assemblage of rocks, belonging to the Eastern Ghat Super-group (EGS), Iron Ore Super-group (IOS), and Gondwana Super-group (GSG) of tertiary and quaternary formations. The IOS rocks occur to the north of the tectonic lineament and Eastern Ghat Super group of rocks to its south. The rocks of Gondwana Super-group form a wedge shaped valley in the northwestern part of the division. They broaden out further west. Laterites (in situ) and Quaternary sediments overlay these. The rocks are dissected by dendritic as well as subtrellis pattern of drainage lines controlled by the Brahmani river system.

1.3.2 The IOS is comprised of a variety of basic schist, chlorite schist, quartz sericite schist and Iron Ore belonging to Badampahar group, the oldest meta-sedimentary unit in the area. Nuakote group represented by basic volcano plutonic rocks, pebbly/gritty quartzite etc. lie over on a granite basement. These are intruded by ultramatics, chromate, younger granite, granophyre and dolomite dykes. Singhbhum Granite, with event co- relating to 2950 million years and 3200 million years, forms a major tectono-magmatic unit of the district.

1.3.3 The Iron ore groups, consisting mainly of quartzite and quartz-schist occur in Anantapur, Ranjagarh and Moulabhanja RFs, to the north of Kamakhyanagar. This type of rock, upon weathering and erosion, gives rise to shallow soil. Consequently, the hill slopes support a poor quality Sal forest and at places dry miscellaneous forests. The age is Precambrian. The Eastern Ghat super-group of rocks is mainly comprised of khondalites (quartz-feldspar-garnet silimanite + graphite schist/gneiss), talc.Granulite, garnetiferous quartzite, charnockites, pyroxene granulite, leptynite and augen gneiss. The Eastern Ghat Super group of rocks has been assigned a middle-lower Proterozoic age on the basis of vast majority of mid-proterozoic dates from adjoining areas.

1.3.4 The out crop is exposed to the South and South-East of Brahmani river and mainly in Kandhara RF, Dhenkanal township, Saptasajya, Mayuri, Charkhola, Kapilas, Kai, Bompa, Nandania forest blocks and reaches its northerly limit in the Sunajhari RF, to the South of Kamakhyanagar. Igneous rocks called charnockites

intrude these rocks at places. It varies from a very hard rock resembling quartzite to one of much more granular structures, which produces light sandy soil. This type of rock supports semi evergreen mixed forests, generally with bamboo, but good Sal forests do occur as seen in Kapilas, Lahada, and Ramai.

1.3.5 A blanket cover of in situ laterites overlies the entire succession described above, soil and alluvium belonging to Tertiary and quaternary age respectively. It occurs in the valley of the river Brahmani and Sapua and deeply covered by alluvium having good soil depth. Such conditions in the forests support daba bamboo and evergreen to semi-evergreen species.

The stratiographic sequence of the rocks encountered in the Division is given in table- 1.2

TABLE -1.2 STRATOGRAPHY OF DHENKANAL DIVISION

Sl. No	AGE	ROCKS
1	Quarternary (Pleistocene to recent)	Soil and alluvium
2	Tertiary	Laterite and alluvium with impersistent laterite
3	Gondwana Super Group (Up Carboniferous age)	Unclassified Barakar Formation, Barren measures Raniganj Formation shale and coal. Talcher Formation Boulder bed, Tillite, sandstone & shale.
4	Eastern Ghat Supergroup (Lower to middle proterozoic age)	Granitoids. Augen gneiss, garnetiferous granite gneiss, Leptynite, Charnockite Group. Acid, Intermediate charnockite, Pyroxene granulite Khondalite Group. Khondalite, Garnetiferous Quartzite, calc granulite.
5	Iron Ore Supergroup. (Archaean age)	Dolerite dyke. Granite and granophyre. Ultramafics + chromite.
6	Nuakot Group	Basic volcanoplutonic rocks. Pebbly quartzite, gritty quartzite and quartzite.
7	Padampahar Group	Hornblende schist, epidiorite, Chlorite schist with Iron Ore.
8	Singhbhum Granite	Granite, schist with gneiss, and pegmatite.
Source: Geological Zonal Survey, Dhenkanal		

1.4 SOIL The following types of soils are found in the division.

1. Sandy loam soils
2. Clayey soils
3. Red sandy loam soils
4. Morrum
5. Calcareous soils

1.4.1 Sandy Loam Soils: In these types of soils the content of sand is slightly higher than the normal loamy soils. These soils have adequate water holding capacity. They are found in Charkhola, Patapuri, Kotaberena, Belabania, Matiamundia, Baliposi, Bega, Khankira, Sunajhari, Ranjagarh, Dhalapada, Balibo, Sundarkhol, Nadabir, Talcher Border, Khalpal, Kadalipal, Bampa and Hitinda Reserved Forests.

1.4.2 Clayey Soils: These soils are composed of about 45-50 percent of clay, 10-20 percent of fine sand, 30 percent of silt and organic matter. They are very finely grained and dark in colour. They are characterized by high swelling and shrinkage, plasticity and stickiness. These soils are low in Nitrogen, Organic matter, Potassium and rich in Iron, Lime, Alumina, Calcium and Magnesium Carbonate. They have low permeability, hence prone to salinity. They are found in Tamada, Sulia, Barbanka North and Barbanka South Reserved Forests.

1.4.3 Red Sandy Loamy Soils: These soils are composed of about 40-45 percent sand, 35-40 percent silt, 10 percent clay, 5 percent organic matter. The colour of these soils is due to the presence of Ferric Oxide. These soils are light textured, poor in humus, Nitrogen, Phosphorus and Lime. They are characterized by argillaceous soil with a cloddy nature. These soils are present in Ghantabaja, Patapuri, Mayuri, Nimidha, Sadangi (A), Lahada (A), Lahada (B), Ramai, Aswakhola, Gondia, Raitola, Rupabalia, Tipiloi, Bhuban, Dolia & Madhi Reserved Forests.

1.4.4 Calcareous or Lime Soils: These are basically sandy soils, which contain about 10 percent lime or calcium carbonate and the rest is sand and silt in equal quantities. These types of soils are found in Kankadahada and Tamada Reserved Forests.

1.4.5 The Soil texture in the Division varies abnoramaly. The soil in the northern hill ranges and the southern hill ranges are mainly coarse and sandy, mixed with quartzite boulders. Soil is very thin on hill slopes, which supports miscellaneous crop with degraded Salia bamboo here and there. Soil in the entire division is acidic in nature with pH value ranging from 5.34 in Siarimalia, Madhi, Bhubana, Birasal etc. to

6.81 in Dhalapada, Tipiloi, Bompa, Hitinda etc. of the RFs. The exceptional high P^H value is recorded 8.44 in Suniamaru R.F. Most of the RFs are degraded with little or no leaf litter cover. The organic carbon content is low (<0.5 %) in most of the RFs. except in a few RFs like Dholpada,Tipiloe,Suniamaru, Anlabereni, Kadilipal, Kankili, Machia, Barabank (N) Barabanka (S), T Border, kansara etc. where it is moderately high (0.51 % to 0.75 %). It is observed that the Organic content in case Nadabir, Bhuban R.F is very high i:e 1.29 & 1.07 respectively. It is interesting to note that the soil in pure Sal forests are richer in Potash content but poorer in organic carbon content as compared to that of miscellaneous forests in a similar crown density. The reason could be the seasonal sweeping and burning of ground floor for Sal seed collection, thereby not allowing the leaf litter to decompose but converting it to ash.

To know the acidic nature and availability of micro nutrients like Iron, Copper, Manganese and zinc of the different forest area of the division, soil samples are collected in three layers (1', 2', 3') form each compartment of 64 RFs (Except Kapilas) and have been got tested by the Agriculture Department in the O/o the Stae Quality Control Laboratory, Bhubaneswar. The soil analysis results of all the compartment of the RF summed up and average of the same have been taken for the R.F. Block. The compartment wise forest soil analysis result has been furnished in the respective Compartment History. The micro nutrients level of the division found to be medium to poor. The results of the soil analysis are provided in the **Table 1.3 & table 1.4**

TABLE- 1.3 DISTRIBUTION AND ANALYSIS OF SOIL

SL.No	RF Block	Texture	pH	Electric conductivity (EC)	Organic Carbon	Phosphorous (P)	Potassium (K)
DHENKANAL RANGE							
1	Charkhola	Sandy loam	5.99	0.03	0.33	23.5	365.67
2	Mayuri	Red sandy loam	5.91	0.02	0.43	15.5	51.58
3	Saptasajya	Calcareous	6.00	0.02	0.31	12.22	302.14
4	Ghantabaja	Red sandy loam	5.68	0.02	0.38	13.75	279.04
5	Patapuri	Sandy Loam	5.93	0.03	0.49	10.00	251.02
6	Megha	Sandy Loam	5.78	0.03	0.35	21.00	420.93
7	Korean	Sandy Loam	5.83	0.01	0.19	9.00	269.1
8	Kankadahada	Calcareous	5.78	0.02	0.15	9.00	319.8
9	Tamada	Clayey	6.13	0.02	0.50	44.0	292.03
10	Kotaberena	Sandy loam	6.02	0.02	0.22	9.00	383.83
11	Jaripal	Sandy loam	5.92	0.02	0.25	66.00	275.0
12	Belabania	Sandy loam	5.92	0.01	0.18	55.0	483.200
13	Sulia	Clayey	6.30	0.01	0.27	27.00	383.03
14	Matia mundia	Sandy loam	5.92	0.01	0.15	10.33	347.63

15	Matharagadi	Red soil	6.74	0.07	0.32	21.00	372.73
16	Nimidha	Red sandy loam	5.94	0.01	0.21	11.00	329.00
17	Godabalua	Red sandy loam	5.87	0.02	0.35	8.00	377.67
KAPILAS RANGE							
18	Ramai	Red sandy loam	5.97	0.02	0.33	17.33	288.04
SARANGI RANGE							
19	Sadangi (A)	Red sandy loam	6.50	0.03	0.43	10.00	202.7
20	Sadangi (B)	Lateritic	5.94	0.03	0.32	13.00	289.5
21	Lahada (A)	Red sandy loam	5.65	0.02	0.38	10.00	394.60
22	Lahada (B)	Red sandy loam	6.42	0.02	0.33	13.0	176.83
23	Raigoda	Red sandy loam	5.98	0.03	0.25	24.00	206.57
24	Aswakhola	Red sandy loam	5.83	0.02	0.35	15.5	251.73
25	Baliposi	Sandy loam with morrum	5.82	0.03	0.16	10.50	428.45
26	Nischinta	Clayey	5.84	0.02	0.22	12.06	284.70
27	Bega	Sandy loam	6.16	0.03	0.25	13.00	179.47
28	Khankira	Sandy loam	5.67	0.04	0.25	30.67	364.97
29	Gondia	Red sandy loam	6.00	0.02	0.21	29.33	297.37
30	Raitola	Red sandy loam	6.01	0.01	0.36	53.00	278.13
31	Rupabalia	Red sandy loam	6.26	0.02	0.46	18.01	340.801
K.NAGAR (EAST) RANGE							
32	Birasal	Sandy loam	5.54	0.02	0.39	12.00	250.63
33	Jiridamali	Morrum	5.88	0.04	0.22	14.00	341.33
34	Maulabhanja	Morrum	5.84	0.03	0.20	30.00	292.413
35	Ranjagarh	Sandy loam	5.62	0.03	0.38	24.14	194.16
BHUBANA RANGE							
36	Balibo	Sandy loam	6.18	0.08	0.88	16.00	347.87
37	Bhairpur	Morrum	5.93	0.02	0.27	102.00	449.5
38	Bhuban	Red sandy loam	5.34	0.02	1.07	15.00	273.57
39	Dhalapada	Sandy loam	6.81	0.07	0.66	21.00	491.2
40	Tipiloi	Red sandy loam	6.73	0.02	0.70	15.00	241.03
41	Sunajhari (part)	Sandy loam	6.09	0.02	0.64	15.67	383.61
K.NAGAR (WEST) RANGE							
42	Sunajhari (part)	Sandy loam	6.09	0.02	0.64	15.67	383.61
43	Anlaberini	Sandy loam	5.89	0.01	0.72	18.00	178.8
44	Kadalipal	Sandy loam	5.76	0.02	0.66	13.00	321.01
45	Kankili	Sandy loam	6.45	0.02	0.50	21.00	262.5
46	Machhia	Sandy loam	5.29	0.03	0.54	15.00	35263
47	Madhi	Red sandy loam	5.36	0.01	0.20	37.50	106.33
48	Nandabir	Sandy loam	6.25	0.04	1.29	15.00	286.83

49	Siarimalia	Sandy loam	6.34	0.03	0.54	13.00	274.1
50	Sundarkhol	Sandy loam	5.87	0.02	0.50	18.17	299.87
51	Suniamaru	Sandy loam with morrum	8.44	0.07	0.55	16.00	317.00
52	Anantapur (part)	Sandy loam with clay	5.82	0.06	0.40	38.26	249.38
MOHABIROD RANGE							
53	Anantapur (part)	Sandy loam with clay	5.82	0.06	0.40	338.26	249.38
54	Barbank (N)	Clayey	5.75	0.01	0.57	20.00	269.13
55	Barbank (S)	Clayey	6.51	0.03	0.59	12.00	300.06
56	Dolia	Red sandy loam	6.04	0.05	0.35	21.00	271.03
57	Khalpal	Sandy loam	6.00	0.03	0.57	21.00	234.03
58	Talcher border	Sandy loam	6.18	0.04	0.85	12.00	294.4
HINDOL RANGE							
59	Kandhara	Clayey soil	6.04	0.07	0.52	11.68	292.75
60	Potalo	Red	6.22	0.02	0.51	12.5	295.05
61	Bompa	Sandy loam	6.45	0.04	0.56	17.4	292.69
62	Hitinda	Sandy loam	6.25	0.02	0.58	14.00	250.70
63	Nandania	Morrum	5.72	0.02	0.30	17.0	244.07
64	Kai	Sandy loam	6.05	0.03	0.34	15.0	258.4
65	Kansara	Clayey with gravel	6.21	0.03	0.68	15.00	308.9
	Ambithi	Clayey	5.83	0.02	0.27	10.00	349.00

TABLE 1.4 INTERPRETATION OF SOIL ANALYSIS RESULTS

Soil parameter	Test Value	Class	Remarks
pH	< 6.6	Acidic	
	6.6 - 7.3	Neutral	
	> 7.3	Alkaline	
Electrical Conductivity	< 1mmhos/ cm		Normal
	1 -2 mmhos/ cm		Critical for germination
	2 - 3 mmhos/cm		Critical for growth of salt sensitive crops
	3 - 4 mmhos/ cm		Critical to most crops
Organic Carbon %	< 0.5%	Low	Represents available organic nitrogen status of soil
	0.51 % to 0.75 %	Medium	
	> 0.75 %	High	
Available Phosphorus	< 20 kg/ ha	Low	
	21 - 50 kg/ ha	Medium	
	> 50 kg/ ha	High	
Available Potash	< 125 kg/ ha	Low	
	126 - 300 kg/ ha	Medium	
	> 300 kg/ ha	High	

1.4.6. **Soil Texture** – Depending on the size of the particles of the soil, it can be grouped as given in the **Table no-1.5**

Table No – 1.5	**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

1.4.7 **P^H Value** - 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. The acidity and alkalinity of a soil solution is due to an excess of hydrogen ions (H+) and hydroxyl ions (OH -) respectively. The trees that will grow better in different P^H ranges have been given in the T**able-1.6.**

Table No – 1.6	**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 MINERAL RESOURCES

1.5.1 The different minerals available in the division are mainly Chromite, Graphite and Coal. Chromite is extracted from Kathpal in the Kamakhyanagar East Range. There were two working Chromite mines over an area of 500 ha and the output was 31000 M.T. worth Rupees 607 lakhs in 1997-98. In 1998-99, there was only one mine over 113 ha and the output was 34000 M.T., worth 583 lakhs. (Source: District Statistical Handbook, Dhenkanal) Laterite stones are extracted all over the division by the local people. Geological Zonal Survey, Dhenkanal has investigated and found out the presence of the following minerals. Abstract of Survey is presented in the **Table 1.7**

TABLE- 1.7 THE MINERAL RESOURCES OF DHENKANAL DISTRICT				
Name of the place /Area	**Year of survey**	**Area (Sq km)**	**Type of minerals**	**Expected percentage**
Kathpal-Maulabhanj Parbat	1972-74	340	Chromite	Cr_2O_3=17.71-29.90%
Toradanali-Kadabansanta Jhilli-Sikheswar hill	1982-92	500	Kyanite	$Al_2 O_3$=27.6 - 75%
Kabisha-Bandhabhuin	-	-	Graphite	High grade
Karanda-Dodrukot	1990-92	100	Chinaclay	Al_2O_3 = 11.4- 14.3% Si O_2 =18.2 - 20.6%
Asanibahal-Ghagarmunda Katumunda Bhejia Gotri Tipeijharan	1992-95	200	Semi-precious	Garnet, moonstone, pink sapphire, pink corundum, Rock crystal
Latadeipur Karada Babandha	1993-94	200	Dimension stone	Varianta of granite
Motanga	1983-84	140	Beryl	Industrial use
East of Brahmani	1994-97	20.38	Coal	Good quality
Source: Joint Director, Geology Zonal Survey, Dhenkanal				

1.6 CLIMATE AND RAINFALL

1.6.1 CLIMATE

The climate is warm and humid. Four distinct seasons are experienced in a year. The summer is from March to May, monsoon from June to September, autumn from October to November and winter from December to February. The spring is practically absent.

(i) Hot and Dry Summer: (March, April and May)

The mean summer maximum temperature is 39°C. May is the hottest month of the year with mean daily maximum temperature of 40°C. March and April receives minimum or sometimes no rainfall and May receives some rainfall.

(ii) Hot and Humid Wet Season: (June, July, August and September)

Usually monsoon sets in the second week of June. The average rainfall during the period from June to September is 1421 mm. The average temperature remains at 28-31°C and is highly humid.

(iii) The Autumn: (October and November)

In this period mean maximum temperature runs between 30-33°C and minimum temperature 17-20°C and severe cold has been experienced in the year 1996 with minimum temperature falling to 5°C in November.

(iv) The Winter: (December, January and February)

The mean maximum temperature is between 28-33°C. The minimum temperature in December is 13-15°C

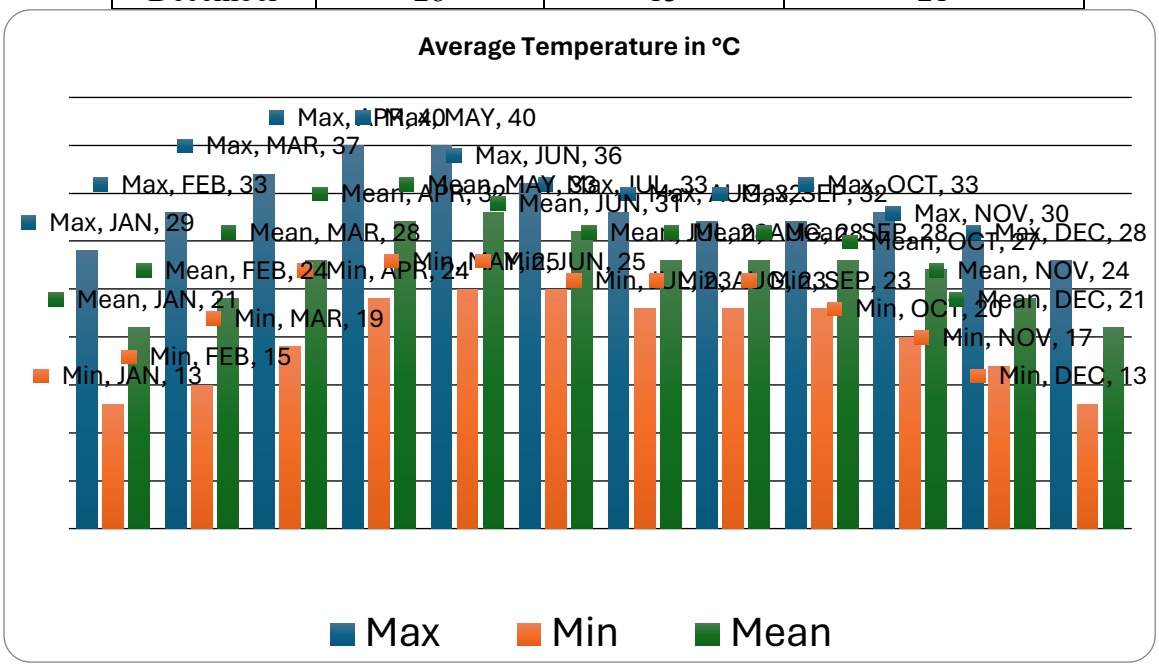
1.6.2 Rainfall:-

The average rainfall of the division is 1500 mm received during rainy days. The comparison of rainfall figures shows that rainfall is erratic and unpredictable. Dhenkanal district comes under Mid Central Table Land zone which comprises Dhenkanal, Angul, Athgarh and Sukinda block of Jajpur district. This zone is physiographically located in the middle of the central tableland that rises from east to west and has elevation of about 300 mts from mean sea level. The monthwise Rain fall of District furnished in **Annexure-I**

TABLE-1.8 Annual (Average) Rainfall of Dhenkanal Forest Division Since-2004										
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1045.2	1718	1369.9	1298.6	1428.5	1471.8	1127.4	1489.2	1477.5	1664.6	1428.8

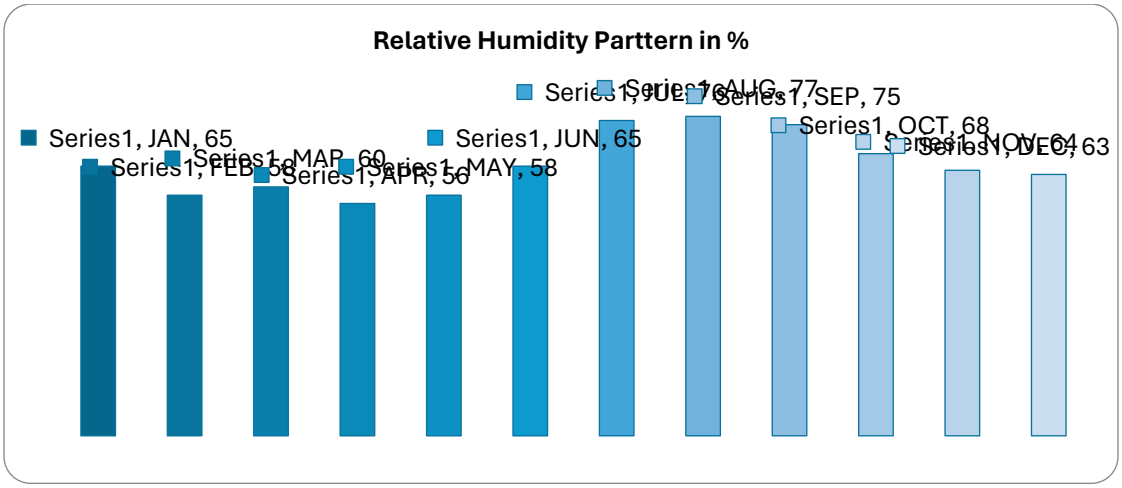
1.6.3 Temperature: May and June are the hottest months of the year with mean daily maximum temperature of 38° Celsius. The temperature gradually decreases with the onset of monsoon and with the passage of monsoon, in October, both day and night temperature further lowers gradually. December & January are the coldest months of the year. The monthwise Temperature of District furnished in **Annexure-II.**

TABLE-1.9 Average Temperature in ºC Dhenkanal Forest Division:			
Month	**Max.**	**Min.**	**Mean**
January	29	13	21
February	33	15	24
March	37	19	28
April	40	24	32
May	40	25	33
June	36	25	31
July	33	23	28
August	32	23	28
September	32	23	28
October	33	20	27
November	30	17	24
December	28	13	21



1.6.4 Relative Humidity. The Relative Humidity in Dhenkanal division is high throughout the year, in contrast to the neighbouring Angul district. The maximum Relative Humidity recorded is during the month of August and minimum in the month of April and June.The humidity is high in the eastern parts of the division due to proximity with sea. The relative humidity is generally high during the monsoon and post monsoon months. The monthwise Relative Humidity of District furnished in **Table-1.10**

TABLE-1.10 **Average Relative Humidity (in %) of Dhenkanal Division**											
Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
65	58	60	56	58	65	76	77	75	68	64	63



1.7 WATER RESOURCES AND SUPPLY

1.7.1 River and Tributaries-The River Brahmani and few of its tributaries are the major perennial source of water in the division. The river Brahmani is a natural boundary for the division; it divides the division into two parts. Ramial is the biggest tributary of Brahmani in the division. It receives mainly two feeders, Purajora and Domsal .In the summer months all most all the streams dry up and water becomes scarce. Scarcity of water is felt mostly in the Anantapur, Ranjagarh and Kandhara blocks. The important rivers, their origin and drainage are provided in **Table - 1.11**

TABLE -1.11 IMPORTANT RIVERS OF DHENKANAL DIVISION			
Name of the River/ Tributary/ feeder	**Origin**	**Passes Through**	**Drains at**
1.Brahmani (Major River)	River Sankh & Koili joins together at Bedabyash of District Sundergarh & River Brahmani Started	Kamakhyanagar East &West Ranges and Sadangi Range	Drains into Bay of Bengal in Cuttack district
2.Ramial(Biggest Tributary)	Benamunda RF, of Keonjhar District.	Ranjagarh RF Comp No 2, Anantapur RF Comp No 7, of K.Nagar East & West Range.	Joins Brahmani River at Bhuban.
3.Ragadinala	Ranjagarh RF comp No 5 & 10	Ranjagarh RF Comp No 1, 6, 8, 10, 11, 19, 2 in K. nagar East and West Range.	Joins Ramial after Comp No 9 & 10 of Ranjagarh RF
4.Pichhuli Feeder	Rebana State Forest Keonjhar Division	Ranjagarh RF Comp No 7, 28, 25, 30, 24, 23, 2.	Joined Ramial.
5.Sapua	Kandhara RF Comp No 9 of Hindol Range	Kandhara RF Comp- No 8 & 10.	Joins River Mahanadi at Mugapatna village
6.Lingara Jore (Feeder)	Similipathar RF of Durgapur Range in Angul Division.	Hindol range	Meet Brahmani at Meramunduli Railway station near Khadagprasad.
7.Badjore (feeder)	Khesara forest near Hindol at village Kantapal.	Kai RF of Hindol Range	Meet Brahmani near at Bangurusingha
8.Deulinala (Feeder)	KapilasRF comp- no 2 and 4.	Passes through Ramai RF.	Joins Brahmani at Jaranda kathapal.
9.Daunsinala	AswakholaRF Comp-No 3, 5	Passes through Matiashi of Kamakhyanagar East Range	Joins Brahmani at Kathapal.
10.Karachamulanala	Ranjagarh RF & Daitari RF of Keonjhar Division.	Passes through common boundary of east and southeast direction of two divisions.	Joins Damsal nala .
11.Doliajore	Koenjhar Division	Passes through Adhapuli of Koenjhar District.	Joins Ramial near Anantapur RF Comp-No 7.

1.7.2 Drinking Water Facilities:-

The Dhenkanal Forest Division has no much scarcity of drinking water facility as the ground water depth is within the reach. Besides number of rivers and tributaries and dam, reservoirs exist in the area. However there is still need of digging of tube wells to the villagers in adequate number**.**

The details of the availability of drinking water facilities are provided in **Table - 1.12**

TABLE-1.12	Drinking Water Facilities					
SL. No.	**Year/Block**	**No of villages/hamlets**	**No of villages covered with rural drinking water supply prog.(out of col.3)**	**No of working tube wells**	**No of working sanitary wells**	**No of pipe water project**
1	2	3	4	5	6	7
	2007-08	3112	169	7538	138	144
	2008-09	3112	169	7538	138	144
	2008-09 BLOCK					
1.	Bhuban	377	18	8255	11	11
2.	Dhenkanal (Sadar)	366	26	970	32	17
3.	Gondia	371	25	9445	27	17
4.	Hindol	611	28	1340	118	19
5.	K.Nagar	365	15	860	08	14
6	Kankadahada	520	12	8181	05	07
7.	Odapada	278	26	862	27	16
8.	Parajanga	324	19	848	10	13
Sources – District Statistical Hand Book of Dhenkanal -2009						

1.7.3 Ground water:- The information collected from The Central Ground Water Board, Bhubaneswar and depth of water level (In Mtr.) during summer furnished in the following **table-1.13**

TABLE NO-1.13		DEPTH OF GROUND WATER TABLE IN METERS											
Sl .No	Block Headqurter	2004				2005				2006			
		Jan	Apr	Aug	Nov	Jan	April	Aug	Nov	Jan	Apr	Aug	Nov
1	Kankadahada	5.34	8.35	0.91	2.14	3.21	6.94	0.56	2.28	4.03	8.54	4.59	4.53
2	Parjang	3.96	4.51	3.07	3.01	3.53	4.12	1.79	2.90	3.52	4.12	3.43	3.51
3	K.Nagar	6.92	7.51	3.74	5.23	6.24	NA	NA	NA	NA	NA	NA	NA
4	Bhuban (Goda)	4.56	NA	3.87	3.81	5.87	7.35	2.82	2.67	7.39	6.87	3.27	4.17
5	Gondia	4.32	4.35	0.66	1.23	3.83	4.25	1.3	NA	3.26	5.54	0.44	2.44
6	Hindol	7.47	6.71	5.05	5.08	6.6	7.75	2.69	NA	6.85	NA	NA	NA
7	Odapada (Motnga)	6.67	NA	3.00	3.48	5.19	7.37	0.99	1.79	5.7	6.44	1.84	2.64
8	Dhenkanal	2.06	2.21	1.30	1.55	1.89	2.41	1.26	2.49	1.67	3.34	1.24	3.14
		2007				2008				2009			
		Jan	April	Aug	Nov	Jan	Apr	Aug	Nov	Jan	Apr	Aug	Nov
1	Kankadahada	4.48	11.74	0.86	2.78	5.71	11.11	1.07	0.77	3.30	10.49	0.64	1.62
2	Parjang	3.64	4.62	2.04	3.19	3.67	3.89	2.01	1.77	3.33	3.83	1.73	2.65
3	K.Nagar	7.50	8.97	1.22	6.28	7.87	7.97	3.22	2.41	6.56	8.43	2.62	4.14
4	Bhuban (Goda)	NA	NA	NA	3.05	4.81	7.28	0.34	0.41	3.70	6.23	0.47	2.18

5	**Gondia**	4.29	7.69	1.54	2.79	4.01	6.19	1.14	0.44	2.02	4.67	1.32	1.09
6	**Hindol**	9.57	13.79	0.73	5.83	10.49	13.72	7.29	0.54	4.09	11.38	6.89	4.27
7	**Odapada (Motnga)**	4.24	6.57	1.96	3.56	NA	6.36	1.46	3.30	4.46	6.54	1.20	3.10
8	**Dhenkanal**	3.44	2.47	1.27	1.68	1.76	2.51	1.20	1.67	1.64	2.56	1.37	1.46
		2010				**2011**				**2012**			
		Jan	**April**	**Aug**	**Nov**	**Jan**	**April**	**Aug**	**Nov**	**Jan**	**April**	**Aug**	**Nov**
1	**Kankadahada**	3.08	10.39	0.36	3.99	7.06	11.44	0.94	2.20	4.51	8.92	0.58	2.45
2	**Parjang**	4.09	5.02	1.96	3.24	3.64	4.22	2.36	3.10	3.62	4.11	1.76	3.26
3	**K.Nagar**	6.60	9.40	3.99	6.08	7.66	8.82	1.99	5.64	7.59	8.80	1.92	5.92
4	**Bhuban (Goda)**	4.24	8.06	0.88	3.42	5.20	7.16	1.06	2.63	4.63	8.56	0.71	2.92
5	**Gondia**	2.47	6.21	0.74	2.06	3.57	5.59	1.06	2.36	3.71	6.03	1.65	2.10
6	**Hindol**	6.61	13.53	0.77	5.27	11.17	13.66	2.72	4.43	8.97	12.72	3.13	5.48
7	**Odapada (Motnga)**	4.41	6.34	3.49	3.19	NA	5.70	1.60	3.74	4.18	6.34	1.47	2.5
8	**Dhenkanal**	1.57	2.07	1.41	1.81	NA	NA	NA	NA	NA	NA	NA	NA
		2013				**2014**							
1		**Jan**	**April**	**Aug**	**Nov**	**Jan**	**Apr**	**Aug**	**Nov**				
	Kankadahada	4.50	6.93	1.44	1.52	2.80	10.97	1.35	3.11				
2	**Parjang**	3.49	4.15	2.64	1.90	3.41	4.26	2.84	3.73				
3	**K.Nagar**	7.55	8.49	2.99	4.15	6.87	11.31	3.90	4.40				
4	**Bhuban (Goda)**	4.38	6.32	0.69	2.00	3.42	5.58	1.19	3.76				
5	**Gondia**	3.33	5.03	0.91	NA	2.21	5.31	3.15	4.14				
6	**Hindol**	7.90	13.85	4.83	2.44	5.81	13.71	7.94	8.72				
7	**Odapada (Motnga)**	4.42	6.44	2.35	2.48	3.48	5.28	0.93	2.50				
8	**Dhenkanal**	NA	NA	NA	NA	2.14	1.54	1.04	1.74				

1.8 HEALTH: - The Dhenkanal Division/District harbours a number of Industries. The medical facilities in the district are considerably good. There is no such instance of acute malaria disease in the locality. Also there is no report of mal-nutrition issue of children in the district. The list of Dispensaries is furnished in the following tables1.14

TABLE-1.14 LIST OF DISPENSARIES OF DHENKANAL DISTRICT

Sl. No	Name of the Dispensaries	2007-08	2008-09
1	District Hospital	01	01
2	Sub-Divisional Hospital	02	02
3	Community Helth Centre	10	10
4	Primary Helth Centre	31	31
5	Ayurvedic Dispensary	22	22
6	Homoeopathic Dispensary	19	19
7	Angan Badi Centre		
Source: District Statistical Hand Book of Dhenkanal -2009			

1.9 CYCLONE:- As per records, the division has experienced unprecedented cyclones on four occasions i.e. during 1936, 1971, 1982, 1999 and 2013 causing large-scale damage to forests and plantations. Consequently, normal annual exploitation of the forest had to be stopped for some years during the first three

cyclones. There was a ban on felling when the fourth cyclone struck the division in 1999. In spite of absence of normal timber extraction, the OFDC Ltd. and the department carried out the salvage operations. In the Super cyclone-1999 (PSUNAMI), the natural forest as well as plantations was affected. These uprooted trees and poles were salvaged. During 1999, nearly 29677 trees and 30694 poles were uprooted. Timber to the tune of 2343.95 cum and firewood to the tune of 75,400 cft were salvaged. Similarly, during Super cyclone (Phailine) 2013, nearly 9587 trees and 5778 poles were uprooted and Timber to the tune of 1203.2060 cum and firewood to the tune of 7490 cft were salvaged. The Block wise details are furnished in the **Table No 1.15**

TABLE- 1.15 EXTENT OF CYCLONE DAMAGE IN 1999

Range	**Area Affected**	**No. Of Trees**	**Timber (cum)**	**Poles (no)**	**Firewood (cft)**
K.Nagar West	Kankili RF	35	2.0595		2000
K.Nagar East	Birasal RF	144	1.5305	89	
	Maulabhanja RF (Teak)	1070		1110	
	Ranjagarh Comp.9	45	-	-	2000
	Ranjagarh Comp.12	151	28.5363	-	3000
	Ranjagarh Comp.22	644	316.1815	-	26300
	Ranjagarh Comp.23	130	-	-	8700
	Ranjagarh Comp.33	134	20.5250	-	2500
Dhenkanal	Megha RF	386	-	386	-
	Patapuri RF	1559	-	1559	-
	Charkhola RF	1146	44.7739	942	-
	Korean RF	399	100.0685	245	-
	Saptasajya RF Comp 2 (Teak)	1666	996.4655	2367	10050
	Saptasajya RF Comp 3 (Teak)	1105	661.3131	2250	10300
	Kapilas RF Comp 3 (Teak)	1901	-	1901	-
	Kapilas RF Comp 5 (Teak)	430	1.3026	399	
	Kapilas RF Comp 5 (Eucalyptus)	247	92.7006	57	2600
Sadangi	Kapilas RF Comp 9,10 (Teak)	9126	37.7743	10160	1600
	Kapilas RF Comp 17,22 (Teak)	8272	2.8620	8311	2750
	Ramai RF	902		902	
Devsabha	Kapilas RF Comp 10 (Zoo)	185	37.8570	16	3600
Total		**29,677**	**2343.95**	**30,694**	**75,400**

TABLE- 1.16 EXTENT OF CYCLONE DAMAGE IN 2013					
Range	**Area Affected**	**No. of Trees**	**Timber (cum)**	**Poles (no)**	**Firewood (cft)**
Dhenkanal	Saptasajya RF	84	40.4295	483	-
	Charkhola RF	202	7.2700	423	10
	Matiamundia RF	118	1.4974	90	50
	Gunadei VF	24	1.9646	7	-
	Balapada VF	16	2.5300	39	-
	Gudianali VSS (Megha RF)	532	1.8006	827	120
	Samacharanpur VSS (Megha RF)	215	5.8683	302	-
	Kathagarh VSS (charkhola RF)	835	17.4107	1162	-
	Nimidha VSS (Nimidha RF)	352	21.1006	445	-
K.Nagar (W)	Anatpur RF	84	11.9665	-	-
	Anatpur RF	67	13.1946	-	-
	Udayagiri VSS	738	9.8128	305	-
	Mahuli VSS	199	7.3685	219	-
	Paktamunda VSS	158	23.7533	7	-
	Kanpur VSS	170	8.6609	230	-
K.Nagar (E)	Rangagarh RF	1882	973.0465	24	7050
	Birasal RF	40	6.0209	25	-
	Khateibereni VSS	185	0.1854	288	-
	Budhibili VSS	16	6.2913	06	-
	Tarinipasi VSS	25	5.7913	01	-
Mahabirod	Dolia RF	107	13.0239	22	-
Hindol	Mundiapsi VF	75	3.0859	390	-
	Mundiapsi VSS	168	7.1590	210	-
Sadangi	Gondia RF	1	0.0540	1	-
	Range office Camus	4	0.7567	-	-
Kapilash	Kapilash RF (Zoo Area)	16	5.3252	9	10
	Kapilash RF (Dakinakali VSS)	18	-	18	-
	Kapilash RF (Harakrusnapur VSS)	13	0.0983	23	-
	Kapilash RF (Kaimati VSS)	10	0.0520	19	-
	Kapilash RF (Maandhari EDC)	10	0.1261	8	-
	Kapilash RF (Chhandabalua VSS)	35	0.4424	26	-
	Kapilash RF (Nigiapasi VSS)	12	-	12	-
	Kapilash RF (Chandrapur EDC)	18	-	18	-
	Kapilash RF (Deogan EDC)	15	0.0714	14	-
	Kapilash RF (Kolha VSS)	1	0.0297	1	-
	Ramei RF (Biswanathpur VSS)	3	-	3	-
Bhuban	Tipilei RF	3000	-	-	250
	Sunajhari RF	48	2.0341	68	-
	Bhuban	41	4.9839	53	-
	Total	9587	1203.2060	5778	7490

1.10 DISTRIBUTION AND AREA: -

The forest area of Dhenkanal Division as per notification/record is as under.

TABLE-1.17 DISRTUBUSATION OF FOREST AREA	
Type of Forests	**Area as per Notification/Govt. record (in ha.)**
(1)	**(2)**
1. Reserve Forest (65 Blocks)	1,16,363.31
2. D.P.F. (47 Nos.)	13,008.17
3. Village Forests (217 Nos.)	1,478.18
4. Protected Forests (04 Nos)	124.46
5. Lakharaj Forests	3,634.00
6. Debottar Forests	5,261.00
7. Unclassed Forests	4.00
Total	**1,39,873.12**

The forest area of Dhenkanal Forest Division as per DLC report is as under

	TABLE-1.18	
Sl.No.	**Category of Forests**	**Area (in Ha)**
(1)	**(2)**	**(3)**
1.	Reserve Forest	1,14,101.8200
2.	Village Forest	1,378.9672
3.	Forest as per Revenue Records including DPF	58,277.8840
4.	Un-classed Forests	4.0000
5.	Area not recorded as forest but which are sizable compact areas of natural Forest Growth and Plantations of Forest Species both on Government and Private land.	5,057.9181
	Total	**1,78,820.5893 Ha. or 1788.20 Sq.Km.**

1.10.1. The out going Working plan prepared by Smt. Uma Nanduri, IFS covers 65 R.F. blocks over a total area of 1,10,712,45 ha (actcual computed area) for the period from 2004-05 to 2013-14**.** The Working Plan Committee while approving the 1st P.W.P.R on 20.05.2013 decided to include other forests in the proposed plan after proper reconcilation.

1.10.2. On scrutiny of the records in the office of the DFO, Dhenkanal Division, it is ascertained that there are 65 notified R.F. blocks ccovering an area of 1,16,363.31 ha. Out of total 65 RFs, 63 RFs are of ex-state Dhenkanal-Hindol declared in between 1905 to 1938 subsequently recgnised by the Govt. as such and 02 RFs namely Sadangi 'A' & Sadangi 'B' declared in the year 1970. During outgoing plan perid 04 nos of Potected Forests (PF) have been notified. The details of these R.F. blocks and PF blocks have been provided in **Table –1.19 and 1.20**

TABLE-1.19 Abstract of Block wise area statement of Dhenkanal Forest Division				
Sl. No	Name of the R.F		Area as per Notification	
		Notification No	Area (In Acr)	Area (in Ha.)
(1)	(3)	(5)	(6)	(7)
1	Belabania	440994/D-2F-189(M/20/59) dt.22.12.1959	1401	566.98
2	Charkhola	-do-	2019	817.09
3	Ghantabaja	-do-	3093	1251.74
9	Godabole	-do-	940	380.42
5	Jaripal	-do-	681	275.60
6	Kankadahada	-do-	940	380.42
7	Korian	-do-	972	393.37
8	Kotaberena	-do-	2480	1003.66
9	Matharagadi	-do-	740	299.50
10	Matiamundia	-do-	2720	1110.78
11	Mayuri	-do-	2450	991.52
12	Megha	-do-	1520	615.15
13	Nimidha	-do-	383	155.00
14	Patapuri	-do-	1180	477.55
15	Saptasajya	-do-	5496	2224.23
16	Sulia	-do-	640	259.00
17	Tamanda	-do-	1360	550.39
18	Kapilas	-do-	31960	12934.21
19	Ramei	-do-	4640	1877.81
20	Aswakhola	-do-	6354	2571.46
21	Baliposi	-do-	660	267.10
22	Bega	-do-	1360	550.39
23	Gondia	-do-	2310	934.86
24	Kankira	-do-	1120	453.26
25	Lahada-A	-do-	3280	1327.42
26	Lahada-B	-do-	6576	2662.35
27	Nischinta	-do-	1760	712.27
28	Raigoda	-do-	898	363.42
29	Raitola	-do-	1280	518.02
30	Rupabalia	-do-	2260	914.62
31	Sadangi A	R(O)-838/70 dt.26.10. 1970	1352	54.72
32	Sadangi B	440994/D-2F189(M/20/59)dt.22.12.1959	1060	428.98

33	Birasal	-do-	4400	1780.68
34	Jiridamali	-do-	1960	783.21
35	Moulabhanja	-do-	3392	1372.74
36	Ranjagarh	-do-	40560	16414.63
37	Balibo	-do-	1650	667.76
38	Bhairpur	-do-	1160	469.45
39	Bhuban	-do-	1137	460.14
40	Dholapada	-do-	920	372.32
41	Tipiloi	-do-	2040	825.59
42	Sunajhari	-do-	6782	2744.68
43	Anlabereni	-do-	1217	492.52
44	Kadalipal	-do-	608	246.06
45	Kankili	-do-	4281	1732.52
46	Machhia	-do-	689	278.84
47	Madhi	-do-	1040	420.89
48	Nadabir	-do-	340	137.60
49	Siarimalia	-do-	3460	1400.26
50	Sundarkhol	-do-	5320	2153.00
51	Suniamaru	-do-	4260	1724.02
52	Anantapur*	-do-	49659	20,016.06
53	Barabank(N)	-do-	1160	469.45
54	Barabanka(S)	-do-	2280	922.72
55	Dolia	-do-	4389	1776.23
56	Khalpal	-do-	1702	688.80
57	Talcher Boarder	-do-	1938	784.31
58	Ambithi	11F-47/68/12087/ CF dt.12.06.69	1148	464.60
59	Bompa	-do-	5820	2355.35
60	Hitinda	-do-	1974	798.88
61	Kai	-do-	6472	2619.22
62	Kandhara	-do-	27608	11172.96
63	Kansara	-do-	126	51.37
64	Nandania	-do-	1586	641.85
65	Patalo	-do-	1980	801.31
			2,87,417.38	**1,16,363.31**

1.10.3. There are 217 Village Forest notified by Governnment of Odisha u/s 30 OFA, 1972. The detils of this V.F. have been provided in **Annexure- III.**

1.10.4. There are 47 blocks (DPF) demarcated for notification u/s 4 (1) of the OFA, 1972 but not a single block has been notified. The status of the DPF is furnished **in Table-1.20**

TABLE-1.20	**STATUS OF DPFs IN DHENKANAL DIVISION**			
Sl. No.	**Name of the Range**	**Block**	**Area in Ha**	**Remark**
1	**Hindol**	Jatia	546.65	Returned from Government
2	-do-	Ranjagola Matha	381.78	Proposal cancelled by F.S.O.
3	-do-	Nuamandap	133.54	Proposal cancelled by F.S.O.
4	-do-	Tarakabeda	46.86	Proposal cancelled by F.S.O.
5	-do-	Jharabanda	182.82	Proposal cancelled by F.S.O.
6	-do-	Bimbori	1068.37	Dropped For Redemarcation
7	-do-	Bahanadoi	64.98	Dropped For Redemarcation
8	-do-	Purunakote	144.24	Proposal cancelled by F.S.O.
9	-do-	Mrugabihar	30.00	Proposal Not Submitted
10	**K. Nagar West**	Sahala-A	124.31	Returned from Government
11	-do-	Sahala-B	189.28	Returned from F.S.O.
12	-do-	Ambapalash	762.00	Returned from F.S.O.
13	-do-	Asanbahali	598.00	Returned from F.S.O.
14	-do-	Do Muhani	122.68	Proposal Dropped
15	-do-	Do Bautinali	1100.74	Proposal Dropped
16	-do-	Bhejia	720.34	Proposal Dropped
17	-do-	Bhulaka	550.37	Proposal Dropped
18	-do-	Biribolua	1068.37	Proposal Dropped
19	-do-	Chunaragadi	502.21	Proposal Dropped
20	-do-	Khandahara	389.30	Proposal Dropped
21	-do-	Panagatira	607.96	Proposal Dropped
22	-do-	Kantapal	721.55	Proposal Dropped
23	-do-	Tipei Jharan	236.00	Proposal Dropped
24	-do-	Kamarda	335.88	Proposal Dropped
25	-do-	Chulia	42.49	Proposal Dropped
26	-do-	Bangura	548.14	Proposal Dropped
27	**K. Nagar East**	Kerojoli	90.00	Proposal Not Submitted
28	-do-	Kutrapalli	20.00	Proposal Not Submitted
29	-do-	Jamujharan	20.00	Proposal Not Submitted
30	-do-	Kaladikundi	10.00	Proposal Not Submitted
31	-do-	Khajuria	40.00	Proposal Not Submitted
32	-do-	Rodanga	100.00	Proposal Not Submitted
33	**Dhenkanal**	Darasingh Dudhukateni	124.36	Returned from F.S.O.
34	-do-	Bangurasingh	389.30	Proposal Dropped
35	-do-	Gundichapada	10.00	Proposal Dropped
36	-do-	Gadasila	50.00	Proposal Dropped
37	-do-	Manipur	34.29	Proposal Dropped
38	-do-	Gunapal	20.00	Proposal Dropped
39	-do-	Padmanabhapur	70.00	Proposal Dropped
40	-do-	Gothamara	55.80	Proposal Dropped
41	-do-	Kantibola	96.33	Proposal Dropped
42	-do-	Darasingh Marthapur	55.88	Proposal Not Submitted
43	-do-	Budhiragadi	272.00	Proposal Not Submitted
44	**Sadangi**	Rasunia	163.88	Proposal Returned
45	-do-	Mandar	84.17	Proposal Not Submitted
46	-do-	Chittalpur	60.00	Proposal Not Submitted
47	-do-	Eleijanga	23.30	Proposal Not Submitted
	Total		**13008.17**	
Source: DFO, Dhenkanal				

1.10.5. On scrutiny and reconciliation of the records in the office of the DFO Dhenkanal division it is ascertained that out of 47 Nos DPF not a single block has been notified u/s 4(1) of the Orissa Forest Act, 1972. Most of the proposals submitted have been either dropped/cancelled and some cases no proposal submitted at all. Similarly there is Govt. record of Lakharaj forest, Debottar forest but no legal document in this regard. Even the location of these forests is not traceable in the field. Due to want of legal sanctity, the DPF, Lakharaj forest, Debottar forest and unclassed forest have been kept out of the management fold of this plan. However these blocks have been documented in the plan for future refrence and guidance of the DFO and kept in the miscellaneous regulation with prescriptions for demarcation and other consolidation work for its notification.

1.10.6. The 65 R.F. blocks are distributed in 8 Ranges. The Rangewise no of blocks, compartments and the area of different blocks as per notification and area adopted in the out going working plan is provided **in the Table –1.21**

TABLE-1.21 Abstract of Block wise area statement of Dhenkanal Forest Division

Sl. No	Range	Name of the R.F	No of Comptt.	Area as per Notification		Area adopted in the WP (in ha.)
				Notification No	Area (in Ha.)	
(1)	(2)	(3)	(4)	(5)	(6)	
1	**Dhenkanal Range**	Belabania	1	440994/D-2F-189(M/20/59) dt.22.12.1959	566.98	603.80
2		Charkhola	1-2	-do-	817.09	808.4
3		Ghantabaja	1-4	-do-	1251.74	1274.4
9		Godabole	1	-do-	380.42	436.60
5		Jaripal	1	-do-	275.60	289.80
6		Kankadahada	1	-do-	380.42	380.40
7		Korian	1	-do-	393.37	387.70
8		Kotaberena	1	-do-	1003.66	1039.70
9		Matharagadi	1	-do-	299.50	285.31
10		Matiamundia	1	-do-	1110.78	1110.90
11		Mayuri	1-2	-do-	991.52	957.11
12		Megha	1	-do-	615.15	603.90
13		Nimidha	1	-do-	155.00	160.70
14		Patapuri	1	-do-	477.55	506.70
15		Saptasajya	1-3	-do-	2224.23	2096.75
16		Sulia	1	-do-	259.00	259.00
17		Tamanda	1	-do-	550.39	566.17
18		Kapilas(Part)	1-4	-do-	1820.13	1820.13
					13572.53	**13587.43**
	Kapilas	Kapilas (Part)	5-23,27	-do-	9364.96	9042.01
19		Ramei	1-4	-do-	1877.81	1877.81
					11242.77	**10919.82**
	Sadangi	Kapilas(Part)	24-26,28	-do-	1749.12	1749.12
20		Aswakhola	1-6	-do-	2571.46	2464.62
21		Baliposi	1	-do-	267.10	267.10
22		Bega	1	-do-	550.39	569.80
23		Gondia	1	-do-	934.86	926.80
24		Kankira	1	-do-	453.26	474.30

25		Lahada-A	1	-do-	1327.42	1339.60
26		Lahada-B	1	-do-	2662.35	2428.00
27		Nischinta	1	-do-	712.27	696.90
28		Raigoda	1	-do-	363.42	363.40
29		Raitola	1	-do-	518.02	535.00
30		Rupabalia	1	-do-	914.62	961.20
31		Sadangi A	1	R(O)-838/70 dt.26.10. 1970	54.72	60.70
32		Sadangi B	1	440994/D-2F189(M/20/59)dt.22.12.1959	428.98	448.00
					13507.99	**13284.54**
33	**K.Nagar East Range**	Birasal	1	-do-	1780.68	1362.90
34		Jiridamali	1	-do-	783.21	815.06
35		Moulabhanja	1	-do-	1372.74	1367.48
36		Ranjagarh	1-33	-do-	16414.63	13822.10
					20351.26	**17367.54**
37	**Bhuban**	Balibo	1	-do-	667.76	659.70
38		Bhairpur	1	-do-	469.45	490.50
39		Bhuban	1	-do-	460.14	457.30
40		Dholapada	1	-do-	372.32	372.30
41		Tipiloi	1	-do-	825.59	947.00
42		Sunajhari (Part)	4-6	-do-	1233.53	1278.85
					4028.79	**4205.65**
	K.Nagar West Range	Sunajhari (Part)	1-3		1511.15	1511.15
43		Anlabereni	1	-do-	492.52	502.20
44		Kadalipal	1	-do-	246.06	246.00
45		Kankili	1	-do-	1732.52	1786.30
46		Machhia	1	-do-	278.84	279.00
47		Madhi	1	-do-	420.89	457.70
48		Nadabir	1	-do-	137.60	145.70
49		Siarimalia	1	-do-	1400.26	1405.10
50		Sundarkhol	1-6	-do-	2153.00	2206.42
51		Suniamaru	1	-do-	1724.02	1855.20
52		Anantapur(Part)	1-20,25-28,32 part	-do-	10699.102	10699.102
					20795.96	21093.87
	Mahabirod	Anatapur(Part)	21-24,29-31,32 Part ,33-40	-do-	9316.958	8116.998
53		Barabank(N)	1	-do-	469.45	433.80
54		Barabanka(S)	1	-do-	922.72	974.50
55		Dolia	1	-do-	1776.23	1766.23
56		Khalpal	1	-do-	688.80	692.90
57		Talcher Boarde	1	-do-	784.31	784.30
					13958.47	**12768.73**
58	**Hindol Range**	Ambithi	1	11F-47/68/12087/ CF dt.12.06.69	464.60	447.60
59		Bompa	1-5	-do-	2355.35	1653.60
60		Hitinda	1-2	-do-	798.88	705.79
61		Kai	1	-do-	2619.22	2266.30

62		Kandhara	1-25	-do-	11172.96	11172.94
63		Kansara	1	-do-	51.37	50.60
64		Nandania	1	-do-	641.85	527.70
65		Patalo	1-2	-do-	801.31	660.47
			218		**18905.54**	**17485.00**
					1,16,363.31	**1,10,712.45**

1.10.7. The ougoing plan was prepred for the 65 R.F Blocks over an area of 1,10,712.45 ha only. The revised working plan has adopted the area statement of out going plan prepared by Smt. Uma Nanduri, IFS for 65 R.F blocks of 1,10,712.45 ha which has been derived after measuring area through the digital planimetre from the block map and adopting a uniform conversion factor. Blockwise area also tallies with the compartmentwise sum total area of the indivisual compartment. The notified 217nos VF areas over 1478.18 ha and 04 nos PF areas over 124.46 ha have been newly included in the revised plan. During the outgoing plan period in the yeay 2011, the part of Kapilas R.F. over an area 12,559.59 ha has been declared as "Sanctuary" hence kept outside the management fold in the revised working plan. Thus the net area adopted under management fold in the revised plan is 99,755.50 ha as detailed below.

Type of Forests	Area adopted in revised plan (in ha.)
1. Reserve Forest (65 Blocks)	1,10,712.45
2. Deducted Sanctuary area of Kapilas RF	(-) 12,559.59
3. Net area of Reserve Forest (65 Blocks)	98,152.86
4. Added Village Forests (217 Nos.)	(+) 1,478.18
5. Added Protected Forest (04nos)	(+) 124.46
Net WP area	**99,755.50**

1.10.8 Diversion of Forest Land

For different non-forestry purposes like Medium Irrigation Project, Construction of National Highways, Transmission Lines, Bridges and Mines etc. forest land to the tune of 1752.0817 ha has been diverted. Against this diversion 2838.8852 ha (Non Forest - 477.3552, Degraded Forest - 2361.53) land has been allotted for compensatory afforestation in this division. However, compensatory afforestation has been taken up over an area of 2811.9492 ha (Non Forest – 460.5392, Degraded Forest – 2351.41) Mutation of Non Forest land allotted to the forest department has been done in favour of forest department in 04 no of cases over an area of 124.46 ha and declared them as Protected Forests under section 33 of the O.F.A.1972. The details of land diverted for non-forestry purposes and compensatory afforestation raised are furnished in Table-1.22 and the details of Non Forets land mutated in favour of Forest Departmrnt (PF) is furnished in **Table No 1.22.**

TABLE-1.22 FOREST AREA DIVERTED FOR NON-FORESTRY PURPOSES IN DHENKANAL DIVISION

Sl. No.	Name of the project approved under FC Act	Area diverted in the year	Forest area diverted (in Ha)	Purpose of diversion	Range	Area Alloted for CA (in ha.)	CA Raised (in ha.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Sapua Badajhara MIP	1987	550.00	Irrigation	Hindol	150.00 - N F (400.00 in Angul Divn.)	150.00
2.	Construction of Missing Link NH-23	1987	76.5623	Road	Mahabirod	121.8281– NF	121.8281
3.	Kankadajhar MIP	1988	8.29	Irrigation	K.Nagar (W)	8.29 - NF	
4.	Construction of Bridge over Dhanianali	1993	0.2050	Road	Sadangi	0.410 - DF	-
5.	Kathapal Chromaite Mines (M/S FACOR Ltd)	1998	113.3120	Mining	K.Nagar (E)	74.896 (64.677 – NF, 10.12 – DF)	64.677
6.	Construction of Geometric on NH-42	1998	0.2830	Road	Dhenkanal	4.00 – DF	4.00
7.	Kathapal Chromaite Mines (M/s OMC Ltd).	2002	80.94	Mining	K.Nagar (E)	162.00 - DF	162.00
8.	Construction of 500 KV HP DC Line (Talcher to Bangalore by Power Grid Corporation Ltd).	2000	14.07	Electric	Hindol	32.00 - DF	32.00
9.	Construction of 400 KV DC Line (Talcher to Meramandali by M/s. Power Grid Corporation Ltd.)	2001	17.0960	Electric	Dhenkanal	46.00 – DF	46.00
10.	Rengali Irrigation Project	2003	711.4673	Irrigation	K.Nagar(W) & (E)/ Mahabirod/Bhuban/ Dhenkanal	2107.00 - DF	2107.00
11.	Bhubsan Steel & Strips	2006	61.48	Industry	Dhenkanal/ Hindol	61.48 – NF	61.48
12.	400 KV DC Line Meramandali to Duburi	2009	47.0960	Electric	Mahabirod/ K.Nagar(E) & (W) /Bhuban	In Athamallik Divn.	-
13	Sukurangi Chromite Mines OMC Ltd. Jajpur.	2009	24.48	Mining	Bhuban	24.28 - NF	23.85
14.	GMR Energy Ltd.	2011	32.3749	Energy	Dhenkanal	32.3749 - NF	32.3749
15	Pipe line from Paradeep to Ranchi via Sambalpur by M/s Indian Oil Corporation Ltd.	2013	8.0960	Pipe Line	Hindol/Dhenkanal	8.0960 – NF	-
16	Ashrubandha chromite Mines M/s Real india Consultancy Ltd.	2013	6.3292	Mining	Bhuban	6.3292 – NF	6.3292
	TOTAL		**1752.0817**			**2838.8852 (NF- 477.3552) DF - 2361.53)**	**2811.9492 (NF-460.5392, DF-2351.41)**

N:B:- NF–Non Forest Land, DF–Degreded Forest Land

TABLE-1.23 NON FOREST LAND MUTATED IN FAVOUR OF FOREST DEPARTMENT (PF)

Sl. No	Name of the Project approved under FC Act.1980	Forest area diverted (in ha.)	Non Forestry area mutated (in ha.)	Notification No	Remarks
1	Bhusan Steel & Sterips	61.4800	61.4800 (Budhiparbat in Odapad Tahasil/ Dkl Range)	10(F (Div)-32/2006-464 dt.07/01/2010 of Govt. of Odisha F&E Depart.	Plantation taken up
2	GMR Energy Ltd.	32.3749	32.3749 (Budhiparbat (A) in Odapada Tahasil/Dkl Range	10(F (Div)-16/2010-24717 dt.23/11/2010 of Govt. of Odisha F&E Depart.	Plantation taken up
3	Ashrubandha chromite Mines M/s Real india Consultancy Ltd.	6.3292	6.3292 (Narsinghapu Sasan in Bhuban Tahasil/ Range)	10(F (Div)-38/2012-18997 dt.08/10/2012 of Govt. of Odisha F&E Depart.	Plantation taken up
4	Sukurangi Chromite Mines OMC Ltd. Jajpur	24.28	24.28 (Jaganath Pur in Bhuban Tahasil/ Range)	10F(Div)-09/2008-14342/F&E dt.28.08.2009	Plantation taken up
	Total	124.46	124.46		
Source: Divisional Forest Officer, Dhenkanal					

1.10.9 Implementation of Forest Right Act, 2006.

In Dhenkanal Forest Division consequent upon implementation of S.T. & other Traditional Forest Dwellers (Recognition of Forest Right) Act, 2006, the title issued for Individual Right is **1787.26 Ha** and for Community Right is **24.10 Ha**. The detail list of beneficiaries and forest areas settled have not been annexed due to large list which comes about 400 pages. However, the Forest block wise forest areas settled under different categories of the Act is furnished in **Table-1.24**

TABLE-1.24

Sl. No	Name of the Forest Block	Compartment No.	Indivisual right (in Ha)	Community right(in Ha)	Total area (in Ha)
1	Anantapur R.F.		354.50	0	354.50
2.	Barabanka (North)	1	2.32	0	2.32
3.	Bega	1	43.52	1.43	44.95
4.	Bhairpur	1	12.68	0	12.68
5	Bhuban	1	28.59	0	28.59
6	Birasl	1	198.26	10.27	208.53
7	Dhalapada	1	28.53	0	28.53
8	Dolia	1	119.38	0	119.38
9	Jiridamali	1	0.10	0	0.10
10	Kankili	1	14.25	0	14.25
11	Kapilash		68.92	0.10	69.02
12	Khankira	1	8.68	0	8.68
13	Lahada-A	1	450.43	0.48	450.91
14	Lahada –b	1	119.09	2.42	121.51
15	Machia	1	2.30	0	2.30
16	Ranjagarh	4,7,8,15,16,17,18,19	300.66	8.58	309.24
17	Sunajhari	4	10.53	0.81	11.34
18	Sundharkhola	2	0.83	0	0.83
19	Suniamaru	1	5.04	0	5.04
20	Tipiloi	1	18.67	0	18.67
	Total		**1787.26Ha**	**24.10 Ha**	**1811.36 Ha.**

Source: Divisional Forest Officer, Dhenkanal

1.11. STATE OF BOUNDARIES:

The boundaries of all RFs were surveyed in the past and maps were prepared for all forest blocks. The boundaries of all the R.Fs have surveyed and verified. The GPS codinates of the boundary pillars existing are recorded. The condition of the existing pillars have been noted and the missing pillars have been calculated. The verificationof DPF could not be taken up due to non-availability of map and being not accurately traceable in the field. Encroachments are rampant in many forest blocks especially in Anantapur, Ranjagarh and Lahada blocks. The number of cases registered against the encroachers seems to be lower than the extent of the encroachment. Generally encroachment is resorted to for agriculture and habitation purposes. There is not much of problem of podu cultivation in this Division. Encroachment is mainly done by Santhal and Munda tribes.

The Rangewise and Blockwise boundary pillar position is furnished in **Table-1.25**.

Range and Block wise boundary pillar position of Dhenkanal Forest Division

Sl.no	Name of the Range	Name of the R.F	As per notification		As per verification			
			Boundary length (in km)	No. of pillars	Good	Damage	Missing	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Dhenkanal	Charkhola	17.66	164	99	25	40	164
2		Ghantabaja	37.2	223	40	97	86	223
3		Saptasajya	21.6	180	72	72	36	180
4		Mayuri	18.7	245	40	47	158	245
5		Nimidha	7	47	46	0	1	47
6		Godabole	10.02	68	8	59	1	68
7		Patapuri	12.7	81	37	28	16	81
8		Megha	12.8	77	20	48	9	77
9		Korean	7.52	51	33	18	0	51
10		Kankadahada	9.96	73	29	34	10	73
11		Tamanda	20.4	101	101	0	0	101
12		Jaripal	9.28	60	17	19	24	60
13		Belabania	16.4	241	54	0	187	241
14		Sulia	7.54	85	0	61	24	85
15		Matiamundia	13.96	146	24	70	52	146
16		Matharagadi	12.32	163	110	53	0	163
17		Kotaberena	18.02	222	27	59	136	222
		Total	**253.08**	**2227**	**757**	**690**	**780**	**2227**
18	Kapilas	Kapilas	**38.4**	**450**	**97**	**322**	**31**	**450**
19	Sadangi	Sadangi -A	-	17	0	7	10	17
20		Sadangi -B	5.8	40	0	40	0	40
21		Lahada -A	12.8	86	5	20	61	86
22		Lahada -B	19.02	144	38	52	54	144
23		Ramei	35.5	136	44	52	40	136

24		Aswakhola	29.12	132	35	82	15	132
25		Raigoda	9.86	53	0	37	16	53
26		Gondia	14	94	17	48	29	94
27		Balipasi	10.4	81	4	14	63	81
28		Nischinta	15.6	90	0	10	80	90
29		Raitola	11.2	61	6	46	9	61
30		Bega	15.8	78	5	-	73	78
31		Rupabalia	24.88	214	0	100	114	214
32		Kankira	5.2	70	6	40	24	70
		Total	**209.18**	**1296**	**160**	**548**	**588**	**1296**
33	K.Nagar(E)	Moulabhanja	24.6	126	5	104	17	126
34		Ranjagarh	64.6	755	17	310	428	755
35		Jiridamali	25.66	103	29	74	-	103
36		Birasal	18.2	93	16	77	-	93
		Total	**133.06**	**1077**	**67**	**565**	**445**	**1077**
37	Bhuban	Tipiloi	16.2	90	51	27	12	90
38		Bhairpur	12.96	82	-	76	6	82
39		Sunajhari	46.66	225	-	164	61	225
40		Dholpada	13	109	15	24	70	109
41		Balibo	18.48	175	-	48	127	175
42		Bhuban	14.04	68	46	22	-	68
		Total	**121.34**	**749**	**112**	**361**	**276**	**749**
43	K.Nagar(W)	Anantapur	152	1463	54	561	848	1463
44		Sundarkhol	28.6	183	26	43	114	183
45		Siarimalia	29.4	187	25	144	18	187
46		Kadalipal	6.56	63	40	23	0	63
47		Kankili	21.4	196	-	139	57	196
48		Madhi	8.6	80	20	60	0	80
49		Machhia	13.8	100	8	56	36	100
50		Anlaberini	15.2	207	-	98	109	207
51		Suniamaro	18.88	73	6	41	26	73
52		Nandabir	9.3	31	24	-	7	31
		Total	**303.74**	**2583**	**203**	**1165**	**1215**	**2583**
53	Mahabirod	Barbank - N	9.8	47	-	13	34	47
54		Barbank - S	14.4	125	9	24	92	125
55		Talcher boarder	12.24	68	6	42	20	68
56		Khalpal	15.2	151	21	41	89	151
57		Dolia	14.8	90	4	55	31	90
		Total	**66.44**	**481**	**40**	**175**	**266**	**481**
58	Hindol	Kandhara	42.24	316	166	134	16	316
59		Potalo	7.76	100	31	11	58	100
60		Bompa	19.92	257	-	82	175	257

61		Nandania	7.56	31	25	5	1	31
62		Hitinda	15.68	122	51	51	20	122
63		Kai	36.94	289	152	125	12	289
64		Kansara	2.9	25	21	--	4	25
65		Ambithi	5.6	92	63	15	14	92
		Total	**138.6**	**1232**	**509**	**423**	**300**	**1232**
		Grand Total	**1263.84**	**10095**	**1945**	**4249**	**3901**	**10095**

Abstract of Boundary Pillar Position

Sl.no	Name of the Range	Good	Damage	Missing	Total
1	Dhenkanal	757	690	780	2227
2	Kapilas	97	322	31	450
3	Sadangi	160	548	588	1296
4	K.Nagar (E)	67	565	445	1077
5	Bhuban	112	361	276	749
6	K.Nagar (W)	203	1165	1215	2583
7	Mahabirod	40	175	266	481
8	Hindol	509	423	300	1232
	Grand total-	**1945**	**4249**	**3901**	**10095**

1.12 ENCROACHMENTS OF FOREST LAND.

In Dhenkanal Forest Division encroachments are rampant in many forest blocks especially in Anantapur, Ranjagarh and Lahada. Generally encroachment is resorted to for agricultural and habitation purposes. There is not much of problem of podu cultivation in this Division. Encroachment is mainly done by Santhal and Munda tribes migrated from Mayurbhanja and Keonjhar District. People, other than tribals, resort to encroachment in forests to grab land. Some of the eligible cases of pre 80 encroachments have been recommended for settlement by the Government of Orissa and a proposal, under the Forest (Conservation) Act 1980, has been moved and sent to the Government of India vide memo no.10F (Cons)-89/2000.15902/F&E, Dtd.2/10/2000,of the Government of Orissa, F & E Department, Bhubaneswar. The details of the pre-80 encroachments are given in Table 1.18. In post 1980 period, maximum numbers of encroachments are seen in the Kamakhyanagar East Range, especially in Ranjagarh and Anlabereni blocks. In Kamakhyanagar West Range the encroachments are highest in Anantapur R.F. Similarly Sadangi Range, Lahada R.F. has maximum incidence of encroachment. The details of pre-80 and post -80 encroachment are given in **Table-1.26 & 1.27.**

Table 1.26 INFORMATION ON PRE-80 ENCROACHMENTS OF DHENKANAL DISTRICT

Name of Tahasil	Name of the Range	Name of the Forest	Name of the Village	No. of families	Purpose		Total Area Encroached in ha.	Remarks
					Homestead in Ha.	Agriculture		
Kamakhyanagar	K.Nagar East	Ranjagarh R.F.	Sinkol	2	0.4	0.6	1	36 years
-do-	-do-	-do-	Kote	9	0.4	3.6	4	25 years
-do-	-do-	-do-	Puttipal	19	0.92	12.4	13.32	25years
-do-	Mohabirod	Khalpal R.F.	Khalpal	27	0.32	10.56	10.88	25 years
-do-	-do-	Khalpal R.F.	Kandeikhola	27	0.4	12.8	13.2	25 years
Gondia	Sadangi	Bega R.F.	Gothatalia	30	3.74	23.5	27.25	22 years
Kamakhyanagar	K.Nagar West	Anantapur R.F.	Gundichanali	36	1.58	22.4	23.98	22 years
Kamakhyanagar	K.Nagar West	Anantapur R.F.	Sunia	18	2.556	15.18	17.736	22 years
Kamakhyanagar	K.Nagar West	Anantapur R.F.	Kusagarh	12	0.9325	11.3575	12.29	22 years
Gondia	Sadangi	Lahada R.F.	Nabarda	11	0.6275	10.1225	10.75	22 years
Gondia	Sadangi	Lahada R.F.	Phuljhar	50	3	77	80	22 years
TOTAL				**241**	**14.879**	**206.528**	**221.406**	Proposal Submitted
Bhuban	Bhuban	Bhuban R.F.		94	5.8	129.5	135.3	Jointly Verified proposal not submitted.
Bhuban	K.Nagar East	Dholpada R.F.		189	43.81	53.7	97.5	
Bhuban	K.Nagar East	Tipiloi R.F.		111	10.7	193	203.7	
Grand Total-		**8**	**11**	**635**	**75.189**	**582.728**	**657.90**	

Table 1.27 INFORMATION ON POST-80 ENCROACHMENTS

Sl.No.	Name of the Range	Name of the R.F.	Area in Hect.
1	**Dhenkanal**	Belabania	4.43
		Matiamundia	1.35
		Godabole	0.16
		Total	**5.94**
2	Kapilas	Ramai	8.484
3	**Sadangi**	Rupabalia	3.22
		Lahada	10.55
		Kankira	1.42
		Bega	10.06
		Gondia	0.4
		Kapilas	0.48
		Total	**26.13**
4	**Hindol**	Kandhara	2.06
5	**K.Nagar East**	Ranjagarh	131.4
		Jiridamali	8.09
		Moulabhanja	3.3
		Total	**142.79**
6	**K.Nagar West**	Anantapur	28.7
		Anlaberini	33.81
		Suniamaru	9.48
		Machhia	1.82
		Sunajhari	0.6
		Kankili	5.704
		Sundarkhol	2

7		Siarimalia	5.84
		Total	**87.954**
	Bhuban	Balibo	5.94
		Bhuban	7.35
		Tipiloi	11.33
		Total	**24.62**
	Mohabirod	Barbank-N	2.13
		Barbank-S	0.2
		Dolia	9
		Khalpal	0.64
		Talcher Boarder	3.45
		Total	**15.42**
		G.Total	**313.938**

1.13 LEGAL POSITION

The 'A' class RFs of the ex-State of Dhenkanal and Hindol were declared as RF between 1905 and 1914, but the exact dates of reservation are not available. Similary no records of notification are available for ex-State of Hindol. Subsequently 'B' class Reserved Forests of Dhenkanal state were demarcated between 1930 and 1938, but no notifications or Durbar declarations, constituting these forests as reserved forests, are available.

1.13.1 Subsequently, in the year 1959 a notification was issued by the Development (Forest) Department on 22nd December and restored the legal status of the 56 Reserved Forest blocks. The notification certified two documents:

*Revised working plan for the reserved forests of Dhenkanal State, 1943-63

*Working Plan map of the reserved forests of Dhenkanal State. (**Annexure-IV**)

1.13.2 Similarly, the Government of Orissa in their Co-operation and Forestry Department, accorded legal status of Reserve forests to the forest of Hindol ex-State by issuing a notification Dated 12th of June 1969. (**Annexure-V**)

1.13.3 Subsequently, a new Reserved Forest block namely Sadangi "A" was constituted vide notification No.59327-F-S.45/70 R dt.26.10.1970 of Co-operation and Forestry Department, Government of Orissa. (**Annexure-VI**)

1.13.4 The notification of 1959 and 1969 did not have detailed boundary description It will be useful to further notify the description of boundary after carrying out proper survey and delineation of the boundaries.

1.13.5 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.

1.14 RIGHTS AND CONCESSIONS

The following rights and privileges are admitted to the genuine inhabitants and forest cess payers of the locality whose names have been entered in the enumeration register which forms part of the settlement records subject to condition that such rights are exercisable up to the limit of which the reserve forest can bear under proper management-

(i) Local tenants may take timber of unreserved species free and reserved species at concession rates as in practice or as may be decided by the Government from time to time from annual coupes set aside for them, provided the timber is for their own bonafide domestic consumption only.

(ii) They may take timbers of unreserved and reserved species for making plough and agricultural implements from annual coupes free of charges.

(iii) They may take fuel and fencing materials from annual coupes free or on payment of only the cost involved if the cutting is done departmentally as may be settled by the Divisional Forest Officer in respect of each land.

(iv) They may collect dry and fallen branches (not fit for timbers) even of the reserved species from any where outside the annual coupes.

(v) They may take minor forest produce like edible roots, fruits, leaves, creepers and grass free only for their personal consumption.

(vi) Permits procured from the forest Department shall cover all removal except the removal permitted at IV and V above.

(vii) No free grazing is permitted. They may be allowed to graze their cattle on payment of grazing at concessional rate as prescribed from time to time under rules subject to the number, which the forest can support, and subject to such Silvicultural Rules and control as may be necessary in the interest of the Forest. No grazing for sheeps, pigs, and goats are permitted.

(vii) The right holders shall not sell or barter timber or any forest produce obtained in exercise of the above rights except in the case of Panas and members of the aboriginal tribes, poorer classes and landless laborers, who can sell to other local persons for their personal use and they have to maintain the external boundary annually against payment of wages at prescribed rate.

(viii) Admitted rights shall pass on to their successors.

(i) The OFDC Ltd. has been assigned for depot at convenient places for supply of roung logs as well as converted sizes, fuel wood, bamboo and small timbers for house building to the needy people for their bonafide use on "first come first serve" basis subject to availability on realization of reasonable rate fixed on time to time.

1.15 JOINT FOREST MANAGEMENT (JFM).

1.15.1 The Orissa Village Forest Rules, 1985, envisaged formation of Village Forest Committee (VFC) in each village for protection of the village forests. The members of the VFC were required to maintain the boundaries, protect the forests and plantations from fire, illicit felling, and theft, and manage the forests by drawing a management plan. In turn, they were allowed to remove forest produce like fire wood and small timber, on realisation of a nominal cost.

1.15.2 The State Government vide Resolution No.17240 Dt.1.8.1988 and No.13638 dt.1.10.1988 introduced the concept of Joint Forest Management in the state for the protection of Reserved Forest by the communities (**Annexure-VII**). Subsequently another resolution was issued by Givernment vide *No.29825 dt.11.12.1990,* which envisages protection of Reserved Forests and Protected Forests by the community and enjoy the usufructs. (**Annexure-VIII**) They were granted certain concessions as per Section-24 of Orissa Forest Act 1972 to meet their *bona fide* requirement of firewood and small timber.

1.15.3 The concept of Participatory Forest Management, a modified form of the JFM, was introduced *vide Govt. resolution No.16700 dt.3.7.1993.* Emphasis was laid on formation of Van Samrakshyana Samiti (VSS) in each village adjoining the degraded reserved and protected forests. The VSS, with one adult member from each household, were required to protect and manage the forests through JFM. In turn, they were granted usufruct rights for collecting royalty-free small timber and firewood, along with 100% of the intermittent yield, and 50% of the final harvest.There were more resolution by the Govt. on JFM during 2008 and 2011. The details of the resolution 1993, 1996, 2008 & 2011 are given in the **Annexure-IX, X,XI & XII**

1.15.3 In Dhenkanal division, the concept of JFM is very old. Many informal committees were in existence much before the government resolution and they were protecting the forests without any government intervention. Subsequently, these committees are converted into VSS. By the pro active action of the Division staff so far 326 VSS committees could be formed and some more are in the process of formation. The forest area assigned for JFM is 38,193.80 ha.

The list of the VSS is given in the **Annexure-XIII**. The abstract of the JFM activities rangewise are given in the **Table-1.28**

TABLE-1.28 ABSTRACT OF RANGEWISE VSS AND AREA ASSIGNED

Sl.No.	Name of the Range	V.S.S.	
		Number	Area in Ha
1	Dhenkanal	56	5147.22
2	Sadangi	49	5637.04
3	K.Nagar East	52	5735.66
4	K.Nagar West	50	6749.54
5	Hindol	48	5992.44
6	Mohabirod	26	3180.98
7	Bhuban	13	1908.50
8	Kapilash	32	3843.00
Total		**326**	**38,193.80**

1.16 FOREST DEVELOPMENT AGENCY:

1.16.1 Forest Development Agency (FDA) has been launched in the year 2002-03 by Ministry of Environment & Forests, Government of India under the SAMANVIT GRAM VANIKARAN SAMIRDDHI YOJONA (SGVSY) Scheme with an integrated approach for regeneration, conservation of degraded forest on watershed basis, ensuring peoples participation in entire process and the development of the communities living in the forest fringe villages. This decentralized institutional structure has the scope for greater participation of the village community as the projects do take care of development needs of the community through entry point activities. The FDA is registered as federation of JMFCs under the Society Registration Act, 1860. The Conservator of Forests/Regional Chief Conservator of Forests (Territorial) is the Chairman of the FDA and Divisional Forest Officer (Territorial) is the Member Secretary. The National Afforestation Programme (NAP) is implemented in 2-tier decentralized mechanism, one at the Division Level through FDA and another at the village level through JMFC/VSS. It is an centrally sponsored scheme with 100% assistance. Initially after approval of projects funds are directly placed with the FDA by Govt. of India through National Afforestation & Eco-development Board (NAEB). In the year 2011-12 State Forest Development Agency (SFDA) came into being. Now the Govt. of India places funds to the SFDA who in turn releases fund to FDA. Funds are directly placed with the JMFC/VSS for execution of the approved projects and utilized as per decision taken in the FDA.

1.16.2 The main components of FDA include implementation of the centrally sponsored apporestation schemes like Aided Natural Regeneration (ANR), Artificialm Regeneration (AR), Pasture Development, Bamboo plantation, Mixed plantation of species having MFP &

medicinal values, soil n& moisture measures etc. besides FDA execute activities viz. provide support to JMFC/VSS for micro planning, training & awareness programme, livelihood support, formulate guidelines for utilization & sharing of usufructs, intra/inter village dispute resolution mechanism, organized way of collection & value addition of NTFP items, development of institution building etc. For each of these interventions, the work starts witrhb'Entry Point Activities'followed with micro planning, planting activities including soil & moisture conservation measures.

In Dhenkanal Forest Division FDA has been constituted in the form of Society known as 'FOREST DEVELOPMENT AGENCY', Dhenkanal and registered vide Registration No. 5297-130/2002-03 dtd 04.09.2002of the Addl. Registrar of Societies, Dhenkanal. The Division had prepared & submitted the proposals on various components against different JMFC/VSS for the 10th Five Year Plan period (1st Phase), 11th Five Year Plan period (2nd Phase) and subsequent years. During 1st Phase under different component plantation taken up covering 1625 ha of forest area spread over 50 nos of VSS and expenditure incurred was Rs. 1,95,97,030 including SMC, EPA, Training/ awareness programme & Micro planning etc. Similarly during 2nd Phase under different component plantation taken up covering 2950 ha of forest area spread over 50 nos of VSS and expenditure incurred was Rs. 2,91,28,000030 including SMC, EPA, Training/ awareness programme & Micro planning etc. The component wise target & achievement, VSS taken up during different period is furnished in **Table no 1.29.**

Table No 1.29 Abstract of Plantation Activities of under FDA

Period	**No. of VSS**	**Target in Ha.**		**Achievement in Ha.**	
2002-03 to 2006-07 (1st Phase)	50	AR	75	AR	75
		ANR	1400	ANR	1400
		Bamboo	50	Bamboo	50
		Past. dev.	50	Past. dev.	50
		Mix. pltn	50	Mix. pltn	50
		Total	**1625**	**Total**	**1625**
2007-08 to 2011-12 (2nd Phase)	50	AR	250	AR	250
		ANR	3800	ANR	2700
		Total	**4050**	**Total**	**2950**
2012-13	6	ANR	200	ANR	200
2013-14	15	ANR	120	ANR	120

1.16.3 FDA is the most ambitious initiative of Govt. of India for afforestation activities and empowering the people in planning, implementing & sharing the benefits arising out of forest management. Consequent upon its implementation, the participation of people in forest management has increased to a greater extent. The sense of belongingness to the natural as well as artificial regenerated forest has developed among the people. A number of successful plantations have been raised and degraded forest land rejuvenated. Besides by way of entry point activities useful infrastructures have been developed and development needs of the community have been taken care of to some extent. The most thing rto be developed is the 'institutional building'. The village level institutions must be able to manage the resources after the Govt. fund is phased out. However DFOs must make sincere efforts in channeling funds for sustenance of the FDA from other sources as well, particularly DRDA & ITDA at the District level to dovetail their schemes and programme with afforestation schemes so that watershed are developed in a holistic manner.

CHAPTER – II
FLORA AND FAUNA

The division on the whole has a moist climate but can be broadly divided into two distinct zones i.e.Northern and Western region, which is comparatively less moist and the Southern and South Eastern region which is more moist and humid in nature. The climatic variation influenced formation of different floral types occurring in this division. The northern side has Tropical Moist Deciduous Forests which tends to become Semi Evergreen towards the south and southeast. In the damper pockets Evergreen Forests are available.

CHAPTER II A
FOREST FLORA

2A. GENERAL DESCRIPTION OF THE GROWING STOCK

2A.1. CLASSIFICATION OF FORESTS

According to the classification of Champion and Seth in their "Revised Survey of Forest Type in India, 1962, the types of forests present in Dhenkanal Division are of following categories:

(i) 2B/ C3 Orissa Tropical Semi-Evergreen Forests
(ii) 2B/ E4 Lateritic Semi-Evergreen Forests
(iii) 3C/C3 North Indian Tropical Moist Mixed Deciduous Forests.
(iv) 3C/C2e North Indian Tropical Moist Peninsular Sal Forests is represented by the two sub-types i.e.
  (a) 3C /C2e (i) North Indian Tropical Moist Peninsular high level Sal.
  (b) 3C / C2e (ii) North Indian Tropical Moist Peninsular low level Sal.
(v) 5B/C2- Northern Tropical Dry Mixed Deciduous Forests.
(vi) 2B/ C3 / E3- Moist Bamboo brakes, an edaphic sub-type of Northern Tropical Semi Evergreen Forests.
(vii) 3C/C3/2S1 - Dry Bamboo Brakes, edaphic sub-types of North Indian Tropical Moist Deciduous Forests (3C).
(viii) 5B/ DS1 Dry Deciduous scrubs.
(ix) 5/ 1S1 -Dry Tropical Riverine Forests.

2A.2 DESCRIPTION OF THE FOREST

2A.2.1 2B/ C3 - ORISSA TROPICAL SEMI EVERGREEN FORESTS

Group 2	Tropical Semi Evergreen Forests
Subgroup	2B Northern Tropical Semi Evergreen Forests
Type	2B/C3 Orissa Tropical Semi Evergreen Forests

Occurrence: These forests occur over an area of 9,187 Ha, which is roughly 8.3% of the total Reserved Forest area of the Division and are confined to south and southeastern

region of the division.Top storey trees are deciduous and remain leafless for a shorter period of time but the middle storey is mostly evergreen having species like *Saraca indica*, Cane, *Mangifera indica*, etc. The forests are confined to the damper pockets in valley, and nallah banks with a few exceptions on the hill slopes. The vegetation in the valley comprises drier type of crop whereas higher slopes contain semi-evergreen species. The forest blocks in which this type of forest existing are Charkhola, Mayuri, Korea, Megha, Kapilas, Saptasajya, Ramei.

Floristic composition:

(i)**Top storey & Middle storey**: Shorea robusta, *Xylia xylocarpa Saraca indica*, *Mangifera indica*, *Amoora rohituka, Alstonia scholaris, Anogeissus acuminata, Boswellia serrata, Bridelia retusa, Bauhinia racemosa, Salmalia malabarica, Cassia fistula, Canthium didymum, Cleistanthus collinus, Dillenia pentagyna, Diospyros montana, Diospyros chloroxylon, Diospyros sylvatica, Dalbergia paniculata, Syzygium cumini, Emblica officinalis, Elaeodendron glaucum, Ficus glomerata, Gelonium lanceolatum, Gelonium multiflorum, Grewia disperma, Grewia tiliaefolia, Holopteiea integrifolia, Lannea grandis, Mangifera indica, Melia composita, Mallotus philippinensis, Pterospermum heyneanum, Pongamia glabra, Putranjiva roxburghii, Strychnos nuxvomica, Strychnos potatorum, Schleichera Oleosa, Streblus asper*, *Terminalia tomentosa, Terminalia belerica, Webera corymbosa, Wrightia tomentosa.*

(ii) **Under growth***: Cipadessa fruticosa, Carrisa spinarum, Helecteres isora, Ixora parviflora, Zizyphus oenoplia, Atlantia monophylla, Allophyllus serratus, Randia malabaricum* and *Glycosmis arborea*.

(iii) **Climbers:** *Combretum decandrum, Bauhinia vahlli, Hemidesmus indicus, Butea superba, Smilax macrophylla, Milletia auriculata, Salpinia sepiaria, Cryptolepsis buchanani, Ventilago madraspatnam* and *Calycopteis floribunda*. *Aganosma caryophyllata,Cane species (Calamus viminalis* and *Calamus guruba),*

(iv) **Ground flora:** *Baralia* and *Strobilanthes* species

2A.2.2 2B/E4 - LATERITIC SEMI EVERGREEN FORESTS

Group 2	Tropical Semi Evergreen Forests
Sub group	2B Northern Tropical Semi Evergreen Forests
Type	2B/E4 Lateritic Semi Evergreen Forests

Occurrence: The above forest type is confined to the lateritic plain tract in the South

and South Eastern region of the Division. . They occur over an area of 3000 Ha, which is approximately 2.7% of the total Reserved Forests of the division.The forest block in which this forest type evident are Aswakhola, Raigoda, Ramai and Charkhola blocks.

Floristic composition:

(i)**Top storey & Middle storey:** *Xylia xylocarpa, Pterocarpus marsupium, Anogeissus latifolia, Grewia tiliaefolia, Terminalia sps. Careya arborea, Bridelia retusa, Calycopteris floribunda, Strychnos nux-vomica* etc.

(ii) **Under growth***: Carissa spinarum, Flacourtia indica, Hugonia mystax* and *Randia malabarica.*

(iii) **Climbers:** *Combretum decandrum* and *Zyzyphus oenoplia.*

2A.2. 3 C/C3 – NORTHERN SECONDARY MOIST MIXED DECIDUOUS FORESTS

Group 3	Tropical Moist Deciduous Forests
Sub group	3C North Indian Moist Deciduous Forests
Type	3C/C3 Moist Mixed Deciduous Forests
Sub type	3C/C3/2S1 Northern Secondary Moist Mixed Deciduous Forests

Occurrence: - They are found in the south and southeastern part of the division. They occur over an area of 8,260 Ha which is roughly 7.5% of the total Reserved Forest area of the division This type of forests occurs in Kandhara, Nandania, Raigoda, Aswakhola, Matiamundia, Sulia and parts of Kapilas blocks.. The forests are characterized by presence of Sal and its associates.

Floristic Composition:-

(i)**Top storey & Middle storey:** Shorea robusta, Kangada (*Xylia xylocarpa*), *Terminalia tomentosa, Bridelia retusa, Strychnos nuxvomica, Schleichera oleosa, Careya arborea, Dillenia pentagyna, Garuga pinata* and *Mangifera indica., Diospyros montana, Melia composita* and *Holoptelia integrifolia Anogeissus latifolia, Lannea grandis, Ougeinia delbergioides, Sterculia urens* and *Diospyros melanoxylon,*

(ii) **Under growth***: Milletia auriculata, Salpinia sepiaria, Cryptolepsis buchanani, Ventilago madraspatnam* and *Calycopteis floribunda*.etc.

(iii) **Climbers:** *Smilax macrophylla, Milletia auriculata, Salpinia sepiaria, Cryptolepsis buchanani, Ventilago madraspatnam* and *Calycopteis floribunda Combretum decandrum* and *Zyzyphus oenoplia.*

2A.2.4 3C/C2e NORTH INDIAN TROPICAL MOIST PENINSULAR SAL

Group 3	Tropical Moist Deciduous Forests
Sub group	3C North Indian Moist Deciduous Forests
Type	3C/C2 Moist Sal bearing Forests
Sub type	3C/C2e (i) Moist Peninsular High level Sal
	3C/C2e (ii) Moist Peninsular Low level Sal

Occurrence:-They occur extensively over an area of 53,280 Ha, which is roughly 48% of the total Reserved Forest of the division. They occur on crystalline quartzite rock.They are present in Ranjagarh, Anantapur Bompa, Potalo, Koi, Kandhara, Lahada , Ramai Dolia, Sundarkhol and Birasal blocks.

Floristic composition:-

(i)**Top storey & Middle storey:** *Terminalia tomentosa, T. chebula, T.belerica, Madhuca latifolia, Syzygium cumini, Diospyrous melanoxylon, Diospyros montana, Adina cordifolia, Schleichera oleosa, Lannea grandis, Cassia fistula, Emblica officinalis, Careya* arborea*, Pterospermum canescens Dillenia pentagyna. Holarrhena antidysenterica* and *Cleistanthus collinus.*

(ii) **Under growth***: Indigofera pulchella, Flemingia chappar, Woodfordia* fr*uticosa, Ixora parviflora, Cipadessa fruticosa, Gardenia gummifera, Gardenia turgida.* There are climbers like *Combretum decandrum, Bauhinia vahlii, Butea superba* and *Milletia auriculata.*

(iii) **Climbers and Grass:** *Soymida febrifuga*, Sabai grass, *Eulalia argentea, Amphilophis glabra* and *Imperata arundinacea.*

2A.2.5 5B/C2 NORTHERN TROPICAL DRY MIXED DECIDUOUS FORESTS

Group 5	Tropical Dry Deciduous Forests
Sub group	5B Northern Tropical Dry Deciduous Forests
Type	5B/C2 Northern Tropical Dry Mixed Deciduous Forests

Occurrence: - These forests occur over an area of 16,890 Ha which is 15% of the total Reserved Forests of the division. They are generally called Dry Sal forests. The upper canopy is light often broken canopy and is usually with trees having relatively short boles and poor

form. They are localized in the upper and steeper slopes of southern aspect of hills in Ranjagarh, Anantapur, Kapilas and Talcher Border blocks.

Floristic composition:-

(i)**Top storey & Middle storey:** Shorea robusta, *Anogeissus latifolia, Boswellia serrata, Buchanania lanzan, Sterculia*, *Bauhinia sps, Terminalia tomentosa ,Adina cordifolia, Lannea grandis, Ougeinia dalbergioidis, Stephogyno parvifolia, Diospyros melanoxylon, Hymenodictyon excelsum, Chloroxylon swietenia, Gardinia latifolia, Emblica officinalis, Cochlospermum gossypium.*

(ii) **Under growth***: Woodfordia, Indigofera pulchella, Carissa opaca, Nyctanthes arbortristis, Helicteeis isora* and *Holorrhena antidysentrica*.

(iii) **Grass:** *Heteropogon contortus, Eulaliopsis binata*

2A.2.6. 5B/DS1 DRY DECIDUOUS SCRUB

Group 5	Tropical Dry Deciduous Forests
Sub group	5B Northern Tropical Dry Deciduous Forests
Type	5B/DS1 Dry Deciduous Scrub

Occurrence: - They occur in Charkhola, Ghantabaja, Patapuri, Kankadahada, Tamanda, Kotaberena, Matiamundia, Nimidha, Sadangi, and Baliposi etc. These forests extend over an area of 13,145 Ha, which is 12% of the total Reserved Forest area of the division. In this forest the soil has become unproductive and supports shrubby growth of 3-6 mts height and some tree species also stemmed from the base due to various stage of degradation.

The common species of this forest type are *Acacia catechu, Zizyphus xylocarpus, Boswellia serrata, Terminalia tomentosa, Gardenia sps, Holarrhena antidysenterica, Woodfordia fructicosa, Carrisa apaca, Lannea coromandelica, Phoenix sylvestris, Randia malabarica, Cleistanthus collinus*

2A.2.7. 5/1S1 DRY TROPICAL RIVERINE FORESTS

Group 5	Tropical Dry Deciduous Forest
Primary Seral Type	1S1 Dry Tropical Riverine Forests

Occurrence: - These forests occur in small patches along the fringes of river Brahmani, Ramial and Sapua. Also occurs in the eroded area with ravines and gullies, usually

calcareous clayey type of soil is met with in these areas. The trees are often larger in size and form strips. The foliage is more or less evergreen. The soil is sandy

Floristic composition:-

(i)**Top storey & Middle storey:** *Anogeissus acuminata, Holoptelia integrifolia, Pongamia glabra, Terminalia arjuna, Trewia nudiflora* and *Streblus.*

(ii) **Under growth***: Diospyros chloroxylon, Cryptomaria reticulata* and *Gelonium* species.

(iii) **Climbers & Grass:** *Aspidopterya indica, Ipomea vitifolia, Hucuna prurita, Calyeopteris floribunda, Cryptolepsis buchanani* and several species of *Dioscorea*,*Vitis, Soymida febrifuga, Gardenia turgida, Acacia leucophloea*, *Chloroxylon swietenia* and *Acacia catechu*

2A.2.8. 2B/C3/E3 - MOIST BAMBOO BRAKES

Group 2	Tropical Semi Ever Green Forests
Sub group	2B Northern Tropical Semi Evergreen Forests
Type	2B/C3 Orissa Semi Evergreen Forests
Sub type	2B/C3/E3 Moist Bamboo Brakes

Occurrence: - The bamboo brakes occur throughout semi evergreen and moist deciduous forests. They favour streamside and shady slopes. They occur in Charkhola, Mayuri, and Saptasajya blocks. They occur over an area of 436 Ha.

Bambusa arundinacea occurs along the alluvial tracts and nallah banks. Most of the bamboo clumps are degraded due to prolonged nonworking. These forests are associated with *Terminalia tomentosa, Bridelia retusa and Anogeissus latifolia*.

2A.2.9. 3C/C3/2S1 DRY BAMBOO BRAKES

Group 3	Tropical Moist Deciduous Forests
Sub group	3C North Indian Moist Deciduous Forests
Type	3C/C3 Moist Mixed Deciduous Forests
Sub type	Dry Bamboo brakes

Occurrence:- They occur mostly on dry hillsides where the rainfall is less than 900 mm. The soil is dry most of the year and often shallow and stoney as well. They are confined to Kandhara, Ghantabaja, and Kapilas, Hitinda blocks. This forest extends over an area of 6,500 Ha of the Reserved Forests.

Dendrocalamus strictus forms dense brakes, though mostly in degraded condition.

Other major species are *Anogeissus latifolia, Lannea coromandelica and Cochlospermum religiosum*.

2A.3 FOREST HEALTH

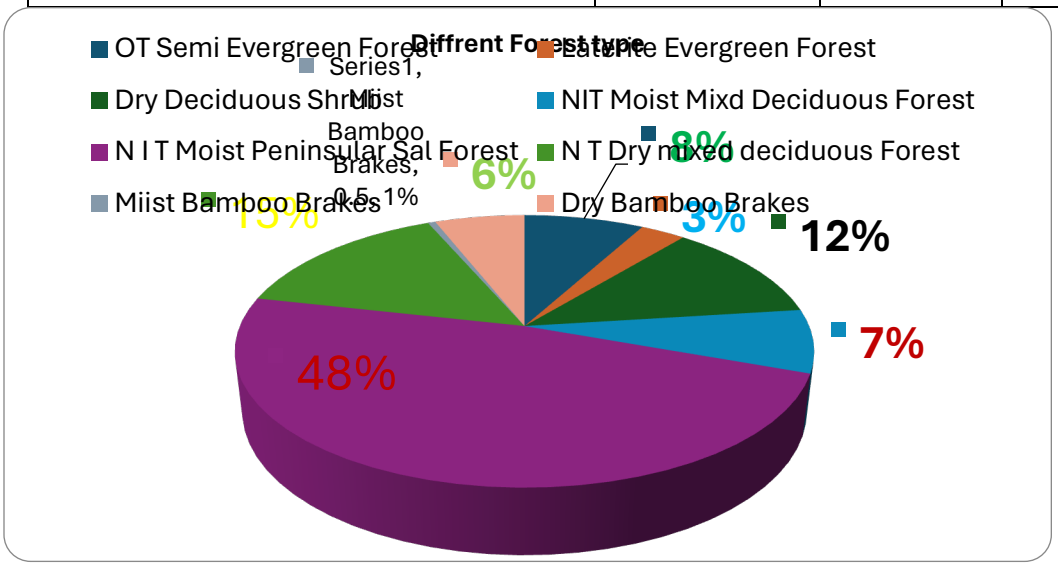
Present condition of forest is distressing. Unending pressure on the forest area has resulted in elimination of the matured trees of economic importance and converting into bushes and scrubs. Therefore, the present crops in the top and middle story would not strictly represent the forest types as per the classification. However, the ground flora has more or less remained unchanged. Study on biodiversity survey and regeneration survey conducted in the forests throws light regarding the species richness of the forest. The extent of different types of forests distributed in different blocks is summarized in table 2A.1

Table 2A.1 EXTENT OF DIFFERENT TYPES OF FORESTS IN VARIOUS FOREST BLOCKS

Forest Type	***Name of the R.F***	**Area in ha**	***Comptt. No***	**% RF**
Orissa Tropical Semi Evergreen Forest	Charkhola	300.00	1,2	
	Mayuri	800.11	1,2	
	Saptasajya	1896.00	1,2,3	
	Megha	603.90	1	
	Korean	387.70	1	
	Kapilas	5200.00	1 to 20	
Total		**9187.71**		**8.298%**
Laterite Semi Ever Green Forest	Charkhola	200.00	1,2	
	Ramai	1100.81	1 to 4	
	Raigoda	200.40	1	
	Aswakhola	1500.62	1 to 6	
Total		**3001.83**		**2.716%**
Dry Deciduous Shrub	Charkhola	230.00	1,2	
	Ghantabaja	900.40	1 to 4	
	Patapuri	506.70	1	
	Kankadahada	380.40	1	
	Tamanda	566.17	1	
	Kotaberena	1039.70	1	
	Jaripal	289.80	1	
	Belabania	603.80	1	
	Matiamundia	660.00	1	
	Nimidha	160.70	1	
	Godabalua	436.60	1	
Dry Deciduous Shrub	Sadangi (A)	60.70	1	

	Sadangi (B)	448.00	1	
Dry Deciduous Shrub	Baliposi	267.10	1	
	Nischinta	696.90	1	
	Bega	569.80	1	
	Khankira	474.30	1	
	Gondia	926.80	1	
	Raitola	535.00	1	
	Rupabalia	961.20	1	
	Jiridamali	815.06	1	
	Bhuban	457.30	1	
	Balibo	659.70	1	
	Kansara	50.60	1	
	Ambithi	447.60	1	
Total		**13144.33**		**11.872%**
North Indian Tropical Moist Mixed Deciduous Forest	Sulia	259.00	1	
	Matiamundia	450.90	1	
	Kapilas	3000.00	8 to 28	
	Aswakhola	964.00	2 to 6	
	Raigoda	163.00	1	
	Kandhara	2896.521	1 to25	
	Nandania	527.70	1	
Total		**8261.121**		**7.461%**
North Indian Tropical Moist Peninsular Sal Forest	Matharagadi	285.31	1	
	Lahada (A)	1339.60	1	
	Lahada (B)	2428.00	1	
	Ramai	777.00	1 to 4	
	Sunajhari	2790.00	1 to 6	
	Maulabhanja	1367.48	1	
	Ranjagarh	8384.144	1 to 9 and 23 to 33	
	Machhia	279.00	1	
	Anlabereni	502.20	1	
	Bhairpur	490.50	1	
	Birasal	1362.90	1	
	Tipiloi	947.00	1	
	Dholpada	372.30	1	
	Anantapur	11060.842	1	
	Sundarkhol	2206.42	1 to 6	
	Nandabir	145.70	1	
	Dolia	1766.10	1	
	Khalpal	692.90	1	
	Barbank (N)	433.80	1	
	Barbank (S)	974.50	1	
	Kankili	1786.30	1	
	Siarimalia	1405.10	1	

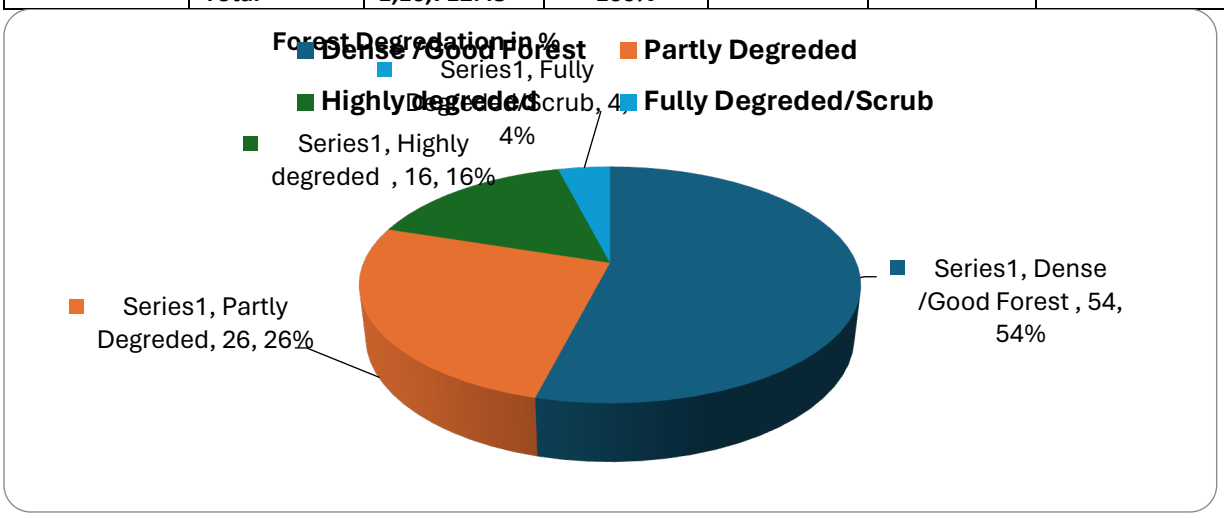
	Suniamaru	1855.20	1	
North Indian Tropical Moist Peninsular Sal Forest	Kadalipal	246.00	1	
	Madhi	457.70	1	
	Kandhara	4344.782	1 to 25	
	Potalo	660.47	1 to 2	
	Bampa	1653.60	1 to 5	
	Koi	2266.30	1	
Total		**53281.148**		**48.125%**
Northern Tropical Dry Mixed Deciduous Forest	Kapilas	2911.26	1 to 16	
	Ranjagarh	5437.956	10 to 22	
	Anantapur	7755.258	26 to 40	
	Talcher Boarder	784.30	1	
Total		**16888.774**		**15.254%**
Moist Bamboo Brakes	Charkhola	78.36	1,2	
	Mayuri	157.00	1,2	
	Saptasajya	200.75	1,2	
Total		**436.11**		**0.393%**
Dry Bamboo Brakes	Ghantabaja	374.00	1 to 4	
	Kapilas	1500.00	8 to 28	
	Kandhara	3931.637	12 to 16, 3,4,5,6	
	Hitinda	705.79	1,2	
Total		**6511.427**		**5.881%**
Grand Total		**110712.45**		



2A.4 CONDITION OF THE CROP

The most of the forest blocks of Dhenkanal division are in degraded condition due to various biotic pressures like illicit felling, grazing, forest fire, encroachments etc. It can be divided into four types based on the extent of degradation as under. The degradation is mainly. The four types of forests are as follows:

Condition of the forest	Crop density class	Approx. area in Ha	% of total Forest area	Extent of biotic pressure	Crown condition	Other physical condition
Good forest	0.3 to 0.4 or > 40%	59,334.61	54%	Not common	Open at few places	Degradation not started
Partially degraded	0.2 to 0.3 or 25 - 40%	29,119.44	26%	Most common	Open at many places	Degradation started
Highlly degraded	0.1 to 0.2 or 10 – 25%	17,655.24	16%	Very high	Open at large places	Advance stage of degradation, blank patches, soil erosion etc.
fully degraded /scrub	< 0.1 or < 10%	4,603.16	4%	Very high even unfit for grazing	Fully open	Fully degraded, devoid of root stock, covered with hardy and throny shrub and herb.
	Total	**1,10,712.45**	**100%**			



The various stages of degradation of forest block of Dhenkanal Forest Division is given in Table-2A.2

Table 2A.2 DEGREE OF DEGRADATION OF VARIOUS FOREST BLOCKS

Good Forest	Partially Degraded	***Highly Degraded***	**Fully Degraded**
1. Kapilas	1.Patapuri	1.Mayuri	1.Charkhola
2.Ranjagarh	2.Sulia	2.Megha	2.Godabalua
3.Anantapur	3.Matharagadi	3.Korean	3.Kankadahada
4.Sundarkhol	4.Sadangi "A"	4.Tamanda	4.Baliposi
5.Kandhara	5.Matiamundia	5.Kotaberena	5.Nischinta
6.Hitinda	6.Ramai	6.Nimidha	6.Bega

	7.Raigoda	7.Belabania	7.Balibo
	8.Raitola	8.Lahada “A”	8.Talcher Boarder
	9.Aswakhola	9.Lahada “B”	
	10.Rupabalia	10.Bhuban	
	11.Sunajhari	11.Khankira	
	12.Maulabhanja	12.Gondia	
	13.Suniamaru	13.Sadangi ‘B’	
	14.Tipiloi	14.Machhia	
	15.Dhalpada	15.Anlaberini	
	16.Dolia	16.Bhairpur	
	17.Khalpal	17.Jiridamali	
	18.Kankili	18.Birasal	
	19.Siarimalia	19.Nandabir	
	20.Madhi	20.Barbank ‘N’	
	21.Potalo	21.Barbank ‘S’	
	22.Bompa	22.Kadalipal	
	23.Nandania	23.Ambithi	
	24.Kai	24.Ghantabaja	
	25.Kansara	25.Jaripal	
	26. Saptasajya		

2A.5 STATUS OF NATURAL REGENERATION

Regeneration of valuable species is very inadequate. Establishment of new recruits is particularly problematic on account of heavy biotic interference. In the vicinity of villages forests are generally quite open like Lahada A, Lahada B, Bega RF, and Kandhara R.F reduces to scrub jungles. In some forests Lantana & Eupatorium are suppressing the growth of other coppice shoots. Frequent removal of economically important species and grazing have also attributed to the general degradation of these forests/lands.In Ranjagarh, Anantapur RF area having mixed Deciduous Forests have good Sal regeneration along with its associate species. The regeneration of Riverian Vegetation/Forests along Brahamani river andother tributaries like Sapua, Ramial etc are good. The regeneration of bamboo is observed in Kandhara R.F., Hitinda R.F. It is seen that the regeneration has come up well where silvicultural cleaning has been taken up.

The regeneration survey has been conducted in 64 Forest Blocks. It was done to know the regeneration status of the forests of the division. The survey is done by laying the sample plots of 10 mt x 10 mt randomly on an average 10 different places in each forest block. The regeneration seedlings are classified into Absent, Un-Established, Whippy, Established (less height) and Established based on the score. They are enumerated and scored. The established seedlings are given the score -5, whippy -4, unestablished -3, absent -0. The value of all sample plots of the forest block is totalled and its average is taken to determine the status of regeneration. The maximum value is 50 and the minimum is 0. The presence of established is sufficient for scoring any plot i.e. if the established is present; the score of it is only taken into account. The total values in each block are tabulated as per the table given below: **Table No-2A.3**

Table 2A.3 STATUS OF REGENERATION

S.No.	Score	Status
1	0-10	Deficient
2	11-20	Fair
3	21-30	Moderate
4	31-40	Good
5	41& above	Excellent

The results of the regeneration survey are given the **Annexure XIV**.
The abstract of the status of regeneration of different species in different forest blocks is given in **Table No.—2A.4**

Table 2A.4 ABSTRACT OF REGENERATION

Name of the Range- Dhenkanal

	Species	Name of the R.F						
Sl. No		Charkhola	Ghantabaja	Sapatasajya	Mayuri	Nimidha	Godabalua	Patpuri
1	Amla	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
2	Anchu	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
3	Asan	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Fair
4	Bahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
5	Bela	Deficient	Deficient	Deficient	Fair	Deficient	Deficient	Deficient
6	Benta	Deficient	Deficient	Fair	Deficient	Deficient	Deficient	Deficient
7	Bhalia	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
8	Bheru	Deficient	Deficient	Fair	Deficient	Deficient	Deficient	Deficient
9	Bija	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
10	Chara	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
11	Chauli	Deficient	Deficient	Deficient	Fair	Deficient	Deficient	Deficient
12	Dhaura	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
13	Giringa	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
14	Gohira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
15	Halda	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
16	Jamun	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
17	Kangada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
18	Karada	Deficient	Deficient	Deficient	Fair	Deficient	Deficient	Fair
19	Kasi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
20	Kendu	Deficient	Deficient	Deficient	Deficient	Deficient	Fair	Fair
21	Khaira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
22	Khakada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
23	Kochila	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
25	Kurein	Good	Deficient	Fair	Moderate	Deficient	Fair	Deficient
26	Kurum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
27	Kusum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
28	Mahula	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
29	Mai	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
30	Mundi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
31	Neem	Deficient	Deficient	Deficient	Fair	Deficient	Deficient	Deficient
32	Rohini	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
33	Sahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
34	Sal	Deficient	Fair	Good	Deficient	Deficient	Fair	Deficient
35	Sidha	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
36	Sunari	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
37	Telkuruma	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
38	Tentala	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
39	Misc.	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient

Name of the Range- Dhenkanal								
	Species	**Name of the R.F**						
Sl. No.		**Megha**	**Korean**	**Kankadahada**	**Tamanda**	**Jaripal**	**Belabania**	**Sulia**
1	Amla	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
2	Anchu	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
3	Asan	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
4	Bahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
5	Bela	Fair	Deficient	Moderate	Deficient	Fair	Fair	Deficient
6	Benta	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
7	Bhalia	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
8	Bheru	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
9	Bija	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
10	Chara	Deficient	Deficient	Deficient	Deficient	Fair	Fair	Deficient
11	Chauli	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
12	Dhaura	Deficient	Deficient	Deficient	Deficient	Fair	Deficient	Deficient
13	Giringa	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
14	Gohira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
15	Halda	Deficient	Deficient	Deficient	Deficient	Deficient	Fair	Deficient
16	Jamun	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
17	Kangada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
18	Karada	Deficient	Deficient	Deficient	Deficient	Fair	Fair	Deficient
19	Kasi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
20	Kendu	Fair	Deficient	Excellent	Moderate	Good	Fair	Deficient
21	Khaira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
22	Khakada	Deficient	Deficient	Deficient	Moderate	Deficient	Deficient	Deficient
23	Kochila	Deficient	Excellent	Deficient	Deficient	Deficient	Deficient	Deficient
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
25	Kurein	Deficient	Deficient	Deficient	Moderate	Moderate	Moderate	Deficient
26	Kurum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
27	Kusum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
28	Mahula	Deficient	Deficient	Fair	Fair	Deficient	Fair	Deficient
29	Mai	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
30	Mundi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
31	Neem	Deficient	Deficient	Deficient	Deficient	Deficient	Fair	Deficient
32	Rohini	Deficient	Deficient	Deficient	Deficient	Fair	Deficient	Deficient
33	Sahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
34	Sal	Excellent	Deficient	Deficient	Excellent	Excellent	Deficient	Moderate
35	Sidha	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
36	Sunari	Deficient	Deficient	Deficient	Deficient	Deficient	Fair	Deficient
37	Telkuruma	Deficient	Deficient	Fair	Deficient	Fair	Deficient	Deficient
38	Tentala	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
39	Misc.	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient

Sl. No.	Species	Name of the R.F		
		Matiamundia	**Matharagadi**	**Kotaberena**
1	Amla	Deficient	Deficient	Deficient
2	Anchu	Deficient	Deficient	Fair
3	Asan	Deficient	Deficient	Deficient
4	Bahada	Deficient	Deficient	Deficient
5	Bela	Deficient	Deficient	Deficient
6	Benta	Deficient	Deficient	Deficient
7	Bhalia	Deficient	Deficient	Fair
8	Bheru	Deficient	Deficient	Deficient
9	Bija	Deficient	Deficient	Deficient
10	Chara	Deficient	Deficient	Deficient
11	Chauli	Deficient	Deficient	Fair
12	Dhaura	Deficient	Deficient	Deficient
13	Giringa	Deficient	Deficient	Deficient
14	Gohira	Deficient	Deficient	Deficient
15	Halda	Deficient	Deficient	Deficient
16	Jamun	Deficient	Deficient	Deficient
17	Kangada	Deficient	Deficient	Deficient
18	Karada	Deficient	Deficient	Deficient
19	Kasi	Deficient	Deficient	Moderate
20	Kendu	Deficient	Deficient	Deficient
21	Khaira	Deficient	Deficient	Deficient
22	Khakada	Deficient	Deficient	Deficient
23	Kochila	Deficient	Deficient	Deficient
24	Kumbhi	Deficient	Deficient	Deficient
25	Kurein	Deficient	Deficient	Deficient
26	Kurum	Deficient	Deficient	Deficient
27	Kusum	Deficient	Deficient	Deficient
28	Mahula	Deficient	Deficient	Deficient
29	Mai	Deficient	Deficient	Deficient
30	Mundi	Deficient	Deficient	Deficient
31	Neem	Deficient	Deficient	Deficient
32	Rohini	Deficient	Deficient	Deficient
33	Sahada	Deficient	Excellent	Excellent
34	Sal	Excellent	Deficient	Deficient
35	Sidha	Deficient	Deficient	Deficient
36	Sunari	Deficient	Deficient	Deficient
37	Telkuruma	Deficient	Deficient	Deficient
38	Tentala	Deficient	Deficient	Deficient
39	Misc	Deficient	Deficient	Deficient

Name of the Range- Sadangi								
Sl. No.	**Species**	**Name of the R.F**						
		Rupabalia	**Sadangi A**	**Sadangi B**	**Lahada A**	**Lahada B**	**Gondia**	**Baliposi**
1	Amla	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
2	Anchu	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
3	Asan	Deficient	Deficient	Deficient	Fair	Deficient	Deficient	Deficient
4	Bahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
5	Bela	Fair	Fair	Fair	Good	Excellent	Fair	Moderate
6	Benta	Deficient	Deficient	Deficient	Deficient	Fair	Deficient	Deficient
7	Bhalia	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
8	Bheru	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
9	Bija	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
10	Chara	Fair	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
11	Chauli	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
12	Dhaura	Deficient	Fair	Deficient	Deficient	Deficient	Deficient	Deficient
13	Giringa	Deficient	Deficient	Deficient	Fair	Deficient	Fair	Deficient
14	Gohira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
15	Halda	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
16	Jamun	Deficient	Deficient	Deficient	Deficient	Deficient	Fair	Deficient
17	Kangada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
18	Karada	Moderate	Fair	Moderate	Deficient	Excellent	Good	Fair
19	Kasi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
20	Kendu	Moderate	Fair	Excellent	Good	Excellent	Good	Fair
21	Khaira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
22	Khakada	Deficient	Deficient	Deficient	Deficient	Deficient	Moderate	Deficient
23	Kochila	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
25	Kurein	Moderate	Deficient	Moderate	Excellent	Excellent	Excellent	Good
26	Kurum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
27	Kusum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
28	Mahula	Deficient	Deficient	Moderate	Deficient	Fair	Fair	Deficient
29	Mai	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
30	Mundi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
31	Neem	Deficient	Fair	Deficient	Deficient	Fair	Deficient	Deficient
32	Rohini	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
33	Sahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
34	Sal	Moderate	Moderate	Excellent	Excellent	Excellent	Deficient	Deficient
35	Sidha	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
36	Sunari	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
37	Telkuruma	Deficient	Deficient	Moderate	Deficient	Fair	Deficient	Deficient
38	Tentala	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
39	Misc.	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient

Name of the Range- Sadangi							
Sl. No.	**Species**	**Name of the R.F**					
		Nischinta	**Raitola**	**Bega**	**Aswakhola**	**Raigoda**	**Khankira**
1	Amla	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
2	Anchu	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
3	Asan	Deficient	Deficient	Deficient	Deficient	Deficient	Fair
4	Bahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
5	Bela	Deficient	Moderate	Deficient	Moderate	Excellent	Fair
6	Benta	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
7	Bhalia	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
8	Bheru	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
9	Bija	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
10	Chara	Deficient	Deficient	Deficient	Deficient	Deficient	Moderate
11	Chauli	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
12	Dhaura	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
13	Giringa	Deficient	Deficient	Deficient	Deficient	Moderate	Deficient
14	Gohira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
15	Halda	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
16	Jamun	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
17	Kangada	Deficient	Deficient	Deficient	Deficient	Fair	Deficient
18	Karada	Deficient	Moderate	Deficient	Deficient	Good	Fair
19	Kasi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
20	Kendu	Deficient	Moderate	Fair	Deficient	Good	Fair
21	Khaira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
22	Khakada	Deficient	Fair	Deficient	Deficient	Fair	Deficient
23	Kochila	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
25	Kureih	Deficient	Good	Moderate	Moderate	Moderate	Moderate
26	Kurum	Deficient	Deficient	Deficient	Deficient	Deficient	deficient
27	Kusum	Deficient	Deficient	Deficient	Deficient	Deficient	deficient
28	Mahula	Deficient	Moderate	Deficient	Deficient	Fair	Fair
29	Mai	Deficient	Deficient	Deficient	Deficient	Fair	Deficient
30	Mundi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
31	Neem	Deficient	Deficient	Deficient	Deficient	Moderate	Fair
32	Rohini	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
33	Sahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
34	Sal	Deficient	Excellent	Deficient	Deficient	Moderate	Moderate
35	Sidha	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
36	Sunari	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
37	Telkuruma	Deficient	Deficient	Deficient	Deficient	Moderate	Deficient
38	Tentala	Deficient	Deficient	Deficient	Deficient	Moderate	Deficient
39	Misc.	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient

Sl. No.	Species	Name of the R.F				
		Birasal	Maulabhanja	Ranjagarh	Jiridamali	
1	Amla	Deficient	Deficient	Deficient	Deficient	
2	Anchu	Deficient	Deficient	Deficient	Deficient	
3	Asan	Deficient	Deficient	Deficient	Deficient	
4	Bahada	Deficient	Deficient	Deficient	Deficient	
5	Bela	Deficient	Deficient	Deficient	Deficient	
6	Benta	Deficient	Deficient	Deficient	Deficient	
7	Bhalia	Deficient	Deficient	Deficient	Deficient	
8	Bheru	Deficient	Deficient	Deficient	Deficient	
9	Bija	Deficient	Deficient	Deficient	Deficient	
10	Chara	Fair	Deficient	Fair	Deficient	
11	Chauli	Deficient	Deficient	Deficient	Deficient	
12	Dhaura	Deficient	Deficient	Deficient	Deficient	
13	Giringa	Deficient	Deficient	Deficient	Deficient	
14	Gohira	Deficient	Deficient	Deficient	Deficient	
15	Halda	Deficient	Deficient	Deficient	Deficient	
16	Jamun	Deficient	Deficient	Deficient	Deficient	
17	Kangada	Deficient	Deficient	Deficient	Deficient	
18	Karada	Deficient	Deficient	Deficient	Deficient	
19	Kasi	Deficient	Deficient	Deficient	Deficient	
20	Kendu	Moderate	Fair	Fair	Deficient	
21	Khaira	Deficient	Deficient	Deficient	Deficient	
22	Khakada	Deficient	Deficient	Deficient	Deficient	
23	Kochila	Deficient	Deficient	Deficient	Deficient	
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	
25	Kurein	Good	Fair	Fair	Excellent	
26	Kurum	Deficient	Deficient	Deficient	Deficient	
27	Kusum	Deficient	Deficient	Deficient	Deficient	
28	Mahula	Fair	Deficient	Fair	Deficient	
29	Mai	Deficient	Deficient	Deficient	Deficient	
30	Mundi	Deficient	Deficient	Deficient	Deficient	
31	Neem	Deficient	Deficient	Deficient	Deficient	
32	Rohini	Deficient	Deficient	Deficient	Deficient	
33	Sahada	Deficient	Deficient	Deficient	Deficient	
34	Sal	Excellent	Excellent	Excellent	Excellent	
35	Sidha	Deficient	Deficient	Deficient	Deficient	
36	Sunari	Deficient	Deficient	Deficient	Deficient	
37	Telkuruma	Deficient	Deficient	Deficient	Deficient	
38	Tentala	Deficient	Deficient	Deficient	Deficient	
39	Misc.	Deficient	Deficient	Deficient	Deficient	

Name of the Range- Kamakhyanagara West								
Sl. No.	**Species**	**Name of the R.F**						
		Anlabereni	Kadalipal	Kankili	Machhia	Madhi	Nandabir	Siarimalia
1	Amla	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
2	Anchu	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
3	Asan	Deficient	Deficient	Fair	Deficient	Deficient	Deficient	Fair
4	Bahada	Deficient	Deficient	Deficient	Dficient	Deficient	Deficient	Deficient
5	Bela	Deficient	Deficient	Deficient	Fair	Deficient	Deficient	Deficient
6	Benta	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
7	Bhalia	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
8	Bheru	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
9	Bija	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
10	Chara	Deficient	Fair	Fair	Deficient	Deficient	Moderate	Deficient
11	Chauli	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
12	Dhaura	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
13	Giringa	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
14	Gohira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
15	Halda	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
16	Jamun	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
17	Kangada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
18	Karada	Deficient	Deficient	Fair	Fair	Fair	Deficient	Deficient
19	Kasi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
20	Kendu	Fair	Fair	Fair	Moderate	Deficient	Good	Good
21	Khaira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
22	Khakada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
23	Kochila	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
25	Kurein	Fair	Good	Fair	Excellent	Deficient	Fair	Fair
26	Kurum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
27	Kusum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
28	Mahula	Deficient	Deficient	Fair	Fair	Fair	Fair	Moderate
29	Mai	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
30	Mundi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
31	Neem	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
32	Rohini	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
33	Sahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
34	Sal	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
35	Sidha	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
36	Sunari	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
37	Telkuruma	Deficient	Fair	Fair	Deficient	Moderate	Fair	Fair
38	Tentala	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
39	Misc.	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient

Name of the Range- Kamakhyanagara West						
Sl. No.	**Species**	**Name of the R.F**				
		Sundarakhol	**Suniamaru**	**Anatapur**	**Sunajhari**	
1	Amla	Deficient	Deficient	Deficient	Deficient	
2	Anchu	Deficient	Deficient	Deficient	Deficient	
3	Asan	Fair	Deficient	Deficient	Deficient	
4	Bahada	Deficient	Deficient	Deficient	Deficient	
5	Bela	Deficient	Deficient	Deficient	Deficient	
6	Benta	Deficient	Deficient	Deficient	Deficient	
7	Bhalia	Deficient	Deficient	Deficient	Deficient	
8	Bheru	Deficient	Deficient	Deficient	Deficient	
9	Bija	Deficient	Deficient	Deficient	Deficient	
10	Chara	Fair	Deficient	Deficient	Deficient	
11	Chauli	Deficient	Deficient	Deficient	Deficient	
12	Dhaura	Deficient	Deficient	Deficient	Deficient	
13	Giringa	Deficient	Deficient	Deficient	Deficient	
14	Gohira	Deficient	Deficient	Deficient	Deficient	
15	Halda	Deficient	Deficient	Deficient	Deficient	
16	Jamun	Deficient	Deficient	Deficient	Deficient	
17	Kangada	Deficient	Deficient	Deficient	Deficient	
18	Karada	Deficient	Deficient	Fair	Deficient	
19	Kasi	Deficient	Deficient	Deficient	Deficient	
20	Kendu	Fair	Fair	Moderate	Deficient	
21	Khaira	Deficient	Deficient	Deficient	Deficient	
22	Khakada	Deficient	Deficient	Deficient	Deficient	
23	Kochila	Deficient	Deficient	Deficient	Deficient	
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	
25	Kurein	Fair	Fair	Moderate	Deficient	
26	Kurum	Deficient	Deficient	Deficient	Deficient	
27	Kusum	Deficient	Deficient	Deficient	Deficient	
28	Mahula	Deficient	Fair	Deficient	Deficient	
29	Mai	Deficient	Deficient	Deficient	Deficient	
30	Mundi	Deficient	Deficient	Deficient	Deficient	
31	Neem	Deficient	Deficient	Deficient	Deficient	
32	Rohini	Deficient	Deficient	Deficient	Fair	
33	Sahada	Deficient	Deficient	Deficient	Deficient	
34	Sal	Excellent	Excellent	Excellent	Deficient	
35	Sidha	Deficient	Deficient	Deficient	Deficient	
36	Sunari	Deficient	Deficient	Deficient	Deficient	
37	Telkuruma	Fair	Fair	Deficient	Deficient	
38	Tentala	Deficient	Deficient	Deficient	Deficient	
39	Misc.	Deficient	Deficient	Deficient	Deficient	

Name of the Range- Bhuban							
Sl. No.	**Species**	**Name of the R.F**					
		Balibo	**Bhairpur**	**Bhubana**	**Dhalapada**	**Tipilei**	**Sunajhari**
1	Amla	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
2	Anchu	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
3	Asan	Deficient	Deficient	Deficient	Fair	Deficient	Deficient
4	Bahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
5	Bela	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
6	Benta	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
7	Bhalia	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
8	Bheru	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
9	Bija	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
10	Chara	Deficient	Deficient	Deficient	Fair	Deficient	Deficient
11	Chauli	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
12	Dhaura	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
13	Giringa	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
14	Gohira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
15	Halda	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
16	Jamun	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
17	Kangada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
18	Karada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
19	Kasi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
20	Kendu	Fair	Fair	Fair	Fair	Deficient	Fair
21	Khaira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
22	Khakada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
23	Kochila	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
25	Kurein	Deficient	Deficient	Deficient	Fair	Deficient	Deficient
26	Kurum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
27	Kusum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
28	Mahula	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
29	Mai	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
30	Mundi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
31	Neem	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
32	Rohini	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
33	Sahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
34	Sal	Good	Moderate	Moderate	Moderate	Moderate	Moderate
35	Sidha	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
36	Sunari	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
37	Telkuruma	Deficient	Moderate	Deficient	Deficient	Deficient	Deficient
38	Tentala	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
39	Misc.	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient

Name of the Range-Mahabirod								
Sl. No.	**Species**	**Name of the R.F-**						
		Anatapur	**Barbank(N)**	**Barbank(S)**	**Dolia**	**Khalpal**	**Talcher Bordr**	
1	Amla	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
2	Anchu	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
3	Asan	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
4	Bahada	Deficient	Deficient	Deficient	Deficient	Deficient	Fair	
5	Bela	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
6	Benta	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
7	Bhalia	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
8	Bheru	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
9	Bija	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
10	Chara	Deficient	Deficient	Deficient	Fair	Deficient	Deficient	
11	Chauli	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
12	Dhaura	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
13	Giringa	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
14	Gohira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
15	Halda	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
16	Jamun	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
17	Kangada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
18	Karada	Fair	Deficient	Deficient	Fair	Deficient	Deficient	
19	Kasi	Deficient	Deficient	Deficient	Deficient	Fair	Deficient	
20	Kendu	Moderate	Deficient	Deficient	Deficient	Deficient	Deficient	
21	Khaira	Deficient	Deficient	Deficient	Deficient	Moderate	Moderate	
22	Khakada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
23	Kochila	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
25	Kurein	Moderate	Defficient	Fair	Moderate	Deficient	Deficient	
26	Kurum	Deficient	Deficient	Deficient	Excellent	Fair	Deficient	
27	Kusum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
28	Mahula	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
29	Mai	Deficient	Deficient	Deficient	Deficient	Deficient	Fair	
30	Mundi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
31	Neem	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
32	Rohini	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
33	Sahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
34	Sal	Excellent	Excellent	Excellent	Excellent	Deficient	Deficient	
35	Sidha	Deficient	Deficient	Deficient	Deficient	Excellent	Good	
36	Sunari	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
37	Telkuruma	Deficient	Moderate	Deficient	Fair	Deficient	Deficient	
38	Tentala	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	
39	Misc.	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	

Name of the Range- Hindol								
Sl. No.	**Species**	**Name of the R.F-**						
		Bompa	**Hitinda**	**Koi**	**Kandhara**	**Kansara**	**Nandania**	**Potalo**
1	Amla	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
2	Anchu	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
3	Asan	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
4	Bahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
5	Bela	Deficient	Deficient	Deficient	Good	Deficient	Fair	Fair
6	Benta	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
7	Bhalia	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
8	Bheru	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
9	Bija	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
10	Chara	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
11	Chauli	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
12	Dhaura	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
13	Giringa	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
14	Gohira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
15	Halda	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
16	Jamun	Fair	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
17	Kangada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
18	Karada	Fair	Deficient	Deficient	Deficient	Fair	Deficient	Deficient
19	Kasi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
20	Kendu	Deficient	Deficient	Deficient	Fair	Fair	Deficient	Fair
21	Khaira	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
22	Khakada	Deficient	Deficient	Deficient	Deficient	Fair	Deficient	Fair
23	Kochila	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
24	Kumbhi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
25	Kurein	Fair	Deficient	Fair	Fair	Excellent	Deficient	Deficient
26	Kurum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
27	Kusum	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
28	Mahula	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
29	Mai	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
30	Mundi	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
31	Neem	Deficient	Deficient	Deficient	Fair	Deficient	Deficient	Deficient
32	Rohini	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
33	Sahada	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
34	Sal	Deficient	Excellent	Excellent	Deficient	Deficient	Deficient	Deficient
35	Sidha	Deficient	Deficient	Deficient	Deficient	Moderate	Deficient	Deficient
36	Sunari	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
37	Telkuruma	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
38	Tentala	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient
39	Misc.	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient	Deficient

Name of the Range- Hindol		
Sl. No.	**Species**	**Name of the R.F-**
		Ambithi
1	Amla	Deficient
2	Anchu	Deficient
3	Asan	Deficient
4	Bahada	Deficient
5	Bela	Deficient
6	Benta	Deficient
7	Bhalia	Deficient
8	Bheru	Deficient
9	Bija	Deficient
10	Chara	Deficient
11	Chauli	Deficient
12	Dhaura	Deficient
13	Giringa	Deficient
14	Gohira	Deficient
15	Halda	Deficient
16	Jamun	Deficient
17	Kangada	Deficient
18	Karada	Deficient
19	Kasi	Deficient
20	Kendu	Deficient
21	Khaira	Deficient
22	Khakada	Deficient
23	Kochila	Deficient
24	Kumbhi	Deficient
25	Kurein	Deficient
26	Kurum	Deficient
27	Kusum	Deficient
28	Mahula	Deficient
29	Mai	Deficient
30	Mundi	Deficient
31	Neem	Deficient
32	Rohini	Deficient
33	Sahada	Deficient
34	Sal	Deficient
35	Sidha	Deficient
36	Sunari	Deficient
37	Telkuruma	Deficient
38	Tentala	Deficient
39	Misc.	Deficient

2A.5.1 The results of the regeneration survey are analysed and discussed below range wise.

Dhenkanal

In Dhenkanal Range the regeneration of miscellaneous species, NTFP and medicinal plant species like Karada, Neem, Bela, Kendu, Chara, Chauri, Kurehi are moderate to good in the blocks like Kataberana, Charkhola, Ghantabaja, Mayuri, Mathargadi, Matiamundia, Nimidha, Tamanda, Belabania, Jaripal etc. Sal regeneration is good to excellent in Patpuri, Saptasajya, Jaripal, Belabania.

Sadangi

The range has misc. species. The regeneration of Dhaura, Jamu, Kurehi, SalKendu, Mahula, Bela, Sal, Chara, Tentla, Telkurma is observed. Kendu regeneration is fair to moderate in Lahada, Raitola, and Khankira blocks. Regeneration of Bela is fair to excellent in Raitola, Lahada, Aswakhola, Raigoda, Rupabalia, Sadangi A&B, Gondia, Baliposi and Kankira blocks. Halda can be potentially available in Bega, Sadangi, Aswakhola, Rupabalia blocks. Sal regeneration is good in Lahada, Gondia, Rupabalia, moderate in Rupabalia, Raigada, Kankira, Sadangi A, excellent in Sadangi B, Lahada A&B. Overall, the regeneration of NTFP, medicinal plants is good in Sadangi, Lahada, Baliposi, Raigoda, Kankira and Rupabalia. So, in these blocks special measures to protect these plants can be taken up and in addition plantation of these species can also be resorted to aid the natural regeneration.

K.Nagar East

The range has good Sal Forest. In this range in most of the blocks young seedlings of Sal exist and the status of its regeneration extends from fair to excellent in Birasal, Ranjagarh, Maulabhanja and Jirindamali. It is also observed that the regeneration of Mahula, Chara, Kurein, Kendu occurs in blocks like Birasal, Ranjagarh, Maulabhanja, etc.

Bhuban

In Bhuban Range the regeneration is very deficient. The regeneration of Asan, Chara, NTFP and medicinal plant species like Kendu, Kurehi are fair in the blocks like Balibo, Bhairpur, Bhuban Dhalpada, Tiploi, Sunajhari etc. Sal regeneration is moderate to good in all the blocks. Needs special attention for its protection and rehabilitation through artificial regeneration.

K.Nagar West

In this range the regeneration of Chara, Telkurma, Kendu, Asan, Kurein, Mahula is seen in Anantapur, Anlaberini, Kadalipal, Kankili, Machhia, Madhi, Siarmalia, Sundarkhol, and Suniamaru. Sal regeneration is excellent in all Forst Blocks except Sunajhari.

Mahabirod

The range has crop condition as incase of K Nagar E&W Range. Then the regeneration of Chara, Kurehi, Kendu, Khair, Mai, Telkurma are fair in Antapur, Barabanka N&S, Dalia, Khalpal and Talcher border. Sal regeneration is excellent in all Forst Blocks except Khalpal & Talcher border.

Hindol

In Kandhara block regeneration of Bela, Kendu, Kurein, Neem are fair to good. The regeneration of Bela, Jammu, Karada, Kendu, Khakda, Kuein, Neem are observed in Bompa, Hitinda, Kai, Kansara, Nandinia and Patalo. Sal is deficient in all Forest Blocks except Hitinda & Kai.

In general, it is observed that the recruits of Sal are excellent in Kamakhya Nagar E & W abd Mahabirod Range and minimum in other ranges. This may be due to the ground fire and removal of seeds. The medicinal and NTFP regeneration is observed good to moderate in many of the blocks. Special protection measures are necessary to protect the regeneration.

2A.6 FLORISTIC DIVERSITY

2A.6.1 Biological diversity or biodiversity is the variety of all life forms on earth. Its complexities are measured in terms of variation at genetic, species and ecosystem levels. The totality of genes, species and ecosystem of a region make up the vital natural resource and a reduction in its frequency constitutes a loss of biodiversity.

2A.6.2 Though no systematic scientific study has been carried out in the past in the forests of Dhenkanal Division, from the present rate of destruction of forest and natural habitat, it can be concluded that biodiversity is continuously on the decline. The natural forests possess myriads of living organisms that are inter-dependent for their survival. So, depletion of any one species will adversely affect the population of other species. Present management of forests is aimed at maintaining this symbiotic relationship. The study conducted in this plan has aimed at knowing the species richness of different flora only. Therefore, it is more appropriate to say it Floristic Diversity instead of Bio Diversity.

2A.6.3 The earlier concept of forest management was revenue or rather timber oriented. In the recent past floristic diversity management has also been given weightage in the forestry planning and management. With better understanding of interdependence of species, floristic diversity importance has been realized of late. Now each and every tree, herb, shrub, climber, fungi, algae etc. are equally waiting for the scientific research to prove it to be indispensable for the benefit of mankind. Hence emphasis has been laid on the floristic diversity studies in this Plan.

2A.6.4 In order to arrive at the species diversity as per field data, **Modified Simpson's Floristic Diversity Index** was used. The formula being,

$D = 1 - [\sum (n_i /N)^2]$

D refers to Floristic diversity Index

i refers to number of species from 1 to n

N is total number of individuals of all the species

n_i is the number of individuals of the given species, i, in the sampled area

The index D is a ratio, which varies from 0 to 1

2A.6.5 Method of Studies

Floristic diversity survey has been caired out in all the 64 RF blocks except Kapilash. The Floristic diversity survey has been carried out in all the grid lines, which was already laid out for the purpose of Growing stock enumeration. In each gird line of the Compartment random sample plots of size 20mX20m were laid down with the help of four pegs fixed at four corners of the plot. In order to avoid repetition of counting, the plot was divided into four sub plots. Counting was done meticulously along the line of the rope /pole to ensure minimum error. The details of all species of trees, shrubs, herbs/grasses, and climbers were recorded. In case of difficulty in identifying a species, knowledgeable local people, vaidyas, and retired forest staff were consulted. The Floristic diversity results for those 64 Forest Blocks along with Dominance value of individual enumerated species Forest Block wise is reflected in **Annexure-XV**.

2A.6.6 Findings of the Studies

The detail results of the floristic diversity data Forst Block wise is given below **Table No- 2A.5.**

Table-2A.5 ABSTRACT OF FLORISTIC DIVERSITY SURVEY

S. No.	Name of the Forest Block	No of Indivisual Species (n_i)	Total Species in sample plots (N)	Dominance Value $(n_i/N)^2$	Floral diversity index
1	Charkhola	36	1849	0.1216371	0.8783629
2	Ghantabaja	56	2866	0.1310944	0.8689056
3	Saptasajya	48	1570	0.0419303	0.9580697
4	Mayuri	37	1909	0.1276858	0.8723142
5	Nimidha	38	2280	0.2526504	0.7473496
6	Korea	29	1182	0.2352576	0.7647424
7	Megha	22	263	0.0745276	0.9254724
8	Matharagadi	28	760	0.161153	0.838847
9	Tamanda	32	1245	0.1398126	0.8601874

10	Matiamundia	26	1965	0.3284276	0.6715724
11	Kankadahada	28	836	0.120593	0.879407
12	Sulia	25	1203	0.1362566	0.8637434
13	Patapuri	23	633	0.2092021	0.7907979
14	Godabole	21	655	0.1554898	0.8445102
15	Kotaberena	32	5034	0.3132787	0.6867213
16	Jaripal	26	2137	0.1394564	0.8605436
17	Belabania	30	1108	0.1831218	0.8168782
18	Ramai	38	1733	0.1537984	0.8462016
19	Aswakhola	74	3724	0.1038624	0.8961376
20	Raigoda	26	227	0.0717985	0.9282015
21	Gondia	20	1276	0.1665385	0.8334615
22	Baliposi	10	957	0.7040123	0.2959877
23	Nischinta	18	915	0.1471905	0.8528095
24	Sadangi(B)	14	569	0.3882311	0.6117689
25	Raitola	24	1404	0.5509107	0.4490893
26	Bega	27	1143	0.1229401	0.8770599
27	Rupabalia	27	695	0.1134952	0.8865084
28	Kankira	21	794	0.1209956	0.8790044
29	Lahada (A)	27	922	0.1175625	0.8824375
30	Lahada (B)	28	748	0.1075596	0.8924404
31	Sadangi (A)	35	926	0.2048011	0.7951989
32	Sunajhari	64	3689	0.0995176	0.9004824
33	Moulabhanja	34	1338	0.0716718	0.9283282
34	Ranjagarh	130	134549	0.0731936	0.9268064
35	Anlaberini	35	1187	0.1181495	0.8818505
36	Machhia	46	1241	0.0987968	0.9012032
37	Suniamaru	52	6252	0.2953529	0.7086471
38	Bhairapur	24	2201	0.3092314	0.6907686
39	Tipiloi	22	5374	0.2549408	0.7450592
40	Jiridamali	26	1112	0.5205492	0.4794508
41	Birasal	19	502	0.1681536	0.8318464
42	Dholpada	22	922	0.1820267	0.8179733
43	Balibo	21	855	0.2107493	0.7892507
44	Bhuban	25	1012	0.1572552	0.8427448
45	Sundarkhol	57	5058	0.2658087	0.7341913
46	Nandabir	19	788	0.2485860	0.7514140
47	Anantapur	123	94252	0.0647345	0.9352655
48	Talcher Boarder	25	1143	0.1159226	0.8840774
49	Madhi	57	1419	0.0692861	0.9004065
50	Kankili	25	1394	0.1080888	0.8919112
51	Siarimalia	26	888	0.1408342	0.8591658
52	Barbank (North)	14	1684	0.3547469	0.6452531
53	Barbank (South)	21	2188	0.1360550	0.8639450
54	Khalpal	19	480	0.183724	0.816276

55	Dolia	23	1707	0.1520405	0.8479595
56	Kadalipal	15	247	0.2556180	0.7443820
57	Hitinda	33	2152	0.0665401	0.9334599
58	Kandhara	129	38632	0.0519228	0.9480772
59	Nandania	25	402	0.1451202	0.8548798
60	Bompa	43	2271	0.1569521	0.8430479
61	Potalo	37	630	0.0922651	0.9077349
62	Ambithi	32	1120	0.1117873	0.8882127
63	Kansara	40	1187	0.1341874	0.8658126
64	Kai	46	1608	0.2205128	0.7794872

2A.7. PLANTATIONS

Large tracks of plantations have been raised in the tract of the Dhenkanal Division prior to out going plan and during the last plan period comprising economic and miscellaneous species in the different reserved Forest Blocks and outside the RF areas by different wings like Territorial, Afforestation, and the OFDC Ltd. etc. The total plantation taken up prior to outgoing plan is 14,157.188 ha. During last plan period Block 6039.00 ha. RDF - 4506.03 ha, Avenue -143.2 RKM & Urban-15,000 nos saplings. Most of the plantations raised do not show good growth due to lack of protection measures and lack of involvement of the people. Wherever the people are active, the plantations are protected.

As per record the Forest Block wise plantation taken up prior to outgoing plan is furnished in following **Table no 2A.6**

TABLE – 2A.6 **LIST OF PLANTATIONS RAISED IN THE DIVISION**

Year	Scheme	Location	Area	Species planted	Planting Agency
1	2	3	4	5	6
1980-81	NREP G.Mixed plant	Raitola	12	Mixed plantation	DFO
	NREP G.Mixed plant	Sadangi	12	Mixed plantation	DFO
	NREP G.Mixed plant	Rupabalia	12	Mixed plantation	DFO
	NREP G.Mixed plant	Eleijanga	7	Mixed plantation	DFO
1981-82	A.Economic plantation	Saptasajya	14	Teak	DFO
	G.Mixed plantation(NREP)	Mayuri	8	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Kaimati	3	Mixed plantation	DFO
	A.Economic plantation	Matiamundia TP	13	Teak	DFO
	G.Mixed plantation(NREP)	Matiamundia	12	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Jaripal	8	Mixed plantation	DFO
	A.Economic plantation	Kandhara TP	8	Teak	DFO
	G.Mixed plantation(NREP)	Rajmohanpur	10	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Bampa	10	Mixed plantation	DFO
	A.Economic plantation	Anantapur TP	20	Teak	DFO
	A.Economic plantation	Maulabhanja	20	Teak	DFO
	G.Mixed plantation(NREP)	Balibo	20	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Siarimalia -B	12	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Madhi- B	12	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Barabanka -B	12	Mixed plantation	DFO
1982-83	A.Economic plantation	Saptasajya	15	Teak	DFO
	A.Economic plantation	Matiamundia TP	15	Teak	DFO
	G.Mixed plantation(NREP)	Matiamundia	10	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Sadangi	10	Mixed plantation	DFO

	G.Mixed plantation(NREP)	Ganeshkhola	1.2	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Debasabha	2.8	Mixed plantation	DFO
	A.Economic plantation	Sorisiapada TP	13	Teak	DFO
	A.Economic plantation	Bimbori	15	Teak	DFO
	G.Mixed plantation(NREP)	Koi	10	Mixed plantation	DFO
	G.Mixed plantation(NREP)	Balibo	10	Mixed plantation	DFO
	A.Economic plantation	Maulabhanja TP	20	Teak	DFO
	G.Mixed plantation(NREP)	Khalpal B	10	Mixed plantation	DFO
1983-84	A.Economic plant (NREP)	Charkhola TP	16	Teak	DFO
	A.Economic plantation	Koriapal	18	Teak	DFO
	Economic plantation	Jharan & Saptasajya	20	Teak	DFO
1983-84	**Drought Relief Assistance**				DFO
	Mixed plantation	Nimidha	26	Mixed plantation	DFO
	Mixed plantation	Jaripal	10	Mixed plantation	DFO
	Mixed plantation	Matiamundia	8	Mixed plantation	DFO
	Mixed plantation	Sadangi	12	Mixed plantation	DFO
	Mixed plantation	Rupabalia	10	Mixed plantation	DFO
	Mixed plantation	Khankira	8	Mixed plantation	DFO
	Mixed plantation	Nathua & Radhadeipur	25	Mixed plantation	DFO
	Mixed plantation	Debasabha park	4	Mixed plantation	DFO
	A.Economic Plantation	Kapilas		Teak	DFO
	A.Economic plantation	Near Chotighar TP	12	Teak	DFO
	A.Economic plantation	Ramai TP	14	Teak	DFO
	A.Economic plantation	Sorisiapada TP	4	Teak	DFO
1983-84	**State plan scheme**				
	Mixed plantation	Aswakhola	5	Mixed plantation	DFO
	Mixed plantation	Kapilas	16	Mixed plantation	DFO
1983-84	**Drought Relief Assistance**				
	G.Mixed plantation	Karnapur ,KF	30	Mixed plantation	DFO
	G.Mixed plantation	Dandiri ,KF	40	Mixed plantation	DFO
	G.Mixed plantation	Kandhara ,KF	40	Mixed plantation	DFO
	A.Economic plantation	Bimbori(Kandhara) RF	12	Teak	DFO
	A.Economic plantation	Dandiri TP	20	Teak	DFO
1983-84	**Drought Relief Assistance**				
	G.Mixed plantation	Sunajhari	46	Mixed plantation	DFO
	G.Mixed plantation	Suniamaru	46	Mixed plantation	DFO
	G.Mixed plantation	Anlaberini	20	Mixed plantation	DFO
	G.Mixed plantation	Ranjagarh & Maulabhanja	70	Mixed plantation	DFO
	A.Economic plantation	Kadalipal	20	Teak	DFO
1983-84	**Drought Relief Assistance**				
	G.Mixed Plantation	Bhuban	4	Mixed plantation	DFO
	G.Mixed Plantation	Maulabhanja	80	Mixed plantation	DFO
	G.Mixed Plantation	Maulabhanja	15	Mixed plantation	DFO
	G.Mixed Plantation	Bhuban B	15	Mixed plantation	DFO
	G.Mixed Plantation	Siarimalia -B	30	Mixed plantation	DFO
	G.Mixed Plantation	Siarimalia -B	20	Mixed plantation	DFO
1984-85	**State plane scheme**				
	Normal economic plantation	Jharana TP	15	Teak	DFO
	Normal economic plantation	Saptasajya	5	Teak	DFO
	N.R.E.P Avenue plan	Panchabati NH-42	4	Teak	DFO

	Non plan scheme				
	G.Mixed plantation	Sadangi	10	Mixed plantation	DFO
	N.R.E.P mixed plan	Kapilas	20	Mixed plantation	DFO
	N.R.E.P mixed plan	Sadangi & Lahada	21	Mixed plantation	DFO
	Drought Relief Assistance				
	A.Economic plantation	Sadangi & Koi	30	Teak	DFO
	Non plan scheme E.Sowing & Planting				
	G.Mixed plantation	Hindol	11	Mixed plantation	DFO
	G.Mixed plantation	Koi	19	Mixed plantation	DFO
	N.R.E.P mixed plantation	Rajmohanpur	6	Mixed plantation	DFO
	Drought Relief Assistance				
	G.Mixed plantation	Anantapur A	10	Mixed plantation	DFO
	G.Mixed plantation	Sunajhari A	11	Mixed plantation	DFO
	G.Mixed plantation	Ranjagarh	60	Mixed plantation	DFO
	G.Mixed plantation	Maulabhanja	60	Mixed plantation	DFO
	513.C.O.L on forest				
	A.Economic plantation	Maulabhanja	10	Teak	DFO
	A.Economic plantation	Siarimalia -B	40	Teak	DFO
	Drought Relief Assistance				
	G.Mixed plantation	Siarimalia -B	19	Mixed plantation	DFO
1985-86	A.Economic plantation	Kapilas	4	Teak	DFO
	A.Economic plantation	Charkhola	15	Teak	DFO
	N.R.E.P Scheme				
	G.Mixed plantation	Charkhola A(strip)	1	Mixed plantation	DFO
	G.Mixed plantation	Kiajhara & Kapilas RF	11	Mixed & Teak	DFO
	G.Mixed plantation Avenue	Korian to Panchupati	3 km	Mixed & Teak	DFO
	G.Mixed plantation	Sarangi B	20	Mixed plantation	DFO
	G.Mixed plantation	Baliposi	10	Mixed plantation	DFO
	G.Mixed plantation	Gondia B	10	Mixed plantation	DFO
	G.Mixed plantation	Aswakhola	20	Mixed plantation	DFO
	A.Economic plantation	Koi B	20	Teak	DFO
	N.R.E.P Scheme				
	Mixed plantation	Patalo	12	Mixed plantation	D.R.D.A
	Mixed plantation	Koi (Karnapur)	14	Mixed plantation	D.R.D.A
	Mixed plantation	Koi (Sarasingh Gap plan)	12	Mixed plantation	D.R.D.A
	Mixed plantation	Potalo (Gap plan)	2	Mixed plantation	D.R.D.A
	A.Economic plantation	Anlabereni TP	10	Teak	DFO
	A.Economic plantation	Kadalipal- B- TP	15	Teak	DFO
	N.R.E.P Scheme				
	Mixed plantation	Ranjagarh	15	Mixed plantation	DFO
	Mixed plantation	Anlaberini B	25	Mixed plantation	DFO
	Mixed plantation	Sunajhari	30	Mixed plantation	D.R.D.A
	Mixed plantation	Maulabhanja	21	Mixed plantation	DFO
	A.Economic plantation	Maulabhanja	10	Teak	DFO
	N.R.E.P Scheme				
	Mixed plantation	Anantapur A	25	Mixed plantation	DFO
	Mixed plantation	Siarimalia	40	Mixed plantation	DFO
1986-87	A.Economic plantation	Kapilas	20	Teak	DFO
	N.R.E.P Scheme				
	G.Mixed plantation	NH-42 bye pass Road	9 kms	Mixed plantation	DFO

	G.Mixed plantation	Badagila to Saptasajya	2 Kms	Mixed plantation	DFO
	G.Mixed plantation	Kapilas P.W.D road	2 kms	Mixed plantation	DFO
	A.Economic Plantation	Khankira A TP	25	Teak	DFO
	N.R.E.P Scheme				
	Mixed plantation	Deogaon	10	Fodder	DFO
	Mixed plantation	Deogaon	6.4	Champa	DFO
	Mixed plantation	Dadhisinga	7.5	Mixed plantation	DFO
	Mixed plantation	Thakurpal River bank	2.5	Mixed plantation	DFO
	Mixed plantation	Sadangi to Deogaon	3	Mixed plantation	DFO
	Mixed plantation	Deogaon to Kapilas	2	Mixed plantation	DFO
	R.L.E.G.P.Scheme	Raitola-B (Gap planting)	344	Mixed plantation	DFO
	R.L.E.G.P.Scheme	Eleijanga	40	Mixed plantation	DFO
	A.Economic plantation	Kandhara A	10	Teak	DFO
	N.R.E.P Scheme				
	Mixed plantation	Gudianali to Karanda	5	Teak	DFO
	A.Economic plantation	Birasal B	20	Teak	DFO
	N.R.E.P Scheme				
	Mixed plantation	Mahuli to K.Nagar	2	Teak	DFO
	R.L.E.G.P Scheme	Suniamaru B	384	Teak	D.R.D.A
	R.L.E.G.P Scheme	Tipiloi B	240	Teak	D.R.D.A
	R.L.E.G.P Scheme	Bhuban B	144	Teak	D.R.D.A
	A.Economic plantation	Anantapur A	25	Teak	DFO
	N.R.E.P. Scheme	Charkhola	55	Mixed plantation	OFDC
	N.R.E.P. Scheme	Kankadahada	70	Mixed plantation	OFDC
	N.R.E.P. Scheme	Khankira	28	Mixed plantation	OFDC
	N.R.E.P. Scheme	Lahada B	30	Mixed plantation	OFDC
	N.R.E.P. Scheme	Jiridamali B	55	Mixed plantation	OFDC
	N.R.E.P. Scheme	Bharipur B	45	Mixed plantation	OFDC
	N.R.E.P. Scheme	Tipiloi B	20	Mixed plantation	OFDC
	M.F.P. Scheme	Lahada B	20	Mixed plantation	OFDC
	M.F.P. Scheme	Bhairpur B	10	Mixed plantation	OFDC
	M.F.P. Scheme	Birasal B	10	Mixed plantation	OFDC
	Silvipasture	Nadiali VF	12.5	Mixed plantation	OFDC
1986-87	R.L.E.G.P Scheme	Mahabiraod(gap planting)	25kms	Teak	DFO
	N.R.E.P Scheme	Multiropw avence plan NH-42	5	Teak	DFO
	Avence plantation	Sadangi to Pitiri	5Kms		DFO
	R.L.E.G.P Scheme	Barabanka-N	384	Teak	DFO
1987-88	A.Economic plantation	Kapilas	25	Teak	DFO
	R.L.E.G.P Scheme	Megha B(Gap plan)	176	Mixed plantation	DFO
	R.L.E.G.P Scheme	Tamanda B(Gap plan)	176	Mixed plantation	DFO
	A.Economic plantation	Ramai A	15	Teak	DFO
	N.R.E.P Scheme				
	Mixed plantation	Dandeibereni	39	Mixed plantation	DFO
	Mixed plantation	Lahada B	10	Mixed plantation	DFO
	Mixed plantation	Rampada	6	Mixed plantation	DFO
	Mixed plantation	Deogaon	30	Mango plan	DFO
	R.L.E.G.P Scheme	Sadangi B	176	Mixed plantation	DFO
	A.Economic plantation	Kandhara A	20	Teak	DFO
	N.R.E.P Scheme	Satamaili & Panchapada	20	Mixed plantation	DFO
	N.R.E.P Scheme	Pada	20	Mixed plantation	D.R.D.A

	R.L.E.G.P Scheme	Koi B (Gap plan)	176	Mixed plantation	DFO
	A.Economic plantation	Birasal B	20	Teak	DFO
	N.R.E.P Scheme	Khajuria	25	Mixed plantation	DFO
	R.L.E.G.P Scheme	Bhairpur B	176	Mixed plantation	D.R.D.A
	R.L.E.G.P Scheme	Tipiloi B	176	Mixed plantation	DFO
	A.Economic plantation	Anantapur A	20	Teak	DFO
	R.L.E.G.P Scheme	Pangatira	176	Mixed plantation	DFO
	N.R.E.P Scheme	Barabanka -South	50	Mixed plantation	DFO
	R.L.E.G.P Scheme	Kankili B	176	Mixed plantation	DFO
	N.R.E.P Scheme	Kankadahada B	50	Mixed plantation	OFDC
	N.R.E.P Scheme	Nuapada RL	20	Mixed plantation	OFDC
	N.R.E.P Scheme	Bijipur KF	30	Mixed plantation	OFDC
	N.R.E.P Scheme	Bharatipahar KF	20	Mixed plantation	OFDC
	N.R.E.P Scheme	Jamunakote KF	20	Mixed plantation	OFDC
	N.R.E.P Scheme	Kamarda KF	30	Mixed plantation	OFDC
	N.R.E.P Scheme	Budhiragadi KF	70	Mixed plantation	OFDC
	N.R.E.P Scheme	Gambharikhol KF	50	Mixed plantation	OFDC
	N.R.E.P Scheme	Gondia B	20	Mixed plantation	OFDC
	N.R.E.P Scheme	Jiridamali B	25	Mixed plantation	OFDC
	N.R.E.P Scheme	Machhia B	35	Mixed plantation	OFDC
	N.R.E.P Scheme	Bhairpur B	35	Mixed plantation	OFDC
	Compensatory	Saptasajya A	35	Mixed plantation	OFDC
	Silvipa Sture	Gunudei R.L	15	Mixed plantation	OFDC
1988-89	A.Economic plantation	Kapilas	160	Teak	DFO
	R.L.E.G.P Scheme	Megha B	166	Mixed plantation	DFO
	R.L.E.G.P Scheme	Tamanda B	166	Mixed plantation	DFO
	A.Economic plantation	Ramai A	20	Teak	DFO
	N.R.E.P Scheme	Lahada	100	Mixed plantation	DFO
	R.L.E.G.P.Scheme	Lahada	167	Mixed plantation	DFO
	A.Economic Plantation	Potalo TP	20	Teak	D.R.D.A
	R.L.E.G.P.Scheme	Koi B	106	Mixed plantation	D.R.D.A
	R.L.E.G.P.Scheme	Analabereni B	167	Mixed plantation	DFO
	R.L.E.G.P.Scheme	Tipiloi	167	Mixed plantation	DFO
	R.L.E.G.P.Scheme	Sahala	187	Mixed plantation	DFO
	R.L.E.G.P.Scheme	Kankili	167	Mixed plantation	DFO
	N.R.E.P Scheme				
	Commercial	Saptasajya A	22	Mixed plantation	OFDC
	Commercial	Saptasajya A	40	Mixed plantation	OFDC
	Commercial	Ghantabaja A	345	Mixed plantation	OFDC
	Commercial	Ghantabaja A	35	Mixed plantation	OFDC
	N.R.E.P Scheme	Machhia	45	Mixed plantation	OFDC
	N.R.E.P Scheme	Khalpal B	25	Mixed plantation	OFDC
	N.R.E.P Scheme	Dhalapada	60	Mixed plantation	OFDC
	N.R.E.P Scheme	Ambapalas RL	100	Mixed plantation	OFDC
	N.R.E.P Scheme	Shyamal D	40	Mixed plantation	OFDC
	N.R.E.P Scheme	Nuapada RL	50	Mixed plantation	OFDC
	N.R.E.P Scheme	Chirulei RL	30	Mixed plantation	OFDC
	N.R.E.P Scheme	Jamchakad RL	80	Mixed plantation	OFDC
	Silvipasture	Malpura	10	Mixed plantation	OFDC
	Silvipasture	Jamchakad RL	10	Mixed plantation	OFDC

	Silvipa Sture	Kotaberena B	58	Mixed plantation	OFDC
1989-90	**J R Y Scheme**				
	Gap filling under RLEGP	Kankadahada	157	Mixed plantation	DFO
	Gap filling under RLEGP	Matiamundia	157	Mixed plantation	DFO
	Gap filling under RLEGP	Koi	157	Mixed plantation	D.R.D.A
	Gap filling under RLEGP	Sahala	157	Mixed plantation	DFO
	Gap filling under RLEGP	Siarimalia	157	Mixed plantation	DFO
	Gap filling under RLEGP	Maulabhanja	157	Mixed plantation	D.R.D.A
	Gap filling under RLEGP	Anlabereni	157	Mixed plantation	DFO
	4406 C.O.L				
	A.Economic Plantation	Kapilas	120	Teak	DFO
	A.Economic Plantation	Kapilas	40	Teak	DFO
	A.Economic Plantation	Aswakhola	40	Teak	DFO
	A.Economic Plantation	Ramai	50	Teak	DFO
	SPL. Scheme				
	TRW for beneficiary of SC/ST	Dallar	10	Bamboo	D.R.D.A
	TRW for beneficiary of SC/ST	Bhapur	5	Bamboo	DFO
	TRW for beneficiary of SC/ST	Khajuria	5	Bamboo	DFO
	TRW for beneficiary of SC/ST	Rajmohanpur	5	Bamboo	D.R.D.A
	TRW for beneficiary of SC/ST	Nabakishorepur	5	Bamboo	DFO
	N.R.E.P Scheme				
	Commercial	Saptasajya A	160	Mixed plantation	OFDC
	Commercial	Ghantabaja A	95	Mixed plantation	OFDC
	Commercial	Kotaberena B	175	Mixed plantation	OFDC
	N.R.E.P Scheme	Jiridamali B	25	Mixed plantation	OFDC
	Silvipa Sture	Dhalapada B	25	Mixed plantation	OFDC
	N.R.E.P Scheme	Bijipur RL	25	Mixed plantation	OFDC
	N.R.E.P Scheme	Sahala D	25	Mixed plantation	OFDC
	N.R.E.P Scheme	Kanchanbahali B	50	Mixed plantation	OFDC
	Silvipasture	Sahala D	25	Mixed plantation	OFDC
	Silvipasture	Kutinia RL	25	Mixed plantation	OFDC
1990-91	**4406 C.O.L**				
	A.Economic plantation	Kapilas A	30	Teak	DFO
	A.Economic plantation	Kapilas A	20	Teak	DFO
	A.Economic plantation	Kapilas A	10	Teak	DFO
	SPL. Scheme				
	TRW for beneficiary of SC/ST	Kalikaprasad	10	Bamboo	DFO
	TRW for beneficiary of SC/ST	Kuseida	10	Bamboo	D.R.D.A
	TRW for beneficiary of SC/ST	Brahmaniapal	20	Bamboo	D.R.D.A
	TRW for beneficiary of SC/ST	Anlabereni	10	Bamboo	D.R.D.A
	TRW for beneficiary of SC/ST	Barabanka	10	Bamboo	DFO
	TRW for beneficiary of SC/ST	Sundikateni	5	Bamboo	DFO
	M.F.P. Scheme				
	M.F.P. Scheme	Raidihi RL	35	Mixed plantation	OFDC
	M.F.P. Scheme	Gangadharaprasad RL	15	Mixed plantation	OFDC
	M.F.P. Scheme	Kukudajhara RL	10	Mixed plantation	OFDC
	M.F.P. Scheme	Kotaberena RL	30	Mixed plantation	OFDC
	M.F.P. Scheme	Koriapal RL	30	Mixed plantation	OFDC
	M.F.P. Scheme	Annapurnapur RL	30	Mixed plantation	OFDC
	A.O.P	Baliamba RL	10	Mixed plantation	OFDC

	A.O.P	Kukudajhara RL	15	Mixed plantation	OFDC
	A.O.P	Koriapal RL	20	Mixed plantation	OFDC
	A.O.P	Annapurnapur RL	5	Mixed plantation	OFDC
	A.O.P	Suruta RL	25	Mixed plantation	OFDC
	Commercial	Saptasajya A	100	Mixed plantation	OFDC
	Commercial	Kotaberena B	80	Mixed plantation	OFDC
	Commercial	Belabania B	50	Mixed plantation	OFDC
1991-92	**JRY Scheme**				
	Block plantation	Kapilas A	10	Mixed & Teak	DFO
	Block plantation	Saptasajya A	20	Mixed & Teak	DFO
	Block plantation	Lahada B	15	Mixed & Teak	DFO
	Block plantation	Ramai A	15	Mixed & Teak	DFO
	A.Economic(Block)	Kapilas A	40	Teak	DFO
	A.Economic(R.D.F)	Koi A	25	Teak	DFO
	A.Economic(R.D.F)	Sunajhari A	25	Teak	DFO
	TRW Scheme				
	for beneficiary of S.C/S.T	Kalikaprasad	5	Bamboo	DFO
	for beneficiary of S.C/S.T	Baladiabandha	3	Bamboo	DFO
	for beneficiary of S.C/S.T	Brahmaniapal	10	Bamboo	DFO
	for beneficiary of S.C/S.T	Udayagiri	5	Bamboo	DFO
	Commercial	Saptasajya A	50	Mixed plantation	OFDC
	Commercial	Lahada A	125	Mixed plantation	OFDC
	Commercial	Raigoda A	125	Mixed plantation	OFDC
	Commercial	Aswakhola A	50	Mixed plantation	OFDC
	Commercial	Sunajhari A	100	Mixed plantation	OFDC
	R.D.F	Lahada A	25	Mixed plantation	OFDC
	R.D.F	Talcher Border A	50	Mixed plantation	OFDC
	Peri-Urban	Charkhola A	10	Mixed plantation	OFDC
	N.R.E.P Scheme	Kotaberena RL	30	Mixed plantation	OFDC
	N.R.E.P Scheme	Kukudajhara RL	40	Mixed plantation	OFDC
	N.R.E.P Scheme	Kadalipal RL	30	Mixed plantation	OFDC
	J R Y Scheme	Odisa RL	30	Mixed plantation	OFDC
	J R Y Scheme	Babandha RL	30	Mixed plantation	OFDC
	Compensatory	Bharatipahad RL	15	Mixed plantation	OFDC
1992-93	A.Economic Plantation	Kapilas A	5	Teak	DFO
	A Economic Plantation - (Block Plan)	Saptasajya A	10	Teak	DFO
		Ramai A	15	Teak	DFO
	A.Economic Plantation - (RDF Plan)	Matharagadi B	30	Miscellaneous	DFO
		Kapilas A	20	Miscellaneous	DFO
	-do-	Siarimalia B	20	Miscellaneous	DFO
	-do-	Koi B	30	Miscellaneous	DFO
	N.R.E.P Scheme				
	Comensatory	Kumusi RL	34.71	Mixed plantation	OFDC
	Compensatory	Bharatipahad RL	62.11	Mixed plantation	OFDC
	Commercial	Lahada A	100	Mixed plantation	OFDC
	Commercial	Aswakhola A	100	Mixed plantation	OFDC
	N.R.E.P Scheme	Patapuri B	60	Mixed plantation	OFDC
	N.R.E.P Scheme	Kankadahada B	60	Mixed plantation	OFDC
	N.R.E.P Scheme	Gondia B	75	Mixed plantation	OFDC
	N.R.E.P Scheme	Kotaberena B	55	Mixed plantation	OFDC

	N.R.E.P Scheme	Bhuban B	40	Mixed plantation	OFDC
	N.R.E.P Scheme	Barabanka B	60	Mixed plantation	OFDC
1993-94	A.Economic	Saptasajya A	5	Teak	DFO
	A.Economic plantation	Putipala of R.Garh ,RF	20	Teak	DFO
	A.Economic plantation	Ramai A	5	Teak	DFO
	N.R.E.P Scheme				
	N.R.E.P Scheme	Majuri	50	Mixed plantation	OFDC
	N.R.E.P Scheme	Khankira	50	Mixed plantation	OFDC
	N.R.E.P Scheme	Majuri	50	Mixed plantation	OFDC
	N.R.E.P Scheme	Gondia	50	Mixed plantation	OFDC
	N.R.E.P Scheme	Bhuban	50	Mixed plantation	OFDC
	N.R.E.P Scheme	Barabanka	30	Mixed plantation	OFDC
	N.R.E.P Scheme	Anlabereni	20	Mixed plantation	OFDC
1994-95	A.Economic plantation	Lahada	3	Teak	DFO
	A.Economic plantation	Ranjagarh	39.5	Teak	DFO
	A.Economic plantation	Ranjagarh	17.5	Bamboo	DFO
	RDF Plantation (cleaning)	Koi of Hindol	20	Cleaning	DFO
	JRY Scheme	Jatia of K.Nagar ,RF	10	Bamboo	DFO
	N.R.E.P Scheme				
	N.R.E.P Scheme	Lahada B	100	Mixed plantation	OFDC
	N.R.E.P Scheme	Ramai	40	Mixed plantation	OFDC
	N.R.E.P Scheme	Gondia	40	Mixed plantation	OFDC
	N.R.E.P Scheme	Jiridamali B	28	Mixed plantation	OFDC
	N.R.E.P Scheme	Jiridamali A	12	Mixed plantation	OFDC
	N.R.E.P Scheme	Haladigundi RL	40	Mixed plantation	OFDC
	N.R.E.P Scheme	Khajuria RL	16	Mixed plantation	OFDC
	N.R.E.P Scheme	Rahani RL	24	Mixed plantation	OFDC
1995-96	A.Economic(Block)	Ranjagarh of K.Nagar	25	Teak	DFO
	RDF Plantation (gap)	Koi of Hindol	30	Miscellaneous	DFO
1996-97	A.Economic (Block)	Ranjagarh	18	Teak	DFO
	A.Economic (Block)	Khateibereni	12	Teak	DFO
	A.Economic (Block)	Kapilas	5	Teak	DFO
	RDF Plantation	Godabalua	30	Bamboo	DFO
	RDF Plantation	Ranjagarh	10	Bamboo	DFO
	Comp. Afforestation	Rajmohanpur	83.3	Miscellaneous	DFO
	N.R.E.P Scheme	Lahada	125	Mixed plantation	OFDC (Aff)
	N.R.E.P Scheme	Ramai B	25	Mixed plantation	OFDC (Aff)
	N.R.E.P Scheme	Belabania B	75	Mixed plantation	OFDC (Aff)
	N.R.E.P Scheme	Balibo B	37	Mixed plantation	OFDC (Aff)
	N.R.E.P Scheme	Bhuban B	38	Mixed plantation	OFDC(Aff)
1997-98	A.Economic(Block)	Ranjagarh near Koi	12	Teak	DFO
	A.Economic (Block)	Ranjagarh	2	Teak	DFO
	Comp. Afforestation	Rajmohanpur	20	Bamboo & Anla	DFO
	E.A.S (RDF work)	Radhadeipur	3	Cashewnut	DFO
		Kapilas Zoo	3	Fodder	DFO
1998-99	A.Economic(Block)	Ranjagarh	18	Teak	DFO
1999-2000	Untied- Fund of DRDA	Kapilas	2	Kia	DRDA

	Comp.Afforestation	Rupabeda & Patabeda -	20	Miscellaneous	DFO
		Kantapal	8	Miscellaneous	DFO
2000-01	E.A.S (block plantation)	Siarimalia	10	Gambhar	
				Simil	DFO
	(Jagannath Banaprakalpa)	Sunajhari	12	Phasi,Asan,Arjun,	D.R.D.A
		Kapilas	1.25	Phasi,Asan,Arjun,	D.R.D.A
2001-02	EAS block plantation	Saptasajya	14	Phasi,Asan,Arjun,	D.R.D.A
		Kapilas	6	Phasi,Asan,Arjun,	D.R.D.A
	(Jagannath Banaprakalpa)	Kapilas	5	Phasi,Asan,Arjun,	D.R.D.A
		Ramai	5	Simil,Arjun,Asan	D.R.D.A
		Sadangi	5	Simil,Arjun,Asan	D.R.D.A
		Nuapada	5	Asan	D.R.D.A
		Kandhara	20	Paldhua	D.R.D.A
		Anlabereni	25	Moi	D.R.D.A
		Siarimalia	11.75		DFO
	CRF Drought scheme				
	Block plantation	Kapilas	25	Teak,limba,piasal	DFO
		Charkhola	5	Amla,Sisso,Belo	DFO
		Mayuri	10	Mixed Plantation	DFO
		Ramai	30	Tentuli,jackfruit	DFO
		Sadangi	10	Mixed Plantation	DFO
		Kandhara	40	Mixed Plantation	DFO
		Ranjagarh	15	Mixed Plantation	D.R.D.A
		Talcher Boarder	15	Mixed Plantation	DFO
	Comp.Afforestation	Jhanjiriberena	8	Miscellaneous	DFO
		Rupabeda + Patabeda	4	Miscellaneous	DFO
2002-2003	S,G,R,Y (J.V.P)	Patapuri	10	Mixed Plantation	D.R.D.A
		Kandhara	10	Mixed Plantation	D.R.D.A
		Koi	10	Mixed Plantation	D.R.D.A
		Jharada near Mahisiakuda	15	Mixed Plantation	D.R.D.A
		Dholapasi	15	Mixed Plantation	D.R.D.A
	Comp.Afforestation	Kankadahada	46	Mixed Plantation	DFO
	R D F	Godabalua	4	Miscellaneous	DFO
		Birasal	140	Miscellaneous	DFO
		Rupabalia	22	Miscellaneous	DFO
		Koi	32	Khaira,Babul,Bamboo	DFO
	B-Economic Plantation	Mayuri,RF	7	Teak,Sissu,Gambhari	DFO
		Kapilas,RF	6	Teak,Sissu,Gambhari	DFO
		Kankadahad,RF	4	Teak,Sissu,Gambhari	DFO
		Patapuri, RF	3	Teak,Sissu,Gambhari	DFO
		Gondia,RF	20	Teak,Sissu,Gambhari	DFO
		Ranjagarh, RF	10	Teak,Sissu,Gambhari	DFO
2003-2004	SGRY-JVP Plantation	Gangadgara Prasad ,KF	10	Phasi,	DFO
		Aswakhola,RF	10	Simili ,Asan	DFO
		Ramei,RF	10	Paldhua	DFO
		Raibole,KF	15	Mahalimba	DFO
		Udayagiri,KF &Sunajhari,RF	15	Gambhari,Arjuna	DFO

	Economic Plantation.	Godabolua,RF	25	Teak,Sissu,Gambhari	DFO
		Kandhora,RF	20	Teak,Sissu,Gambhari	DFO
		Khankira,RF	29.50	Teak,Sissu,Gambhari	DFO
		Ranjagarh, RF	10	Teak,Sissu,Gambhari	DFO
		Dhalpada,RF	5	Teak,Sissu,Gambhari	DFO
		Balibo RF	15	Teak,Sissu,Gambhari	DFO
		Kankili RF	20	Teak,Sissu,Gambhari	DFO

The Plantation taken up during the outgoing plan is furnished in **Table-2A.7**

TABLE – 2A.7- BLOCK PLANTATION (From 2004-05 to 2013-14)

2004-05

Sl.No.	Name of the Range	Name of the R.F	Area covered in Ha.	Amount spent.	Work done	Planted by
1	Dhenkanal	Kankadahad RF	15	1,72,170	Block Plantation under Comp.Affn Scheme	DFO
2		Godabolua RF	15	1,72,170	-do-	DFO
3	Hindol	Nandinia RF	20	2,29,560	-do-	DFO
4	Sadangi	Sadangi RF	15	1,72,170	-do-	DFO
5	K Nagar East	Jiridamali RF	25	2,86,950	-do-	DFO
6		Ranjagada RF	15	1,72,170	-do-	DFO
7	K Nagar West	Anantapur RF	20	2,29,560	-do-	DFO
8		Machhia RF	15	1,72,170	-do-	DFO
9	Kapilash	Kapilash RF(Compt-19)	20	2,29,560	-do-	DFO
10		Kapilash RF (Compt. 23)	15	1,72,170	-do-	DFO
11	Odapada	Dolia RF	20	2,29,560	-do-	DFO
12		Talcher border RF	15	1,72,170	-do-	DFO
13	Bhuban	Sunajhari RF	20	2,29,560	-do-	DFO
14		Bhuban RF	20	2,29,560	-do-	DFO
15	K Nagar East	Rupabeda KF	4	25,300	-do-	DFO
		Total	**254**			
2005-06						
1	K Nagar East	Maulabhanja RF	13	1,95,000	Block Plantation under Comp.Affn Prog.	DFO
2		Ranjagarh RF	12	1,80,000	-do-	DFO
3	K Nagar West	Machhia RF	13	1,95,000	-do-	DFO
4	Kapilash	Kapilash RF(Compt.-20)	12	1,80,000	-do-	DFO
5	K Nagar West	Sirimula KF	15	1,17,969	-do-under NFFWP Scheme	DFO
6	Sadangi	Sadangi KF	6	54,929	-do-	DFO
7		Atinda KF	5		-do-	DFO
8	K Nagar East	Haridapada KF	15	2,46,242	-do-	DFO
		Total	**91**			

1	2	3	4	5	6	7
2006-07						
1	Dhenkanal	Megha RF	35	3,51,540	Block Plantationundedr Comp.Affn Prog.	DFO
3	Hindol	Ambithi RF	35	3,51,540	-do-	DFO
4	Sadangi	Rupabalia RF	24	2,41,056	-do-	DFO
5		Aswakhola RF	11	1,10,484	-do-	DFO
6	K Nagar East	Jiridamali RF	15	1,50,660	-do-	DFO
7		Maulabhanja RF	25	2,51,100	-do-	DFO
8	K Nagar West	Anantapur RF	20	2,00,880	-do-	DFO
9		Anlabereni RF	20	2,00,880	-do-	DFO
10	Kapilash	Kapilash RF(Compt-22)	20	2,00,880	-do-	DFO
11		Ramei RF	20	2,00,880	-do-	DFO
12	Odapada	Anantapur RF	20	2,00,880	-do-	DFO
13		Khalpal RF	20	2,00,880	-do-	DFO
14	Bhuban	Bhuban RF	35	3,51,540	-do-	DFO
15	Dhenkanal	Tamanda RF	25	3,45,000	-do-under B.Economic	DFO
16	Hindol	Ambithi RF	25	3,45,000	-do-	DFO
		Total	**350**			
2007-08						
1	Dhenkanal	Ghantabaja RF	15	1,58,100	Block Plantation under Comp.Affn	DFO
2		Jaripal RF	30	3,16,200	-do-	DFO
3		Godabolua RF	30	3,16,200	-do-	DFO
4	Hindol	Kandhar RF	20	2,10,800	-do-	DFO
5	K Nagar East	Makuakateni KF	20	2,10,800	-do-	DFO
6	K Nagar West	Sunajhari RF	25	2,63,500	-do-	DFO
7	Kapilash	Kapilash RF (Compt-22)	20	2,10,800	-do-	DFO
8	Mahabirod	Barabanka South	20	2,10,800	-do-	DFO
9	Bhuban	Bhairpur RF	20	2,10,800	-do-	DFO
10	Dhenkanal	Patapuri RF	35	1,96,805	Block Plantation under 12th FC Grant.	DFO
11		Charkhola RF	15	84,345	-do-	DFO
12	Hindol	Koi RF	30	1,68,690	-do-	DFO
13		Kandhara RF	150	8,43,450	-do-	DFO
14	Sadangi	Baliposi RF	40	2,24,920	-do-	DFO
15		Lahada RFB	160	8,99,680	-do-	DFO
16		Gondia RF	35	1,96,805	-do-	DFO
17	K.Nagar East	Maulabhanja RF	30	1,68,690	-do-	DFO
18	K.Nagar West	Sunajhari RF	45	2,53,035	-do-	DFO
19		Anantapur RF	35	1,96,805	-do-	DFO
20	Kapilash	Ramei RF (Compt-3)	20	1,12,460	Block Plantation under 12th FC Grant -	DFO
21	Mohabirod	Anantapur RF	50	2,81,150	-do-	DFO
22		Talcher Border RF	30	1,68,690	-do-	DFO
23	Bhuban	Bhuban RF	35	1,96,805	-do-	DFO

24	Bhuban	Dhalpada RF	15	84,345	-do--	DFO
25	Hindol	Hitinda RF	65	2,23,773	-do-(Bamboo)	DFO
26		Kandhara RF	135	4,64,760	-do-	DFO
		Total	**1125**			
2008-09						
27	Dhenkanal	Godabolua RF	40	7,21,666	Block plantation under B.Economic	DFO
28	Hindol	Kandhara RF	50	9,02,100		DFO
29	Sadangi	Bega RF	30	5,41,260	-do-	DFO
30	Dhenkanal	Kapilash RF	50	5,27,000	Block Plantation under Comp.Affn Prog.-	DFO
31		Saptasajya RF	30	3,16,200	-do-	DFO
32		Nimidha RF	30	3,16,200	-do-	DFO
33		Megha RF	15	1,58,100	-do-	DFO
34		Kankadahad RF	35	3,68,900	-do-	DFO
35	Hindol	Koi RF	40	4,21,600	-do-	DFO
36	Sadangi	Lahada RF	20	2,10,800	-do-	DFO
37	K.Nagar East	Jiridamali RF	30	3,16,200	-do-	DFO
38	K.Nagar West	Anantapur RF	20	2,10,800	-do-	DFO
39	Bhuban	Tipilei RF	30	3,16,200	-do-	DFO
40	Hindol	Chataka K.F.	5	53,815	-do-(Bamboo)under NBM	DFO
41		Kalipoi V.F	5	53,815	-do-	DFO
42	Sadangi	Sadangi RF	10	1,07,630	-do-	DFO
		Total	**440**			
2009-2010						
1	Dhenkanal	Majuri RF	25	2,63,500	Block Plantation under Comp.Affn Prog	DFO
2		Matiamundia RF	25	2,63,500	-do-	DFO
3		Jaripal RF	30	3,16,200	-do-	DFO
4		Megha RF	25	2,63,500	-do-	DFO
5	Hindol	Kandhara RF	25	2,63,500	-do-	DFO
6	Sadangi	Lahada RFB	60	6,32,400	-do-	DFO
7	K.Nagar East	Maulabhanja RF	25	2,63,500	-do-	DFO
8	K.Nagar West	Suniamaru RF	30	3,16,200	-do-	DFO
9	Mohabirod	Barabanka North RF	25	2,63,500	-do-	DFO
10	Bhuban	Tipilei RF	30	3,16,200	-do-	DFO
11	Dhenkanal	Godabolua RF	25	4,51,040	Block plantation under B.Economic	DFO
12	Hindol	Kandhara RF	25	4,51,043	-do-	DFO
13	Sadangi	Rupabalia RF	10	45,000	-do-under OBDP	DFO
14	Hindol	Panchupada Village Forests	20	2,05,432	-do-(Bamboo)under NREGS	DFO
		Total	**380**			

2010-2011						
1	K.Nagar West	Kankili RF	50	6,12,376	Block plantation under B.Economic	DFO
2	Hindol	Bampa RF	20	87,000	-do-under OBDP	DFO
3	Hindol	Ambithi RF	30	3,74,953	-do-under NBM	DFO

4	Dhenkanal	Kapilash RF	150	26,84,361	Block Plantation Under CAMPA	DFO
5		Saptasajya RF	60	12,06,064	-do-	DFO
6		Kotaberena RF	120	18,96,686	-do	DFO
7	Hndol	Koi RF	70	15,42,815	-do	DFO
8		Kandhara RF near Bankual	60	13,26,403	-do-	DFO
9		Kandhara RF near Kanka-Rajanga	60	12,58,066	-do	DFO
10	Sadangi	Bega RF	62	11,67,506	-do	DFO
11		Kapilash RF	33	7,55,579	-do-	DFO
12		Lahada RF	60	11,23,281	-do	DFO
13		Aswakhola RF	55	10,01,701	-do	DFO
14	K.Nagar East	Maulabhanja RF near Chakapal-Tulasipasi	45	10,33,481	-do-	DFO
15		Maulabhanja RF near Mathakargola	35	8,47,828	-do	DFO
16	K.Nagar West	Anlaberini RF	50	10,02,229	-do	DFO
17	Kapilash	Ramei RF	10	2,03,570	-do-	DFO
18	Mahabirod	Dolia RF	40	8,26,297	-do	DFO
19		Barabanka North RF	40	7,94,595	-do	DFO
20	Bhuban	Balibo RF	85	18,05,425	-do-	DFO
21		Bhairpur RF	65	14,03,234	-do	DFO
22	Dhenkanal	Kotaberena RF	40	6,36,840	Block Plantation under Compensatory Affn Programme	DFO
23		Majuri RF	40	6,69,110	-do	DFO
24	Hindol	Koi RF	25	3,78,785	-do	DFO
25		Patalu RF	35	6,86,133	-do-	DFO
26	Sadangi	Lahada RF	40	5,79,778	-do	DFO
27	K. Nagar East	Maulabhanja RF	15	2,59,248	-do	DFO
28	K.NagarWest	Anantapur RF	20	5,05,703	-do-	DFO
29		Suniamaru RF	30	2,80,943	-do	DFO
30	Mahabirod	Khalpal RF	25	2,74,266	-do	DFO
31	Bhuban	Tipilei RF	30	4,79,690	-do-	DFO

		Total	**1500**			
2011-12						
1	Dhenkanal	Charkhola RF	60	9,53,400	B.Economic	DFO
2	Hindol	Kandhara RF	40	6,35,600	-do-	DFO
3	Dhenkanal	Majuri RF	40	3,95,333	TFC.Grant	DFO
4	-do-	Megha RF	40	3,95,333	-do-	DFO
5	Hindol	Hitinda RF	40	3,95,333	-do-	DFO
6	-do-	Kandhara RF	30	2,96,500	-do-	DFO
7	-do-	Koi RF	25	2,47,083	-do-	DFO
1	2	3	4	5	6	7
2011-12(contd.)						
8	Sadangi	Aswakhola R.F	25	2,47,083	TFC.Grant	DFO
9	-do-	Lahada R.F	40	3,95,400	-do-	DFO
10	-do-	Bega R.F	40	3,95,400	-do-	DFO
11	Bhuban	Balibo R.F	20	1,97,670	-do-	DFO
12	Hindol	Babandha V.F	40	3,95,000	-do-	DFO
13	Hindol	Balisahi V.F.	20	97,400	O.B.D.P	DFO
14	Hindol	Ranjagol V.F	30	3,40,500	NBM	DFO
15	Dhenkanal	Tamanda RF	100	21,83,164	Comp. Affn.	DFO
16	-do-	Matiamundia RF	40	8,73,265	-do-	DFO
17	-do-	Majuri RF	40	8,73,264	-do-	DFO
18	-do-	Charkhola RF	30	6,54,949	-do-	DFO
19	Hindol	Bampa RF	40	8,69,608	-do-	DFO
20	-do-	Nandinia RF	30	6,52,131	-do-	DFO
21	-do-	Kandhara RF	50	10,86,864	-do-	DFO
22	K.Nagar East	Jiridamali RF	20	4,01,279	-do-	DFO
23	Bhuban	Tipilei RF	30	6,52,721	-do-	DFO
24	-do-	Balibo RF	27	5,87,448	-do-	DFO
25	-do-	Panchupada VSS	20	2,26,457	MG NREGS	DFO
		Total	**797**			
2012-13						
1	Bhuban	Tipilei RF	20	4,12,140	B. Economic	DFO
2	-do-	Dhalapada RF	30	6,18,210	-do-	DFO
3	Hindol	Kandhara RF	50	10,30,350	-do-	DFO
4	Dhenkanal	Belabania RF	20	3,46,550	TFC Grant	DFO
5	-do-	Matiamundia RF	50	8,66,375	-do-	DFO
6	Hindol	Kandhara RF	40	6,93,100	-do-	DFO
7	-do-	-do-	20	3,46,550	-do-	DFO
8	-do-	Hitinda RF	40	6,93,100	-do-	DFO
9	-do-	Nandinia RF	40	6,93,100	-do-	DFO
10	-do-	Patalu RF	40	6,93,100	-do-	DFO
11	Mahabirod	Dolia RF	30	6,18,210	-do-	DFO
12	-do-	Anantapur RF	40	6,93,100	-do-	DFO
13	K.Nagar East	Haladikundi KF	20	3,82,750	-do-	DFO
14	K.Nagar West	Rangamatia KF	20	3,82,750	-do-	DFO
15	Hindol	Alusingh VF	20	87,760	OBDP	DFO

16	-do-	Pada VF	25	3,97,738	NBM	DFO
17	Dhenkanal	Patapur RF	10	2,64,491	MG NREGS	DFO
18	Hindol	Bampa RF	10	2,26,408	-do-	DFO
19	K.Nagar East	Khajuria KF	10	2,81,025	-do-	DFO
20	Mahabirod	Kudheikhol KF	10	1,88,310	-do-	DFO
		Total	**545**			

			2013-14			
1	Hindol	Kandhara RF	50	9,25,000	Economic Plantation	DFO
2	Mahabirod	Barabanka (S) RF	25	4,63,500	-do-	DFO
3	K.Nagar West	Suniamaru RF	25	4,63,500	-do-	DFO
4	Hindol	Kharchuli VF	20	1,50,100	OBDP	DFO
5	Hindol	Pada VF	45	5,62,500	NBM	DFO
6	Dhenkanal	Jaripal RF	50	7,65,000	TFC Grant	DFO
7	Hindol	Kandhara RF	40	6,12,000	-do-	DFO
8		Hitinda RF	40	6,12,000	-do-	DFO
9		Koi RF	30	4,59,000	-do-	DFO
10		Bampa RF	30	4,59,000	-do-	DFO
11	K.Nagar West	Anantapur RF	25	3,82,500	-do-	DFO
12		Siarimalia RF	25	3,82,500	-do-	DFO
13	Mahabirod	Anantapur RF	20	3,06,000	-do-	DFO
14		Dolia RF	24	3,67,200	-do-	DFO
15	K.Nagar West	Rangamatia KF	30	4,59,000	-do-	DFO
16		Adhapalli KF	10	1,53,000	-do-	DFO
17	K.Nagar East	Maulabhanja RF & near by VF	44.25	12,17,163	Elephant fodder species Pltn.	DFO
18	Bhuban	Jaganatapur VF	23.85	3,64,905	Compn. Affn.	DFO
		Total	**557.1**			
		G.Total-	**6039.1**			

TABLE – 2A.8- R.D.F. PLANTATION (From 2004-05 to 2013-14)						
Sl. No.	**Name of the Range**	**Name of the R.F**	**Area covered in Ha.**	**Amount spent. (in Rs.)**	**Work done**	**Planted by**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
			2004-05			
1	KNagar East	Rupabeda KF	10.170	88,700	RDF Plantationunder Comp.Affn Prog.	DFO
2		Patabeda- I & II KF	8.995		-do-	DFO
3	K Nagar West	Jhanjiriberena KF	1.835		-do-	DFO
4	KNagar East	Birasal RF	4	2,800	-do-	DFO
5		Birasal RF	6.12	4,284	-do-	DFO
6		Birasal RF	12	31,280	-do-	DFO
7	Sadangi	Rupabalia RF	18	52,200	-do-	DFO
8	Hindol	Rajamohanpur KF	46.7	79,490	-do-	DFO
		Total	**107.82**			
			2005-06			
1	Kapilash	KapilashRF	**2**	1,56,420	RDF Plantn (Bela)under SGRY	DFO
			2006-07			
1	Dhenkanal	Charkhola RF	50	1,90,125	RDF Plantation under 12th FC Grant	DFO
2	Hindol	Koi RF	25	95,063	-do-	DFO
3	Sadangi	Lahada RF	25	95,063	-do-	DFO
4	KNagar East	Ranjagarh RF	25	95,063	-do-	DFO
5	KNagar West	Anantapur RF	25	95,063	-do-	DFO
6	Kapilash	Kapilash RF	25	95,063	-do-	DFO
7	Odapada	Dolia RF	25	95,063	-do-	DFO
		Total	**200**			
			2007-08			
1	Dhenkanal	Patapuri RF	100	2,25,000	RDF Plantation under 12th FC Grant	DFO
2		Megha RF	50	1,84,400	-do-	DFO
3		Saptasajya RF	200	7,37,600	-do-	DFO
4		Charkhola RF	50	1,84,400	-do-	DFO
5		Matharagadi RF	50	1,84,400	-do-	DFO
6	Hindol	Ambithi RF	100	3,68,800	-do-	DFO
7		Hitinda RF	50	1,84,400	-do-	DFO
8		Koi RF	250	9,22,000	-do-	DFO
9	Sadangi	Rupabalia RF	100	3,68,800	-do-	DFO
10		Lahada RF' A'	200	7,37,600	-do-	DFO

11		Lahada RF 'B'	100	3,68,800	-do-	DFO
12	KNagar East	Maulabhanja RF	200	7,37,600	-do-	DFO
13	KNagar West	Anantapur RF	250	9,22,000	-do-	DFO
14		Sunaghari RF	250	9,22,000	-do-	DFO

2007-08						
15	Kapilash	Ramei RF(Compt.3)	100	3,68,800	RDF Plantation under 12th FC Grant	DFO
16		Kapilash RF(Compt.14)	50	1,84,400	-do-	DFO
17		Kapilash RF(Compt.18)	150	5,53,200	-do-	DFO
18		Kapilash RF(Compt.19)	100	3,68,800	-do-	DFO
19		Kapilash RF(Compt.21)	100	3,68,800	-do-	DFO
20	Mahabirod	Anantapur RF	100	3,68,800	-do-	DFO
21		Barabanka South RF	100	3,68,800	-do-	DFO
22		Dolia RF	150	5,53,200	-do-	DFO
23	Bhuban	Bhuban RF	100	3,68,800	-do-	DFO
14		Bhairpur RF	200	7,37,600	-do-	DFO
15	Dhenkanal	Charkhola RF	40	1,26,280	RDF Plantation under Support to VSS scheme	DFO
16		Patapuri RF	40	1,26,280	-do-	DFO
17	K. Nagar East	Maulabhanja RF	40	1,26,280	-do-	DFO
18	Kapilash	Kapilash RF	40	1,26,280	-do-	DFO
19	Mahabirod	Barabanka South RF	40	1,26,280	-do-	DFO
		Total	3500			
2008-09						
1	Hindol	Kandhara RF	25	50,000	RDF Plantation under B.Economic	DFO
2		Koi RF	25	50,000	-do-	DFO
3	KNagar East	Jiridamali RF	50	1,00,000	-do-	DFO
4	KNagar West	Madhi RF	50	1,00,000	-do-	DFO
5	Mahabirod	Anantapur RF (Near Darangabadi Compt.No.3,7)	50	1,00,000	-do-	DFO
		Total	200			
2009-10 - Nil						
2010-11						
1	Dhenkanal	Budhiparbata KF	61.48	2,45,287	RDF Plantation under Comp.Affn Programme.	DFO
2011-12 Nil						
2012-13						
1	Dhenkanal	Charkhola RF	80	2,83,581	RDF Plantation under MG NREGS	DFO
2	-do-	Saptasajya RF	60	3,04,683	-do-	DFO
3	-do-	Matiamundia RF	60	2,84,019	-do-	DFO
4	Hindol	Kandhara RF	100	1,67,969	-do-	DFO
5	-do-	Kandha VF	75	1,41,787	-do-	DFO

6	-do-	Balipasi VF	60	80,118	-do-	DFO
		Total	435			
2013-14 -Nil						
		G.Total -	**4506.3**			

TABLE – 2A.9 - AVENUE PLANTATION From 2004-05 to 2013-14

List of Avenue Plantation Taken up in Dhenkanal Division

Sl. No.	Name of the Range	Name of the Road	Area covered in Rkm.	Amount spent. (in Rs.)	Scheme	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		2010-11				
1	Sadangi	Sadangi- Mandar PWD Road	3 Rkm	2,21,600	MG NREGS	
		Dhanianali Chhaka - Nilakantapur PMGSY Road	2 Rkm	1,47,700	-do-	
		TOTAL	**5 Rkm**			
		2011-12				
1	Hindol	Satamile- Mahidharpur PWD Road	6 Rkm	6,03,000	MG NREGS	
2		Rasol- Dandhiri PWD Road	5 Rkm	7,40,200	-do-	
3	Sadangi	Letheka- Ranla PMGSY Road	4 Rkm	3,30,400	-do-	
4	Mahabirod	Gadapalasuni- Dolia PMGSY Road	5 Rkm	5,51,500	-do-	
5	K.Nagar (W	Sogara- Medicinal Garden	1.7 Rkm		-do-	
		TOTAL	**21.7Rkm**			
		2012-13				
1	Dhenkanal	Govindpur- Talabarkot PMGSY Road	5 Rkm	4,88,300	MG NREGS	
2		Paschimeswar- Sankarpur PWD Road	5 Rkm	3,88,800	-do-	
3	Hindol	Babandha- KutuniaPMGSY Road	5 Rkm	3,76,000	-do-	
		Gandanali- Fasigaon PMGSY Road	10 Rkm	3,25,200	State Plan	
4	K.Nagar East	Birasal- Kochilabanka PMGSY Road	5 Rkm	1,62,600	-do-	
5		Birasal- Kochilabanka PMGSY Road	10 Rkm	7,42,100	MG NREGS	
6	Mohabirod	Bhalumunda- Anlakata RD Road	5 Rkm	4,56,800	-do-	
7	K.Nagar W	Sogar- Medicinal Plantation	0.5 Rkm		-do-	
		TOTAL	**45.5 Rkm**			

2013-14						
1	Dhenkanal	Siminai- Sadasibapur PMGSY Road	5 Rkm	2,32,158	State Plan	
2	K.Nagar W	Kotaberena- Kadalipala PMGSY Road	2 Rkm	92,863	-do-	
3	Bhuban	Majhisahi- Bankuala G.P. Road	5 Rkm	2,32,159	-do-	
4	Bhuban	Balipada- Tangar PWD Road	8 Rkm	3,71,454	-do-	
5	Hindol	Baishnabandha- Ranjagol PMGSY Road	5 Rkm	2,85,600	MG NREGS	
6		Karnpur- Hindol PWD Road	8 Rkm	4,06,600	-do-	
7		Kadalipala- Naukiari PWD Road	12 Rkm	4,41,100	-do-	
8	Bhuban	Kainsiri Chhaka- Dhalapada PMGSY Road	3 Rkm	2,29,000	-do-	
9		Baruan Chhaka- Odisha PMGSY Road	3 Rkm	2,23,100	-do-	
10	Mahabirod	Dasipur- Gurujanguli PMGSY Road	5 Rkm	2,25,900	-do-	
11		Asanabali- Khanda PMGSY Road	5 Rkm	2,51,800	-do-	
12		Mahabirod- Pangatira PMGSY Road	5 Rkm	1,69,800	-do-	
13		Katarapada- Saranga RD Road	5 Rkm	98,600	-do-	
		TOTAL	**71 Rkm**			
		G Total	**143.2 Rkm**			

TABLE – 2A.10- **URBAN PLANTATION TAKEN UP DURING 2013-14**

Sl. No.	Name of the Range	Name of the R.F	Area covered in Ha.	Amount spent. (in Rs.)	Work done	Planted by
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Dhenkanal	Mahisapat of Dhenkanal Municipality area	4,040 nos.	12,47,633	Urban Pltn.	DFO
2	-do-	Around Deulasahi Pond of Dhenkanal Municipality area	260 nos.	80,293	-do-	DFO
3	K.Nagar West	Kamakshyanagar NAC area	2,700 nos.	8,33,814	-do-	DFO
4	Bhuban	Bhuban NAC area	8,000 nos.	24,70560	-do-	DFO
		Total	**15,000**			

TABLE-2A.11	**Bamboo plantation taken up under OBDA (NBM), OBDP (State Bamboo) and other Bamboo Schemes.**			
Year	Range	Name of RF/KF/VF	Area (In Ha.)	Name of the Scheme
2007-08	Hindol	Hitinda RF	65	12 th FC Grant
2008-09	Hindol	Chataka KF	05	NBM (OBDA)
	Hindol	Kalipoe VF	05	NBM (OBDA)
	Sadangi	Sadangi RF	10	NBM (OBDA)
2009-10	Sadangi	Rupabalia RF	10	OBDP
	Hindol	Panchupada VF	20	NREGS
2010-11	Hindol	Bompa RF	20	OBDP
		Ambithi RF	30	NBM (OBDA)
2011-12	Hindol	Balisahi VF	20	OBDP
		Ranjagol VF	30	NBM
2012-13	Hindol	Alusingh VF	20	OBDP
		Pada VF	25	NBM (OBDA)
2013-14	Hindol	Khairabahali VF	20	OBDP
		Pada VF	45	NBM (OBDA)

The result of plantation surevey taken up is annexed in **Annexure – XXV.**

2A.8. INJURIES TO WHICH THE CROP IS LIABLE

The forests of Dhenkanal Division are vulnerable to the injuries due to biotic and abiotic factors. The main biotic factors are human beings, animals, insects, fungi, weeds and climbers etc. The abiotic factors responsible for the forest injuries are natural calamities like cyclone, wind, frost, flood and fire etc.

2A.8.1. Biotic Factors:

2A.8.1.1.Illicit felling: Human being and animals are the most important factors that cause injuries to the forest vegetation. The man destroys the forests due to his need as well as greed. Men damages forests through illicit felling for timbers, encroachment of forest land for cultivation as well as home stead purposes. Exploiting human population is main cause of degradation of forests of Dhenkanal Division. Similarly, an unpaid stocking of cattles by the people is another major cause of damage of the forest.

2A.8.1.2. Encroachments: The encroachments are high in some of the forest blocks like Ranjagarh, Anantapur, and Lahada etc. Government of Orissa has moved to Government of India for the regularization of pre-80 encroachments and the state government has sent a proposal under Forest Conservation Act 1980.Consiquent upon implementation of Forest Right Act 2006 there is tendency of more encroachment. The detail of the encroachment and the title issued under Forest Right Act is furnished below:

A. PRE-80 ENCROACHMENTS OF DHENKANAL DISTRICT							
Sl. No	No of Forest Block	No of Village	No. of families	Purpose (in Ha)		Total (in Ha.)	Remarks
				Homestead	Agriculture		
1	8	11	635	75.189	582.728	657.9	

B. POST-80 ENCROACHMENTS OF DHENKANAL DISTRICT				
Sl. No	No of Forest Block	No of Person involved	Area under Encroachment (in Ha)	Remarks
1	34	1174	1325.65	

C. FOREST AREA DISTRIBUTED TO BENEFICIARIES UNDER FOREST RIGHT ACT 2006.					
Sl.No.	No of Forest Block	Area distributed for individual claims (in Ha.)	Area distributed for community claims (in Ha.)	Total area Distributed (in Ha.)	Remarks
1	20	1787.26	24.10	1811.36	

2A.8.1.3. Control measures: The Division administration is making all out efforts to control illicit felling and encroachment of forest land. The anti smuggling squad has been engaged. The VSS are strengthened. The forest staffs are fighting courageously with the smugglers and even getting assaulted.

The forest cases booked against the offenders is furnished in the following

Table-2A.12

TABLE-2A.12 FOREST OFFENCE CASES BOOKED FOR THE YEAR 1994-95 TO 2013-14					
Year	**OR Cases**	**UD Cases**	**Timber Seized**	**Person arrested**	**Total**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
1994-95	2633	634	-	NA	3267
1995-96	2408	654	401.4959	NA	3062
1996-97	1908	644	366.1457	NA	2552
1997-98	2006	854	676.2579	NA	2860
1998-99	1925	610	288.0313	NA	2535
1999-2000	1519	894	257.5535	NA	2413
2000-01	1850	8481	367.9600	NA	2331
2001-02	1866	462	144.7450	NA	2328
2002-03	1919	701	457.6590	NA	2620

2003-04	1374	489	304.1597	468	1863
2004-05	1356	488	189.8600	68-PR	1794
2005-06	1241	394	176.9365	47	1635
2006-07	1502	423	304.3170	43	1925
2007-08	1411	324	179.0698	38	1735
2008-09	1532	342	271.3488	70	1874
2009-10	1376	383	282.8168	69	17598
2010-11	1386	390	217.3232	46	1776
2011-12	1225	347	328.2062	48	1572
2012-13	1207	325	177.2167	41	1532
2013-14	1110	272	145.1362	27	1382

2A.8.1.4 Grazing: The domestic animals (cattle, buffalo, sheep, goat, pig & fowl) population of Dhenkanal district as per 2003census is 8,62,882. The damage done by the domestic animals is far more than wild animals. There is no concept of stall-feeding and the usual practice followed is mass grazing. The silvipasture plantation attempts made by various plantation agencies have not succeeded.

Grazing also causes irreparable harm to the young seedlings. The goat causes harm by eating even the unpalatable and thorny species. The ground becomes hard because of trampling and is detrimental to the regeneration of forest species. Grazing increases the rate of degradation of the forests.

TABLE.2A.13 **Domestic population of Dhenkanal District (2003 Census)**

Category	**Male**	**Female**	**Total**
Cattle	221649	253300	474949
Buffalo	21421	27957	49378
Sheep	14192	32479	46671
Goat	49740	132943	182683
Pig	1001	1456	2457
Fowl	31969	74775	106744

Sources – District Statistical Hand Book, Dhenkanal- 2009

2A.8.2. Abiotic Factors:

2A.8.2.1 Forest Fire: Ground fire is very common in most of the forest blocks. Every year the forest floor is burnt two to three times from February to June. The fire results in degradation of forests, loss of soil fertility and accelerates soil erosion. In the Sal forests it adversely affects the regeneration because of dying back of Sal and other species. The timber quality is affected due to repeated fire and timber develops hollowness and gets deteriorated. Fire in bamboo forests devastates whole clumps and aggravates crown fire. Fire destroys organic elements and micro fauna of the soil and impoverishes its nutrient content. Repeated fire in the Dry Deciduous Forests causes retrogression of the vegetation towards more xerophytic conditions. It causes imbalance in the entire ecosystem.

TABlE-2A.14	Extent of Forest fire in different Forest Blocks				
		Degree of Fire			
SlNo	Range	VeryHigh	High	Moderate	Fair
1	Dhenkanal	-	-	Moderate	-
2	Sadangi	-	-	Moderate	-
3	K.Nagara (E)	-	-	Moderate	-
4	K.Nagara (W)	-	-	Moderate	-
5	Bhuban	-	-	Moderate	-
6	Kapilash	-	-	Moderate	-
7	Mahabir Road	-	-	Moderate	-
8	Hindol	-	-	Moderate	-
Source: Divisional Forest Officer, Dhenkanal					

2A.8.2.2. Causes: Fire occurrence in Dhenkanal Forest Division is noticed in almost all R.Fs. The high degree of fire is noticed in Balibo and Kandhara R.F. In other R.F the degree of forest fire is moderate to fair. The most of the forest fire are men made and intentional fire and hardly any accidential fire. The main causes are

(i) Kendu Leave pluckers set fire in the forest with a view to production of good quality and quantity of kendu leaves.

(ii) For collection of Sal and Mahula seeds in the forest cleaning the surface through firing the forest floor.

(iii) For hunting purposes peoples set fire in the forests.

(iv) The cultivators set fire in the uphill side of the forests to get the ashes which is used for good manure for cultivation.

(iv) The traveler some times through the burning cigerate and bidi while passing through the forest path causes fire.

(v) The cow grazers and children some times set fire the dry leaves in the forest out of pleasure which subsequently expressed to larger area.

vi) For getting fresh and tender grasses people set fire in the forest.

2A.8.2.3. Remedial measures: Now the forest fire is under controlled due to pro-active action of the forest staff through enforcement by Departmental staff, fire fighting squad and active participation of VSS and Forest fringe villagers. The Government of Odisha has also taken steps to zero fire incidence in the forest Divisions for which fund for fire line tracing, deployment of fire fighting squad, awarenesss of the people etc. is being made available.

The expenditure for prevention of fire for last 20 years is furnished below.

TABLE-2A.15 EXPENDITURE ON FOREST FIRE	
Year	**Expenditure (in Rs.)**
1994-95	25,000
1995-96	25,000
1996-97	30,000
1997-98	30,000
1998-99	34,910
1999-2000	28,840
2000-01	32.00

2001-02	15,000
2002-03	15,000
2003-04	9,000
2004-05	10,000
2005-06	10,000
2006-07	30,000
2007-08	30,000
2008-09	1,81,000
2009-10	1,25,000
2010-11	14,40,250
2011-12	13,07,663
2012-13	18,21,200
2013-14	11,81,800

2A.8.3 Diseases caused by Fungus and Parasites: Many fungi and parasites effect forest growth adversely and common among them are: *Loranthus scurrula, Polyporus shorea, Fomes fastuosus, Fomes caryophylli* and *Hymenochaete rubiginosa*

2A.8.4 Insects: The damage caused due to insects, borers, defoliators and termites is common and wide spread. Some of the harmful insects are as follows: *Hoplocerambyx spinicornis, Hapalia machaeralis (Teak skeletoniser)* and *Hyblea pleura (Teak defoliator)*

The other insect attacks are by Batocera rufomaculata, which sporadically damages young Semal (Bombax ceiba) by tunneling and destroying the growing shoots. Incidence of Aelosthes holosericea (lenticel beetle) and Xyleborus (pinhole borer) are noticed particularly in depots. Termites are menace for plantations especially Eucalyptus plantations and the timber depots.

2A.8.5 Climbers and weeds: Climbers destroy trees and make bole unsound. Climbers like *Combretum decandrum* (Atundi), *Milletia extensa* (Arkala), *Bauhinia vahlii* (Siali), *Butea superba* (Naipalas), *Acacia sinuata* (Dantari), *Smilax macrophylla* (Muturi), *Entada scandens* (Gila), *Dioscorea bulbifera* (Pitaalu), *Cryptolepis buchanani* (Gopkanu), *Asparagus racemosus* (Satabari), *Hemidesmus indicus* (Anantamula) are common in the high forests.

Weeds compete for food and light and chokes valuable plants particularly the young ones. *Eupatorium* and *Lantana* are the most common weeds in the forests of Dhenkanal. Besides, *Loranthus* and epiphytic plants like *Ficus* affect growth and development of trees.

2A.9 Mahatma Gandhi Ausodhiya Aranya, Sogar.

In Dhenkanal Division a medicinal garden named Mahatma Gandhi Ausodhiya Aranya at Sogar under Kamakhyanagar (W) Range has been created during the year 2010. It was conceptualized by the Hon'ble MLA, Kamaakhyanagar Sri Prafulla Kumar Mallick and the then Collector-cum-District Magistrate Sri S.N. Girish It was inaugurated by the Hon'ble Chief Minister, Odisha Sri Nabin Pattnaik on 19.09.2010. The main objective of the garden was to raise medicinal plants and to create a germ plasm of rare, endangered & threatened medicinal plat species. Also the garden is aimed at to develop as a centre of knowledge on medicinal plants in the locality and to promote traditional ethno medicinal health treatment. Initially the garden was started with area of 510 Acres and subsequently extended to 754.35 acres in the year 2014 comprising of 494.65 Acres of Revenue Forest Land and 259.70 Acres of non-forest govt. land covering nine revenue villages i.e. Sogar, Kanapalo, Upper Jhagadapada, Hadagarh, Sukapada, Machhia, Gadobhango and Robada. Plantations and infrastructure development activities have been taken up with the fund made available by district window from NREGS, MLA Lad after due approval of the Zillaparishad, Dhenkanal. So far 83,200 medicicinal seedlings have been planted over 52 ha. The saplings planted are Anla, Harida, Bahada, Gambhari, Sunari, Karanja, Sajana, Simili, Fenfena, Piasal Pestabadam, Bamboo, Khaira, Arjuna, Palas, Begunia, Chhatian, Bel, Tentuli, Gangasiuli, Jammu, Mahaneem, Ashoka, Baula, Kadam, Muchjukunda, Raktachandan, Ambada, Bhalia,

Sissoo, Kaintha, Mahula and Versunga. The garden is well fenced with barbed wire fencing over 13.5 Kms and other live hedges and there is provision of watch & ward round the clock. Inspection path over 2.3 Kms have been constructed. Besides 03 nos bore wells nave been dugged and 02 nos watcher shed have been constructed. For the activities mentioned above the expenditure incurred from 2010-11 to 2014-15 is Rs. 1,79,88,794/-.

During recent visit of the Hon'ble Minister Sri Prafguilla Kumar Mallick, Steel & Mines, Labour & ESI Department, Govt. of Odisha, Principal Secretary F&E Department, Govt. of Odisha and Principal Chief Conservator of Forests, Odisha it has been decided for further development of the garden. It has been proposed to take up more plantations over 90 ha during 2015-16. Other infrastructure development proposed are creation of Internal inspection path over 20 Kms and peripheral inspection path over 21.27 Kms, setting up a permanent nursery, development of eco-tourism complex, digging of elephant proof trench around the garden, provision of lift irrigation facility and provision of full-fledged power supply to the garden. The fund will be made available by the forest department and the district Administratio through NREGs & MLA Lad.

In future the garden will act as a education centre and be a good source of knowledge im the area.

CHAPTER II B

FOREST FAUNA

2B.1. General History: Dhenkanal forest Division has rich biodiversity of flora and fauna. Forests of Dhenkanal like Ranjagarh, Anantapur, Kandhara, Hitinda, Bompa, Potalo are contiguous to the forests of Satkosia of Angul, Keonjhar division and Sukinda belt of Cuttack district. They function as corridor for terrestrial migratory animals. However, depletion of natural forest has cause threat to fauna as a result there is increasing in man animal conflict. Wild life menace by way of attack on human beings, cattle lifting, crop damage, intrusion to human habitation etc. are common phenomena due to destruction of their habitat. Poaching is another problem wherever forests exist. In the past wild life were not managed under any systematic prescription upto 1995. From 1995-96 separate prescription for management and development of wild life are being prescribed. During the last plan period, in pursuance to Sec-26 AN (I) (b) of the Wildlife Protection Act 1972 (53 of 1972) the State Govt. has declared part of Kapilash R.F. area as sanctuary named Kapilash Wildlife Sanctuary vide Notification No. 8F (WL) -25/11 5937 / F & E.

2B.2. MAMALS, BIRDS, REPTILES AND FISHES**:**

The commonly sighted animals are Elephant, Barking Deer, Mouse Deer, Hyena, Wild Dog, Sloth Bear, Jackal, Indian Fox, Wolf, Indian Squirrels, Flying Squirrels, Porcupines, Rabits, Rats, birds like Peafowl's were commonly seen all over the Division. Other birds were Jungle fowl, Quail, Horn bills, the hill Myna, Orioles, Bulbul, Para kits and Rocket Tailed Drongo were common. Among snakes, the Indian Python and King Cobra were found in Malchhama Forests. The Cobra, Russels Vipers and Green Pit Vipers were abundantly founding the Division. Among fishes Catfishes, Murals and other small fishes were found in river, tributaries and streams.

2B.3 EXISTING WATER SOURCES & SALT LICKS:

The division has no of natural water sources in shape of perennial streams; rivers, reservoirs, water holes and other water bodies. The major rivers and tributaries are Brahmani, Ramial, Sapua, Ragodinala, Pichuli, Lingra; Baunsi etc are the main water sources, which are being used by the wild animals. Besides no of water bodies/ WHS are being constructed under different scheme by the Department in interior pocket of the forest to meet the water scarcity of the wild animals.

A good number of WHS has been created in the outgoing plan period for use of human habitation as well as wild life as detailed below.

TABLE -2B.1 List of WHS			
Year	**No of WHS created**	**Amount spent(In lakh)**	**Scheme**
2004-05	6	11.41	CP/NFFWP
2005-06	4	9.2	-do-
2006-07	5	21.88	CP/NREBS
2007-08	3	19.16	SP/NREGS
2008-09	1	3.0	CP
2009-10	2	6.1	CP/NREBS
2010-11	9	26.0	SP/NREGS/CAMPA
2011-12	3	3.37	CP/NREGS
2012-13	8	18.5	SP/CAMPA
2013-14	25	64.75	SP/CAMPA

2B.4. INJURIES TO WHICH THE FAUNA IS LIABLE AND PROTECTION:

Elephant depredation is a perpetual problem in this division. There are several reports of killings and injury of the human beings, damage to the crops in the division. Often it leads to law and order problems in the district. The man-animal conflict is mainly due to degradation of habitat of Wild elephants, encroachments etc as a result of which they enter human habitation causing damage to life and properties of local inhabitants.

TABLE -2B.2 **CROP DAMAGE BY WILD ELEPHANT AND PAYMENT OF COMPENSATION**

Year	**Crop damage**		**House Damaged**	
	Area (in Acr.)	**Compensation paid**	**No. of House**	**Compensation paid**
2004-05	414.670	6,42,870/-	-	-
2005-06	16.300	3,00,000/-	-	-
2006-07	124.870	5,24,610/-	-	-
2007-08	752.010	9,26,100/-	-	-
2008-09	779.300	7,79,300/-	-	-
2009-10	1147.720	8,39,300/-	-	-
2010-11	1241.570	12,41,570/-	42	85,500/-
2011-12	2104.770	35,37,210/-	72	1,44,000/-
2012-13	1107.062	72,10,616/-	143	3,02,000/-
2013-14	1604.881	1,33,25,501/-	64	1,36,000/-

Source: Divisional Forest Officer, Dhenkanal

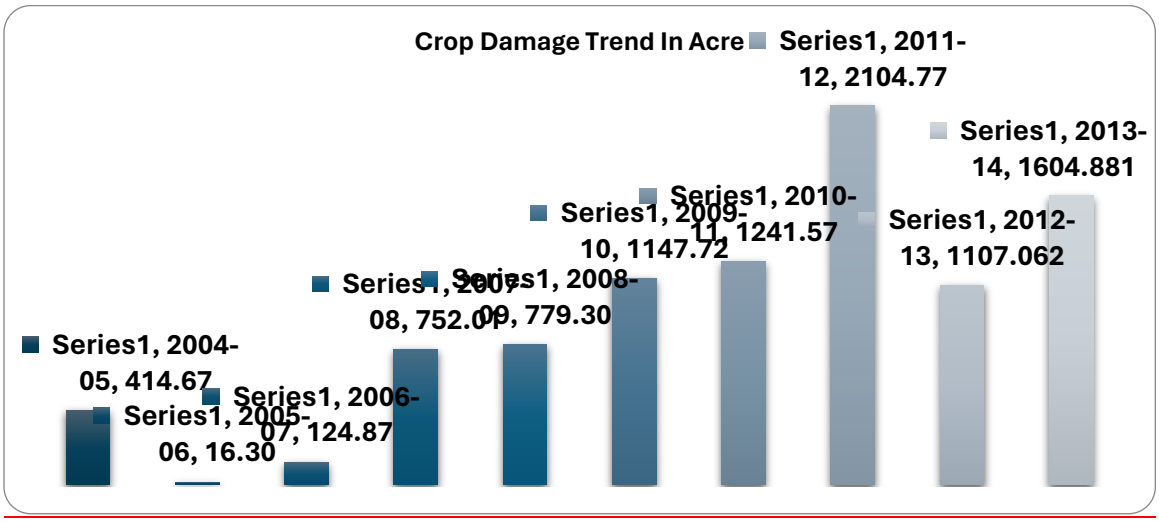
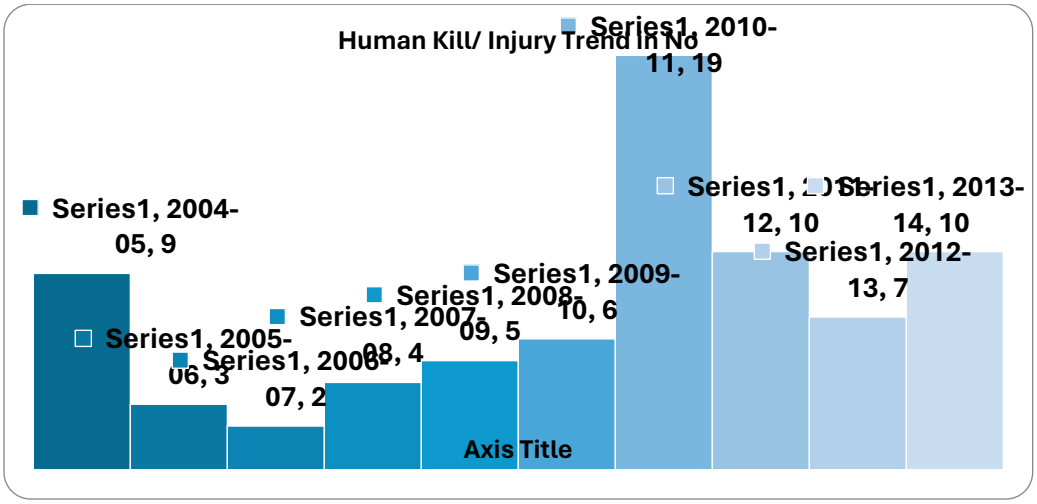


TABLE -2B.3 **KILLING AND INJURY BY WILD ANIMALS (ELEPHANT)**

Year	Human kill/Injury	Compensation paid
2004-05	09	6,00,000/-
2005-06	03	3,00,000/-
2006-07	02	1,00,000/-
2007-08	04	4,00,000/-
2008-09	05	5,00,000/-
2009-10	06	6,00,000/-
2010-11	19	19,00,000/-
2011-12	10	18,00,000/-
2012-13	07	8,00,000/-
2013-14	10	14,00,000/-

Source: Divisional Forest Officer, Dhenkanal



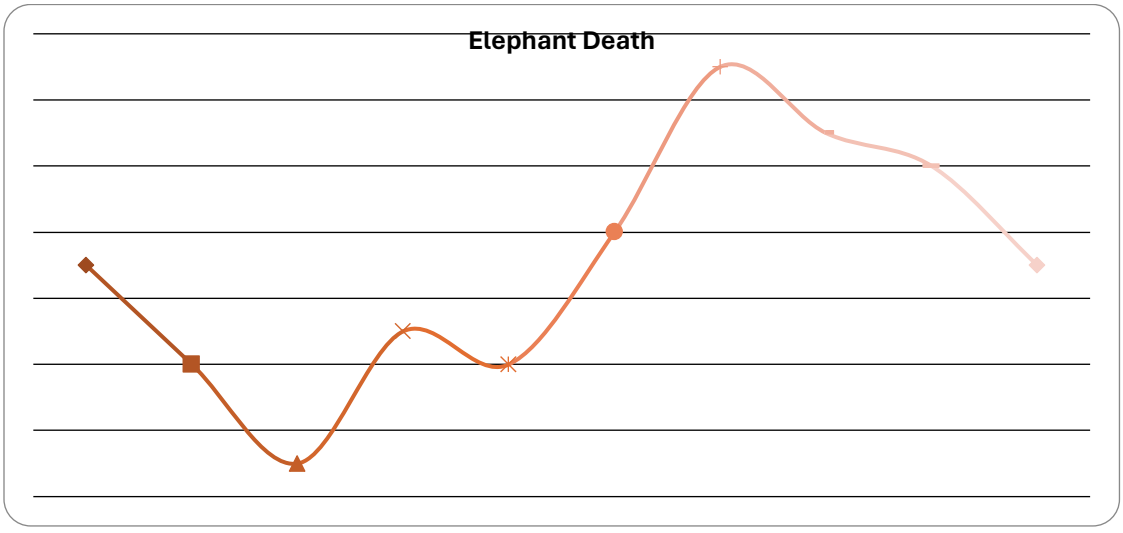
2.B.5. COMMON INJURY TO THE WILD LIFE:

The wild animals, birds and reptiles are being used as means of earning of livelihoods by some professional people like snake charmers, tribes etc. Bears and other wild animals are being trained by the circus parties and exhibits different feats. Wild animals are also very often kept in captivity for the shake of pleasure and status. The wild life traders engage local tribals to kill the wild life for different parts like horns, hides, fur, feathers, skin, claws and teeth, trophies, bones etc. The medicinal value of these wild life parts has multiplied the reason for speedy depletion of it. The regular incidents of poaching of wild animals in the Division. Poaching of fauna for meat, horn, fur, feather, hides, claws, bones etc. have direct effect on the decline in population of the wildlife.

TABLE -2B.4 **ELEPHANT DEATH DUE TO DIFFERENT REASONS**

YEAR	Draught	Railway Accident	Electrocaution	Poaching	Disease	Other	Total
2004-05	-	-	-	-	05	02	07
2005-06	-	-	-	01	01	02	04
2006-07	-	-	-	-	-	01	01
2007-08	-	-	-	-	04	01	05
2008-09	-	-	-	-	03	01	04
2009-10	-	-	-	01	01	06	08
2010-11	-	-	04	-	02	07	13
2011-12	-	02	01	-	01	07	11
2012-13	-	-	03	-	01	06	10
2013-14	-	-	-	-	02	05	07

Source: Divisional Forest Officer, Dhenkanal



2B.6 **GRAZING:-**

Severe damage is caused to the forest due to grazing by domestic animals. Like human population, the population of the domestic animals has also increased over the years causing pressure on the forest. It is observed that large herds of cattle, buffallows, goats and sheep are kept by the villagers for their domestic requirements. The uncontrolled grazing and browsing in the forest area causes severe damage to the forest vegetation. Excessive grazing is also one of the factors affecting adversely natural regeneration and establishment of seedlings of Sal and others species. In some of the forest areas adjacent to the human habitations, uncontrolled and excessive grazing has led to the replacement of mesophytic flora by relatively more xerophytic, dry and thorny types of vegetation. In some places it has exposed forest floor and made it prone to soil erosion. The herbivores are unable to get sufficient food in forest.

2B.7. FOREST FIRE:

Forest fire is a regular phenomenon in Dhenkanal Forest Division. It is being caused either intentionally or accidentally, igniting fire for collection of NTFPs, driving out of wild animals from their agriculture fields, use as torch while moving through forest roads and when they go for hunting of wild animals. It also damages the grass lands, soil nutrition and there by the fertility. This compels the herbivores to move out side their habitats for searching foods and become easy prey to carnivores and local people. Fire also damages the habitats of birds and reptiles resulting decrease in population.

2B.8 OTHER FACTORS

The fauna are also facing threat to their habitat due to increasing incidence of encroachment; increasing demand for firewood, timber and NTFPs for the ever-rising population. The developmental activities like construction of roads, buildings and canals etc. has led to large-scale deforestation and fragmentation to the wild life habitats of the Division. The disturbance caused by this has led to animals stray in to the human habitations causing damage to the both life and properties and get killed in retaliation. The large-scale pure plantations raised in the inside forest area has not only caused the shrinkage of natural habitats of wild life but also changed the environments of the localities. There is also lack of awareness among the local public on the importance of wild life in present eco-system.

2B.9. PROTECTION TO THE WILD LIFE:

A no of Acts and Rules have been climed by the Government and being from time to time such as Wild Life Protection Act 1972, Wildlife (Stock Declaration) Rule 1974, Wild Life Transaction and Taxidermy Rule 1974 by Government of India. The Govt. of Orissa also framed the Orissa Forest Shooting Rule, 1973 under section 82 of the Forest Act, 1972 and The Wild Life (Protection) Rules, 1974. These Acts and Rules were amended as the Wild Life (protection) Amendment Act, 2002. The Wild Life-Stock Rules, 2003 has come up with detail procedure to be adopted by the individuals and the communities in possession of wild animals.

The Division has also tried to create awareness among the villagers through VSS Meetings, celebration Wildlife Weeks, Environment Days and publicity through newsletters, signboards, hoardings etc.

The Division has also taken up the construction of Elephant Proof Trench and Solar fencing around the Elephant area to control the movement. The Elephant corridors have been

maintained. Signages have been posted along the Elephant passage area to avoid man-animal conflict. Also, Antidepredation squard has ben deployed for taking of the movement of Elephant and to prevent Elephant depredation.

However more protection measures are required as under:-

(i) Elephants are mostly concentrated in two zones, one near Talcher Border, Anantapur, Barbanka (N) & Barbanka (S) RFs and the other near Moulabhanja, Tipiloi, Kapilas RFs. The free movement of the elephants is obstructed as the Rengali canal stands as a barrier. Corridors and ramps are required to be created on the Rengali irrigation project main canal for free movement of wild elephants.

(ii) The periodicity of movement, intensity of movement and the movement routes should be mapped to prepare action plan for anti-depredation. The migratory routes and the corridors should be reflected in the maps. This exercise is should be taken up every year.

(iii) The anti-depredation personnel deployed for the job should be properly trained to handle the situations effectively. They should be trained on how to control the mob, how to drive away the elephants, how to educate the people with effective communication skills etc. The local cattle of villagers pollute the water harvesting structures and game tanks of wild animals and as a result disease like diarrhoea is observed among calf of elephants. The depredation problem can be effectively tackled with the participation of local people. This can be done with rapport building, identification of village level leaders and keeping the communication channels open with the villagers.

CHAPTER – III

UTILISATION OF THE FOREST PRODUCE

3.1 AGRICULTURAL CUSTOMS AND WANTS OF THE POPULATION

3.1.1. Demographic profile: Dhenkanal Forest Division is in cotermineous with the Dhenkanal Revenue District area which has 03 Sub-Divisions and 08 Tahasil/Block

Population – As per census figure the population of the area included in this division is given in the **Table 3.1 & 3.2**

Table No – 3.1	**Population**				
Year of census	Male	Female	Total	Rural	Urban
2001	544001	522877	1066878	973964	92914
2011	6,12,593	5,80,218	11,92,811	10,75,305	1,17,506
Source – Odisha Agriculture Statistics, 2012-13.					

Table No – 3.2	**Population as per census**			
Year of census	Population			Total
	General	Scheduled Cast	Scheduled Tribe	
2001	733097	197280	136501	1066878
2011	796676	234079	162056	11,92,811
Sources – Odisha Agriculture Statistics, 2012-13.				

. **Density of Population** – The total geographical area covered by this division is 4599.00 sq. KM and forest area is 30.38% of total geographical area. The population is fairly high in the plains. District has number of industries and irrigation facilities are very good due to presence of number of Dams and Reserviors. The density of population as per the census figure is given in the **Table 3.3.**

Table No – 3.3		**Density of population**				
Year census	Geographical area (Sq.Km)	Total population	Rural	Urban	% of rural population to total population	Population density per Sq./Km
2001	4599.00	1066878	973964	92914	91.20	240.00
2011	4599.00	11,92,811	10,75,305	1,17,506	90.15	268
Sources - Odisha Agriculture Statistics, 2012-13.						

Educational Institution – The primary education facilities is available in this Division in most of the G.P. or within 5 Kms of the village/ hamlet. For higher education there are 30 nos of Colleges. Also there are 02 nos of Engineering and other professional institutions in the District.The detail of educational institution (2008-09) and Literacy rate information (2001 Census) is given in the **Tables 3.4.**

TABLE-3.4 **Educational institution (2008-09) and Literacy rate information (2001 Census)**		
SL.No	**Categories of School/Colleges**	**No.**
1	Primary	1127
2	Middle	541
3	Secondary/Higher Secondary	259
4	Colleges (Gen.Edu.)	30
5	Colleges(Diploma)	01
6	Colleges(Tech.Degree)	01
Sources - District,Statistical Hand Book, Dhenkanal-2009		

SL.No.	**Block/ULB**	**Primary**	**Middle**	**Secondary/ HS**	**Colleges (Gen)**	**Colleges (Diploma)**	**Colleges (Tech.Deg.)**	**Literacy**
1	Bhuban	128	55	27	02	-	-	73.37
	Dhenkanal	122	57	30	03	-	-	70.89
	Gondia	114	64	31	05	-	-	68.17
	Hindol	133	93	41	03	-	-	65.21
	K.Nagar	150	59	26	01	-	-	68.36
	Kankadahad	180	70	27	04	-	-	57.85
	Odapada	91	57	31	03	-	-	71.99
	Paranjaga	164	60	29	02	-	-	69.52
	Bhuban(NAC)	13	06	03	02	-	-	76.57
	Dhenkanal (M)	18	15	09	03	01	01	87.19
	K.Nagar(NAC)	14	05	05	02	-	-	82.52
		1127	541	259	30	01	01	69.42

Literacy – There are 1959 No (Primary- 1127, Upper primary -541 and Secondary School -259) of Schools and 32 No (Junior College 30 No, Diploma 01 No, Degree College 01No.) of educational institutions in this area of revision.The literacy rate as per 2001 census is given below.

All Class			**Scheduled Caste**			**Scheduled Tribe**		
Total	Male	Female	Total	Male	Female	Total	Male	Female
69.42	80.57	57.89	56.23	70.83	41.25	39.41	53.69	24.66

3.1.2. **Agricultural Customs:**

3.1.2.1 Land Use Pattern: Maximum farmers (78.18%) are marginal having an area of 0.5-1.0 ha and even less than that followed by small farmers (17.62%) having an area of 1.0-2.0 ha. Maximum land is with small farmers followed by semi-medium farmers.

The details of number of people in different categories and the area operated in different categories are given in the following

Table No 3.5	**Land Use Pattern**		
Type	**Area (Ha)**	**Number of people**	**% People**
Marginal (<1 ha)	40570	87210	78.18
Small (1-2 ha)	25907	19655	17.62
Semi- Medium (2-4 ha)	10323	4048	3.63
Medium (4-10ha)	3070	609	2.75
Large (>10 ha)	2107	50	0.045
Total	**81977**	**111572**	
Sources – Dy Director Agriculture, Dhenkanal			

3.1.2.2 The land use pattern shows that over a period of time the cultivable waste lands and pastures and grazing lands are increasing. The details of the different land use patterns are given in the **Table 3.6**

Table: 3.6 LAND UTILIZATION PATTERN (in 000 Ha.) OF DHENKANAL DISTRICT		
Category	2012-13	2013-14
Forest Area	174	193
Land put to Non- Agricultural Use	42	52
Barren and Non-Cultivable land	5	7
Permanent pastures and grazing land	8	8
Land under misc. tree, crop & groves (not included net area sown)	6	7
Cultivable Waste land	4	4
Other Fallows land	20	13
Current Fallow land	6	5
Net Sown Area land	129	186
Geographical area	445	430
Sources – Dy Director Agriculture, Dhenkanal		

3.1.2.3 In the district 93,507 ha is high land, 52,164 ha is medium land and 40,327 ha is the low land. Majority of the cultivation is dry upland cultivation. The high lands are maximum in Dhenkanal, Hindol, Bhuban and Kankadahada blocks. The medium lands are maximum in Hindol, Gondia, Odapada & Dhenkanal blocks and low lands are more in Dhenkanal, Hindol and Gondia blocks. The details are furnished in **Table-3.7**

Table: 3.7 EXTENT OF CULTIVATED LAND IN THE DISTRICT						
S.No	**Block**	**Geographical Area In Ha**	**Cultivated Area In Ha**			
			High	**Medium**	**Low**	**Total**
1	Dhenkanal	46569	14443	7566	8585	30594
2	Odapada	34056	9958	7687	3967	21612
3	Gondia	47933	9152	8936	5060	23148
4	Hindol	81370	14793	9061	7638	31672
5	K.Nagar	46865	9560	5936	3861	19357
6	Bhuban	29216	12334	3767	3624	19725
7	Parjang	50497	10927	5865	3955	20747
8	Kankadahada	93971	12160	3346	3646	19152
9	**Dist Total**	**430477**	**93507**	**52164**	**40327**	**186007**
Sources – Dy Director Agriculture, Dhenkanal						

3.1.2.4 The irrigation potential created in the district is furnished in the **Table 3.8**. The maximum land is irrigated through major irrigation projectsin kharif crop and no irrigation in Rabi. Normally the Kharif & Rabi crop is irrigated by Minor and Medium irrigation projects.

Table 3.8 IRRIGATION POTENTIAL OF THE DISTRICT.								
Year	Major Irrigation projects(in ha)		Medium Irrigation projects (in ha)		Minor Irrigation projects(i n ha)		Lift Irrigation projects(in ha)	
	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi	Kharif	Rabi
2012-13	27832	-	12768	3950	16564	960	6210	5690
2013-14	27520	-	12768	4502	16564	960	5988	5684
Sources – Dy Director Agriculture, Dhenkanal								

3.1.2.5 The main Agriculture crops grown in the district are Rice, Wheat, Maize, Groundnut, and Sugarcane etc. The details of the production and yield in KG per hectare are given in the **Table -3.9**

Table: 3.9 PRODUCTION OF MAJOR CROPS IN THE DISTRICT						
	2012-13			**2013-14**		
Crop	**Area in Ha**	**Yield Rate in K.G**	**Production in Qtl**	**Area in Ha**	**Yield rate in K.G**	**Production in Qtl**
Paddy	96767	39.24	390938	96732	39.27	366327
Wheat	125	19.25	241	148	18.92	280
Maize	2704	19.07	4706	2521	19.54	2926

Ragi	35	6.0	21	29	6.21	18
Mung	25045	4.06	10593	25426	4.0	10487
Groundnut	11834	18.90	23438	11688	21.23	25856
Mustard	2612	2.99	781	2698	2.88	777
Potato	2267	110.44	25036	2365	108.43	25644
Sugarcane	899	746	67065	1100	762	83858
Biri	28245	4.7	13419	28317	4.35	12475
Kuluthi	7945	5.16	4096	7930	3.80	3011
Til	16832	3.59	6050	19520	3.22	6417
Arrahar	3434	8.72	2992	3625	8.82	3196
Sources – Dy Director, Agriculture, Dhenkanal						

3.1.3 SOCIO-ECONOMIC SURVEY:

3.1.3.1 The purpose of Socio-Economic Survey is to assess the level of dependence of the villagers on the forest for timber, firewood, fodder and other items for their lively hood. This is also important in the context of preparation of the micro-plan for Joint Forest Management. Since there is no data on socio-economic survey available, small attempt has been made in this regard with the available staff. Socio-economic Survey was carried out in 08 forest fringe villages spread over the entire division representing all the Ranges. In each village nearly 40 to 45 households were selected having 03 different economic profile groups - High, Middle and Low income category with nearly 15 households in each. Adequate representation of SC & ST category was also taken into account while selecting the respondents. The criteria adopted for the selection of the respondents were caste, occupation structure, human & cattle population, level of dependence on forest, education etc. The respondents were asked predesigned questionnaires. The detail of the villages & respondents are furnished in the **Table No. 3.10**

Table: 3.10 VILLAGE WISE DETAILS OF THE RESPONDENTS SURVEYED			
SL No	Name of the Range	Name of the village	No of respondents
1.	Dhenkanal	Bhagirathipur	45
2.	Sadangi	Raitola	45
3.	K.Nagar East	Sasapasi	45
4.	K.Nagar West	Kandhara	45
5.	Mahabirod	Tampei	34
6.	Bhuban	Kanchanbahali	43
7.	Hindol	Dandiri	37
		Karnapur	45

3.1.3.2 The respondents selected belong to different caste groups. Out of total 339 household surveyed, nearly 25% belong to SC, 32% to ST, 31% to OBC and 12% belong to general category. The village wise categorization of the respondents is given in the **Table No. 3.11.** In 01 village namely Dhandiri of Hindol Range, there is no respondent from ST. In village Tampei of Mohabirod & Kanchalabhali of Bhuban Range there is higher representation of ST category people. The representation of General category is highest in Raitala village of Sadangi Range.

Table: 3.11 DETAILS OF DIFFERENT CATEGORIES OF THE RESPONDENTS SURVEYED										
Range	**Village**	**S.C.**		**S.T.**		**O.B.C**		**General**		**Total**
		No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	
Dhenkanal	Bhagirathipur	0	0	11	24.4	34	75.6	0	0	45
Sadangi	Raitola	2	4.4	15	33.4	11	24.4	17	37.8	45
K.Nagar East	Sasapasi	6	13.3	18	40	13	28.8	8	17.7	45
K.Nagar West	Kandhara	16	35.5	5	11.1	19	42.3	5	11.1	45
Mahabirod	Tampei	12	35.3	19	55.9	3	8.8	0	0	34
Bhuban	Kanchanbahali	17	39.5	25	58.2	1	2.3	0	0	43
Hindol	Dandiri	24	64.9	0	0	11	29.7	2	5.4	37
	Karnapur	2	4.4	14	31.1	20	44.5	9	20	45

3.1.3.3 The per capita income has been worked out in each village. This has been arrived at by taking the family income from different sources and dividing it with the family size. Mainly

income is obtained from agriculture, small business & wage earnings, and income from collection of forest produces. The average income from various sources in different villages is given in the **Table No.3.12** From the table it is known, that the proportion of income from the small business & wage earnings is highest in most of villages, it is due to industrialization and urbanization of the district. The percentage of earnings from agriculture comes to next and income from collection & selling of NTFP items is minimum. The income trends show that the level of dependence on forest preduces with the increase in the urbanization.

Table: 3.12 DETAILS OF AVERAGE ANNUAL INCOME PER FAMILY(In Rs.)

Name of the Range	Name of the village	Agriculture	Business/ Wages	NTFP items	Total	Per Capita Income
Dhenkanal	Bhagirathipur	71600	1016200	3680	1091480	5222
Sadangi	Raitola	164400	1650800	1110	1816310	7443
K.Nagar (E)	Sasapasi	711200	1242000	3810	1957010	8480
K.Nagar (W)	Kandhara	391300	2372000	4069	2767369	13536
Mahabirod	Tampei	237600	1112500	3290	1353390	8632
Bhuban	Kanchanbahali	143400	987600	3272	1134272	4448
Hindol	Dandiri	191500	1064600	11010	1267110	5866
	Karnapur	196000	2000600	22150	2218750	11038
Total		2107000	11446300	52391	13605691	64665
Average		263375	1430788	6548	1700711	8083

3.1.3.4 Timber & Firewood:

The firewood requirement is worked out per family in each village. The requirement is worked out village wise and the details are given in the **Table No.3.13.** The Timber & firewood requirement is higher in villages Dandiri, Raitola, Sasapasi & Tampei and Lower in Karnapur, Kandhara and Bhagirathipur etc. The villages having higher consumption of timber and fire wood are bit urbonised due to nearby towns. The villages having in lower consumption of timber and fire wood are located in close proximity of the forest. This trend clearly reveals that the higher consumption villages have the tendency to meet their greed whereas other villages are satisfied in meeting their need.

Table: 3.13 QUANTITY OF TIMBER & FIREWOOD CONSUMPTION					
Name of the Range	**Name of the village**	**Total FW(qntls)**	**FW (qtls) Per Family**	**Total Timber (cft.)**	**Timber (cft.) Per Family**
Dhenkanal	Bhagirathipur	690	15.33	176	3.91
Sadangi	Raitola	861	19.13	182	4.13
K.Nagar (E)	Sasapasi	798	17.73	270	6.0
K.Nagar (W)	Kandhara	661	14.68	177	3.93
Mahabirod	Tampei	596	17.52	210	6.18
Bhuban	Kanchanabahali	717	16.67	129	3.0
Hindol	Dandiri	627	22.54	257	5.71
	Karnapur	602	13.37	186	4.04
Total		136.97	5552	1587	413
Average		17.12	694	198.4	4.61

3.1.3.5 Fodder: The fodder requirement is met through different sources like Straw, Grass and Kunda etc. The straw is obtained from agricultural waste and Kunda is made from the husk and the grass is mainly obtained from the forest. The majority of the cattle requirement is met from the grass obtained from the forest. Mostly the cattle are left to the forest for grazing. The Cattle population and fodder requirement are given in **Table No.3.14.**

Table 3.14 CATTLE POPULATION & QUANTITY OF FODDER UTILIZED (Qtls)						
Name of the Range	**Name of village**	**Straw**	**Grass**	**Kunda**	**Total**	**Cattle Population**
Dhenkanal	Bhagirathipur	50.7	94.9	48.1	193.7	70
Sadangi	Raitola	79.4	105.3	70.1	254.8	66
K.Nagar E	Sasapasi	89.1	156.6	84.4	330.1	80
K.Nagar W	Kandhara	114.7	119.2	107.5	341.4	143
Mahabirod	Tampei	67.5	145.7	57.4	270.6	87
Bhuban	Kanchanabahali	96.1	194.8	92.4	383.3	178
Hindol	Dandiri	79.5	108.8	76.7	265	122
	Karnapur	47.5	128.7	42.6	218.8	69
Total		624.5	1054	579.2	2257.7	815
Average		78.06	131.75	72.4	282.21	101.87

3.1.4. WANTS OF THE PAPULATION:

People depend on the forest for variety of needs. Rural population require Bamboo, Poles, Fuel wood, Charcoal, Timber for agricultural implements, NTFP items like seeds, leaves, flowers, roots, bark etc. since the majority of population being rural and whole of their daily requirements comes from the forests, the damage to forest over a period of time is serious. Urban demands are sophisticated but are routed through the rural mass. The forests of Dhenkanal are located between industrially congested zone of Talcher, NALCO and FCI. Organized timber smugglers of Narasingpur, Badamba, Tigiria and Athgarh with competitive consumers of neighbouring towns and cities like Tangi, Choudwar, Cuttack, Bhubaneswar Jajpur, Kendrapara, Paradeep, Salepur, Jajpur road have made the forests of this Division vulnerable. With the flow of easy money, timber smuggling has become profession in villages like Beltikiri, Nagiaposi Bidharpur, Sadangi, Mandar, Nihalprasad, Sorisiapada, Mohadia, Gunadei, Khadaka and Nadhara of Dhenkanal Sadar Sub-division; Haripur, Sapha Tangi, Bidharpur, Dalijoda, Kalakala, Khuntuni, Mahalaxmipur, Sabitripur, Kandurai, Gurudijhatia etc. of Cuttack district, Surapratapur, Dayanabili, Gada, Jayapur, Srirampur, Krushnapur, Tipiloi, Kashipur, Maruabili, Madhi, Baunasapal, Mahulpal, Alatuma, Kulei, Pasulei, Pangatira, Dashapur, Gadapalasuni, of Kamakhyanagar Sub-Division and Dudurkot, Tutupada, Tangisal, Baunsapokhari, Nuakote, Nuabog, Rasol, Naukiari, Babandhar and Giridharaprasad of Hindol Sub-Division. Organized timber smugglers in the above places have assaulted resulting in casualties on the Forest Department personnel on several occasions in the past.

3.1.4.1 Timber

The Dhenkanal Forest Division is a Industrialised District area. People of urban area are more sophisticated than rural ones. The timber is required for various purposes like wooden posts, household wooden panels, doors and window leaves, furniture, agricultural implements etc. Generally, Sal, Bija, Sissoo, Asan, Kasi, Bandhan are used for ridge pieces, door and window frames. The important timber species available in the division and their uses for different purposes are elaborated in the following **Table 3.15.**

Table:3.15 LIST OF PRINCIPAL TIMBER YIELDING SPECIES

S.No	Local Nam	Botanical Name	Uses				
			Building	Furniture	Agricultural implements		
					Plough	Cart	Others
1	Arjuna	*Terminalia arjuna*	✓	-	-	-	-
2	Asan	*Terminalia tomentosa*	✓	-	-	-	-
3	Bandhan	*Ougeinia oojeinensis*	-	-	-	✓	-
4	Bija	*Pterocarpus marsupium*	✓	✓	-	-	-
5	Champa	*Michelia champaka*	✓	✓	-	-	-
6	Dhala Siris	*Albezzia procera*	✓	✓	-	-	-
7	Dhaura	*Anogeissus latifolia*	✓	-	✓	✓	-
8	Gambhari	*Gmelina arboria*	✓	✓	-	-	-
9	Kurum	*Adina cordifolia*	✓	✓	-	-	-
10	Mundi	*Mitragyna parviflora*	✓	✓	-	-	-
11	Kala siris	*Albizzia lebbek*	✓	✓	-	-	-
12	Karada	*Cleistanthus collinus*	✓	-	-	-	-
13	Kasi	*Bridelia retusa*	✓	✓	-	-	-
14	Kusum	*Schleichera oleosa*	-	-	✓	-	-
15	Teak	*Tectona grandis*	✓	✓	-	-	-
16	Sal	*Shorea robusta*	✓	✓	✓	✓	✓
17	Sidha	*Lagerstroemia pariflora*	✓	-	-	-	-
18	Simili	*Bombax ceiba*	-	✓	-	-	-
19	Sisoo	*Dalbegia sisoo*	✓	✓	-	-	✓
20	Sisoo	*Dalbergia latifolia*	✓	✓	-	-	✓

3.1.4.2 Firewood

The sources of firewood are forest, agricultural wastes, dung cakes. Of these, forest is the major source. In Dhenkanal Forest Division 90% of the population are from rural area. Fire wood is required by rural people per cooking. Also, some of the rural people as well as Hotels running in town and NHs use Coal for the purpose. However, there is no scarcity of firewood being forest dominated area.

3.1.4.3 Fodder

The cattel population of the Division as per 2007 census is Cattel-4,64,911, Buffalo-49,957, Sheep-48,904, Goat-1,86, 634.The requirement for the fodder of the above animals is partly met from the Forest and partly from other sources. There is no concept of stall feeding and usually practice adopted is mass grazing.

3.1.4.4 Bamboo:

People need bamboo for construction of houses, Basket, Tray, Stick, etc. It is known as poor man's timber. The Bamboo is available in Kandhara and Hitinda RF of this Division. In other RF it is very sparsely located not viable for working. However, the Bamboo Forest in the above RF has degraded a lot, hence not sufficient to meet the requirement of the people. **Table – 3.16**

TABLE-3.16 **PRODUCTION OF BAMBOO FROM COUPE AREAS**

Year of working	Name of the coupe	Production (Industrial Bamboo) (in MT)			Production (Commercial Bamboo) (in No)	Royalty paid by OFDC, Ltd.
		Salia	Daba	Total		
1	2	3	4	5	6	7
2004-05	Gurujang-A Talaganda-A	89.156 -	22.774 -	111.930 -	- -	55,965.00
	Total	**89.156**	**22.774**	**111.930**	**-**	
2005-06	Gurujang- B Talaganda-B	- 18.05	- -	- 18.05	- -	9,025.00
	Total	**18.05**	**-**	**18.05**	**-**	
2006-07	Gurujang- C Talaganda-C	86.877 -	12.695 -	99.582 -	- -	49,791.00
	Total	**86.877**	**12.695**	**99.582**	**-**	
2007-08	Gurujang- D Talaganda-D	Coupes not worked				-
2008-09	Gurujang-A Talaganda-A	Coupes not worked				-
2009-10	Gurujang- B Talaganda-B	Coupes not worked				-
2009-10 Flowered Bamboo coupes	Gurujang-A Gurujang- B Gurujang-D Kandhara SWC-X	- - - -	16.77 8.39 8.38 3.35	16.77 8.39 8.38 3.35	- - - -	18,445.00
	Total	**-**	**36.89**	**36.89**	**-**	
2010-11	Gurujang- C Talaganda-C	Coupes not worked				-
2011-12	Gurujang- D Talaganda-D	Coupes not worked				-
2012-13	Gurujang-A Talaganda-A	Coupes not worked				-
		Total= Salia-194.083 +Daba-72.359= 266.442				133226.00

3.1.4.5 Non-Timber Forest Produces (NTFPs):

The forests of this division are rich in various non-timber forest produce (NTFP) items like Siali leaves, Sal leaves, Mahua flower, Sal seeds, Rohini fruits, Mango kernels, Simul cotton, kendu leaves, Tamarind etc. NTFPs contribute sizable portion to the livelihood of the tribals and people living around the forests. Inventorization of NTFP items has been taken up in 08 ranges during out going plan period. This will give the potentiality of the different NTFP items in the Division area. The NTFP survey carried out during 2011-12 to 2013-14 of the Ranges of this division is given in the Table below.

The important MFP items available in different forest blocks are given in the **Table-3.17**

TABLE: 3.17 NTFP ITEMS AVAILABLE IN THE DIVISION

S.No		Name of the R.F	NTFP Items Available
1		Charkhola	Kendu leaves, Mahua flowers, Neem seeds, Char seeds, Mahua seeds
2		Ghantabaja	Bahada, Char seeds, Mahua seeds, Mahua flowers.
3		Saptasajya	Mahua flower, Mahua seeds Kendu leaves.
4		Mayuri	Kendu leaves, Mahua flowers Mahua seeds, Char seeds.
5		Nimidha	Kendu leaves
6		Godabalua	Char seeds, Kendu leaves, Mahua flowers, and Mahua seeds.
7		Patapuri	Anla, Kendu leaves
8		Megha	Char seeds, Mahua flowers, Mahua seeds, Kendu leaves Siali leaves, Siali fibers, and Sunari bark, Sal leaves.
9		Korean	Sal seeds, Siali leaves, Siali fibers, Sal leaves, Mahua flowers, Mahua seeds.
10		Kankadahada	Kendu leaves, Char seeds, Sunari bark.
11		Tamanda	Mahua flowers, Mahua seeds, Kendu leaves, Siali leaves, Sal leaves, Siali fiber, Sunari bark.
12		Jaripal	Mahua flowers, Mahua seeds Sal seeds, Sal leaves
13		Belabania	Siali leaves, Siali fiber, Sunari bark, Char seeds.
14		Sulia	Char Seeds, Anla, Sal Leaves, Kendu Leaves, Mahua Flowers, Mahua Seeds.
15		Matia Mundia	Kenduleaves
16		Matharagadi	Sal Leaves, Sal Seeds, Siali Leaves, Siali Fiber, Anla, Bahada, Char Seeds
17		Kotaberena	Mahua Flowers, Mahua Seed, Kendu Leaves
18		Kapilas	Sal Seeds, Mahua Flowers, Sal Leaves, Mahua Seeds, Siali Leaves, Siali Fiber, Sunari Bark, Sal Resin,

			Honey, Lac, Anla, Harida, Bahada, Kendu Leaves
19		Sadangi -A	Sal Leaves, Kendu Leaves, Mahua Flower, Mahua Seeds, Sunari Barks
20		Sadangi-B	Sal Leaves, Kendu Leaves, Mahua Flower, Mahua Seeds, Sunari bark
21		Lahada- A	Bahada, Kendu Leaves, Sal Leaves, Mahua Flower, Mahua Seeds.
22		Lahada - B	Bahada, Kendu Leaves, Sal Leaves, Mahua Flower, Mahua Seeds.
23		Ramai	Bahada, Anla, Sal Leaves, Mahua Flower, Mahua Seeds, Siali Leaves, Siali Fiber.
24		Aswakhola	Kendu Leaves, Char Seeds, Sal Leaves, Sunari Bark
25		Raigoda	Kendu Leaves.
26		Gondia	Sal Leaves, Char Seeds
27		Baliposi	Nil
28		Nischinta	Kendu Leaves.
29		Raitola	Kendu Leaves, Mahua Flower, Mahua Seeds, Sal Leaves, Char Seeds.
30		Bega	Nil
31		Rupabalia	Kendu Leaves, Mahua Flower, Sal Leaves, Char Seeds,
32		Kankira	Kendu Leaves, Mahua Flower, Mahua Seeds, Sal Leaves.
33		Sunajhari	Sal Leaves, Sal Seeds, Siali Leaves, Siali Fiber, Mahua Flower, Mahua Seeds, Kendu Leaves, Char Seeds.
34		Maulabhanja	Sal Leaves, Sal Seeds, Kendu Leaves, Sunari Bark, Char Seeds
35		Ranjagarh	Sal Leaves, Sal Seeds, Sal Resin, Siali Leaves, Siali Fiber, Mahua Flower, Mahua Seeds, Kendu Leaves, Honey, Lac.
36		Anlabereni	Sal Leaves, Anla, Mahua Flowers, Mahua Seeds, Kendu Leaves.
37		Machhia	Sal Leaves, Sal Seeds, Kendu Leaves, Mahua Flowers, Mahua Seeds.
38		Suniamaru	Sal Seeds, Sal Leaves, Char Seed, Kendu Leaves, Mahua Flowers, Mahua Seeds, Siali Fiber, Siali Leaves
39		Bhairpur	Sal Leaves, Char Seed, Kendu Leaves, Mahua Flowers, Mahua Seeds.
40		Tipiloi	Sal Leaves, Sal Seeds, Char Seed, Kendu Leaves, Mahua Flowers, Mahua Seeds.
41		Jiridamali	Sal Leaves, Kendu Leaves.
42		Birasal	Sal Leaves, Kendu Leaves, Mahua Flowers, Mahua Seeds.
43		Dholpada	Sal Seeds, Sal Leaves, Kendu Leaves, Char Seeds.
44		Balibo	Sal Leaves, Kendu Leaves.
45		Bhuban	Sal Leaves.
46		Anantapur	Sal Leaves, Sal Seeds, Sal Resin, Siali Leaves, Siali

			Fiber, Mahua Flower, Mahua Seeds, Kendu Leaves, Honey, Lac.
47		Sundarkhol	Sal Leaves, Sal Seeds, Siali Leaves, Siali Fiber, Mahua Flower, Mahua Seeds, Kendu Leaves, Char Seeds.
48		Nandabir	Sal Leaves, Sal Seeds, Mahua Flower, Mahua Seeds, Kendu Leaves.
49		Talcher Boarder	Kendu Leaves, Sal Leaves, Char Seeds
50		Dolia	Kendu Leaves, Sal Leaves, Char Seeds, Mahua Flower, Mahua Seeds.
51		Khalpal	Kendu Leaves, Sal Leaves, Sal Seeds, Char Seeds,
52		Barbank (N)	Kendu Leaves, Sal Leaves, Char Seeds
53		Barbank (S)	Kendu Leaves, Sal Leaves, Char Seeds
54		Kankili	Kendu Leaves, Sal Leaves, Sal Seeds, Char Seeds
55		Siarimalia	Sal Leaves, Sal Seeds, Char Seeds Kendu Leaves, Mahua Flowers, and Mahua seeds.
56		Kadalipal	Sal Leaves, Char Seeds, Kendu Leaves.
57		Madhi	Sal Leaves, Char Seeds, Mahua Flowers, Mahua seeds.
58		Kandhara	Sal Leaves, Char Seeds, Mahua Flowers, Mahua seeds, Kendu Leaves, Siali Leaves, Siali Fiber, Honey, Lac, Sunari bark.
59		Potalo	Kendu Leaves
60		Bompa	Kendu Leaves, Sal Leaves, Char Seeds.
61		Nandania	Kendu Leaves, Sal Leaves.
62		Hitinda	Sal Leaves, Char Seeds, Kendu Leaves, Siali Leaves, Siali Fiber.
63		Kai	Sal Leaves, Sal Seeds, Char Seeds, Kendu Leaves.
64		Kansara	Kendu Leaves.
65		Ambithi	Kendu Leaves.

Table: 3.18 IMPORTANT FRUIT BEARING TREES IN THE DIVISION

S.No	Local Name	Scientific Name	Period	Uses
1	Amba	*Mangifera indica*	April-May	Fruit is edible
2	Ambda	*Spondias pinnata*	Jan-Feb	Fruit is edible
3	Anla	*Emblica officinalis*	Dec-Jan	Medicinal
4	Bahada	*Teminalia belerica*	Feb-Mar	Medicinal and Edible for Animal
5	Barkoli	*Zyzyphus mauritiana*	Nov-Dec	Fruit is edible
6	Baula	*Mimusops elengi*	April-May	Fruit is edible
7	Barta	*Melia composita*	Mar-April	Edible for Animals
8	Bela	*Aegle marmels*	April-May	Edible Fruit
9	Bhalia	*Semicarpus anacardium*	Mar-April	Medicinal Use
10	Chara	*Buchanania lanzan*	April-May	Edible Fruit
11	Dimiri	*Ficus racemosa*	Nov-Dec	Fruits eaten by Birds & Animals

12	Bar	*Ficus bengalensis*	Nov-Dec	Fruits eaten by Birds & Animals
13	Gohira	*Acacia leucophloea*	May	Fruits for Animals
14	Gambhar	*Gmelina arborea*	May-June	Fruits for Animals
15	Harida	*Terminalia chebula*	Feb-Mar	Fruit for Medicine
16	Jamu	*Syzygium cumini*	June-July	Edible Fruit
17	Aswastha	*Ficus religiosa*	Dec-Jan	Fruit for Animals
18	Kaitho	*Limonia acidissima*	Nov-Dec	Fruit for Man & Elephant
19	Tentuli	*Tamarindus indica*	Mar-April	Edible Fruit for Man
20	Karanja	*Pongamia pinnata*	Jan-Feb	Oil & Medicine
21	Kendu	*Dyospyros melanoxylon*	Mar-April	Edible Fruit
22	Kochila	*Strictnous naxvomica*	Nov-Dec	Fruit for Medicine& Birds
23	Kusum	*Schleichera oleosa*	April-May	Edible Oil &Fruit
24	Mahula	*Madhnca indica*	Feb-Mar	Edible Oil &Fruit
25	Mankada Kendu	*Dyospyros embryopteris*	Feb-Mar	Animal Fruits
26	Neem	*Azadirachta indica*	May-June	Medicine & Oil
27	Panas	*Artocarpus integrifolia*	May-June	Edible Fruit
28	Sal	*Shorea robusta*	April-May	Edible Oil
29	Simal	*Bombax ceiba*	April-May	Cotton yield
30	Tal	*Borassus flabelliformis*	July	Edible Fruit

Table: 3.19 IMPORTANT FIBRE YIELDING SPECIES

S.No	Local Name	Botanical Name	Useful part	Uses
1	Siali	*Bauhinia vahlii*	Fibre	Binding of kendu leaves and Rope making
2	Jaisanda	*Litsia glutinesa*	Fibre	Medicinal value
3	Palasa	*Butea monosperma*	Root	Rope making
4	Bara	*Ficus bengulensis*	Tree	Rope making
5	Aswasta	*Ficus religiosa*	Tree	Rope making

Table: 3.20 IMPORTANT OIL YEILDING SPECIES

S .No	Local Name	Botanical Name	Useful part	Uses
1	Mohula	*Madhuca indica*	Seed	Edible
2	Kusum	*Schleichera oleosa*	Seed	Cooking, and soap making
3	Karanja	*Pongamia pinnata*	Seed	Medicines
4	Neem	*Azadirachta indica*	Seed	Medicines
5	Kochila	*Strychnos nuxvomica*	Seed	Medicines
6	Champa	*Michelia champaca*	Flower	Perfumes
7	Eucalyptus	*Eucalyptus indica*	Leaf	Medicines
8	Sal	*Shorea robusta*	Seed	Edible food
9	Polanga	*Callophylum inophyllum*	Seed	Soap making
10	Chandan	*Santalum album*	Wood	Perfume and soap making

Table: 3.21 IMPORTANT TANIN YIELDING SPECIES				
S.No	**Local Name**	**Botanical Name**	**Part Yielding Oil**	**Uses**
1	Babul	*Acacia nilotica*	Bark and fruits	Leather
2	Sunari	*Casia fistula*	Bark and fruits	Medicinal
3	Sal	*Shorea robusta*	Bark and fruits	Leather
4	Arjuna	*Terminalia arjuna*	Bark and fruits	Leather
5	Harida	*Terminalia chebula*	Fruit	Medicinal, leather
6	Bahada	*Terminalia belerica*	Myrobalans (Fruit)	Medicinal, leather
7	Anla	*Emblica officinalis*	Fruit	Medicinal, leather
8	Dhaura	*Anogeisus latifolia*	Leaves	Leather

Table: 3.22 IMPORTANT GUM AND RESINS YIELDING SPECIES				
S.No	**Local Name**	**Botanical Name**	**Useful Part**	**Uses**
1	Sal	*Shorea robusta*	Resin from heart wood	Manufacture of varnish, paint,
2	Genduli	*Sterculia urens*	Gum	Gum is edible and Used in preparation of Confectionaries
3	Babool	*Acacia nilotica*	Gums	Calico-printing, dyeing and as a sizing material for silk, cotton
4	Salai	*Boswellia serrata*	Gum	Pleasant aromatic smell when burnt
5	Khaira	*Acacia catechu*	Khaira	Pan making industry
6	Dhaura	*Anogeissus latifolia*	Gum	Sizing paper and incalicoprinting

The list of important medicinal plants available in the Division is appended in **Annexure-XVI.**

3.1.5 MARKETS AND MARKETABLE PRODUCTS:

The no of market centers for consumption of forest produces like poles, round timber and other NTFP items are limited. It is confined to the District headquarters at Dhenkanal, two Sub-Divisional headquarters at Kamakhyanagar and Hindol. Other places including block headquarters are very small. However local people illegally collect firewood, small timber and poles and sale the same in the town and in big villages. After moratorium on tree felling in the forests, restriction in Working Plan Prescription, timber known to be a scarce and expensive commodity. However, the OFDC Ltd continue to be the authorized agency for supply of timber and fire wood, salvaged from forest floor including seized and confiscated ones.

The paper industry M/s Bilt Ltd., Choudwar used to consume all the industrial bamboo where as the number of industries like FCI, Heavy Water Project, MCL, NTPC, NALCO etc. are the main centre for consumption of pole and building materials. The TDCC Ltd. disposes its produces after procuring from the primary collectors from the local *haats* to outside agencies.

Different marketable products of Dhenkanal Forest Division are as follows:

(a) Timber: Sal, Biza, Sissoo, Haldu, Asan, Kasi, Bandhan, Tangana etc. are the main timber species but Sal by far is the major species. Sal poles are used in mining industries. The OFDC has monopoly in trade of timber and timber products in the state. There was no uniform policy for fixation of local prices for different kind of forest produces until 1992 when the first ever sale policy of the OFDC was spelt out. In Dhenkanal division, the minimum sale price depends on rate fixed at the nearest base station i.e. Bhubaneswar/Cuttack and the transportation cost to various places depending on the lead from the nearest base station.

(b) Fire wood and Charcoal: There is huge gap in the requirement and supply of firewood and usually these are illicitly removed from the forests. Charcoal is generally prepared at stump site in the forest by burning of the logs.

(c) Bamboo: Bamboo is used in many ways such as tender shoots as food, Karadi bamboo for basket making and pakal bamboo for house construction and agricultural implements. The industrial bamboo is supplied to the Paper mills at Choudwar.

(d) Kendu leaf: The Kendu leaves procured in this Division are marketed by the OFDC and sold to different parties. Kendu leaves are collected by Angul K.L. division in Dhenkanal, Hindol, Sadangi ranges and by Keonjhar K.L. division in K.Nagar East and West ranges. There are six KL Ranges under the jurisdiction of Dhenkanal division. The average production of Kendu Leaves in the division is about 3000 quintals.

(e) Non-Timber Forest Produces (NTFP): Plenty of NTFP items are available in the forests. Prior to 2002 the NTFP items were leased out co-operative bodies like TDCC, OFDC and private agencies. These organizations used to collect NTFP items through local people providing them seasonal employment.

In March 2000 and subsequent stages Government of Orissa announced new NTFP policy and orientation changed from revenue earning to livelihood support. The ownership of 69 MFP items in the scheduled areas was vested with panchayats. Government of Orissa, Panchayati Raj Department has framed MFP Rules and as per this rules Panchayat Samiti fixes minimum procurement price for MFP items. The penal provisions for violation of any conditions are also spelt out in the rules.

3.1.6 DEMAND AND SUPPLY OF FOREST PRODUCE AND PRESSURE ON FOREST:

With the rise in population and ever changing life styles, there is an increasing demand and tremendous pressure on forests to meet their requirement in shape of timber and other forest products. Rural population require bamboo, poles, fuel wood, charcoal, timber for agricultural implements, NTFP items like seeds, leaves, flowers, roots, bark etc. Majority of population are rural people and most of their daily requirements comes from the forests. The forests of Dhenkanal are located between industrially congested zone of Talcher, NALCO and FCI. Organized timber smugglers in the above places have assaulted resulting in casualties on the Forest Department personnel on several occasions in the past.

3.1.6.1 Demand of Timber:

Timber is required for construction of houses, agricultural implements, such as ploughs, carts, beams, doors and window and plank sizes, furniture wood etc. The population as per 2011 Census is 11,92,811 (Rural-10,75,305 Urban-1,17,506) The per capita requirement for different activities like housing, furniture and agricultural implements have been calculated by FSI in 1996 and using those per capita data the total requirement is worked out as follows:

TABLE -3.23 Requirement of Timber			
Purpose	**Type**	**Per Capita Consumption**	**Annual Requirement (cum) (as per 2011 Census)**
Housing and Allied uses	Rural	0.040	43,012.2
	Urban	0.047	5,522.782
Furniture	Rural	0.008	8,602.44
	Urban	0.015	1,762.59
Agriculture Implements	Rural	0.053	56,991.165
Total Requirement			**1,15,891.177**

The calculated timber requirement shown in the above table is of minimum requirement. On the other hand, the production of timber in the last 10 years is shown below.

Table -3.24 Production of Timber through Salvage & Seized materials (in cum):

Year	Dhenkanal Division		Total
	Seized	Salvaged	
2004-05	189.8600	-	189.8600
2005-06	176.9365	-	176.9365
2006-07	304.3170	-	304.3170
2007-08	179.0698	-	179.0698
2008-09	271.3488	26.5445	297.8933
2009-10	282.8168	123.2904	406.1072
2010-11	217.3232	20.1567	237.4799
2011-12	328.2062	-	328.2062
2012-13	177.2167	-	177.2167
2013-14	145.1362	-	145.1362
Total	**2272.2312**	**169.9916**	**2442.2228**

Source: Divisional Forest Officer, Dhenkanal

The production of timber out of seized & salvaged is 2442.2228 Cum and from coupe working is 4833.1117 Cum during the plan period. Thus, the the total production of timber during plan period i.e. over 10 years is 7275.1335 Cum. Hence the annual production of timber is 727.53 Cum. This shows that there is wide gap between demand and supply and only 0.63% of the demands in terms of timber are only fulfilled through legalized manner.

The requirement of timber as furnished above is not realistic and calculation is based per capita requirement of timbers prescribed by FSI. Now most of the urban people have switched over for using fabricated materials instead of timbers for furniture, housing and allied uses. Simiraly in the rural also some people have preferred uses of Tractors, modern agricultural implements like iron ploughs instead of traditional wooden ploughs and bullock cart. In view of the above the per capita consumption for timber in both urban and rural area have definitely less than as mentioned above. In absence of data on actual per capita consumption of timber, it is not possible to calculate in realistic way.

3.1.6.2 Demand of Firewood:

The rural people use the firewood for cooking their foods, warmed during winter. They collect the firewood from the nearby forests. The urban people have the access of L.P.G., coal and solar systems, most of them depend upon firewood for cooking their foods. The local tribals who do not have regular cultivation and of marginal nature use to convert firewood illegally from forests and sale in nearby township. They use to bring as head-load, *bhar* load and by bi-cycle from all the side to mitigate the requirement of towns and urban population. Thus, there is tremendous pressure on the existing forests. As per 1996 FSI report, the firewood requirement of the tract is as below (Rural-10, 75,305, Urban-1, 17.506, Total-11, 92,811 as per 2011 census)

TABLE -3.25 Requirement of Firewood (in M.T):

Division	Type	Per capita consumption in Kgs	Annual requirement in Thousand Tons
Dhenkanal Forest Division	Rural	168	180. 651
	Urban	140	16. 450
TOTAL		308	197.101

Thus, the annual requirement of firewood for the tract of the Division is 197.101 Thousand Tons. The firewood is legally supplied to the people through Depots of O.F.D.C Ltd. on retail sale. There are 2 Nos. of Retail Sale Depots in the tract. Practically, firewood is supplied to the O.F.D.C Ltd. by the Forest Department after salvaging the dead, fallen and uprooted trees.

TABLE -3.26 Production of Fire Wood (in Qntls)

Year	Dhenkanal Division		Total
	Salvage	Seize	
2004-05	105	90	195
2005-06	1095	105	1200
2006-07	550	26	576
2007-08	840	67	907
2008-09	1000	145	1145
2009-10	1710	153	1863
2010-11	1212	88	1300
2011-12	1770	42	1812
2012-13	200	43	243
2013-14	-	20	20
Total	**8482**	**779**	**9261**

Source: Divisional Forest Officer, Dhenkanal

The production of firewood out of seized & salvaged is 926.1 MT and from coupe working is 2729.25 MT during the plan period. Thus, the the total production of firewwod during plan period i.e. over 10 years is 3655.35 MT. Hence the annual production of fireewood is 365.54 MT. The production of firewood legally is very negligible in comparison to the requirement assessed. In fact, the production is hardly 0.19% of the requirement. Though LPG, agricultural waste, kerosene and cow dung act as alternate cooking fuel, firewood continues to be the major source, putting severe pressure on the forests of the tract. In town people also use charcoal as a cooking fuel for its easy availability. The dead, fallen, even if young pole crops are converted into charcoal in wasteful manner. Thus, charcoal making in forests is a key for the rapid destruction of the forests particularly around towns.

The requirement of firewood as furnished above is not realistic and calculation is based per capita requirement of timbers prescribed by FSI. Now most of the advance people and even some

rural people have preferred the uses of liquidified gases for cooking their foods and other purposes. Also, the bio gas, solar chulla, fuel efficient chulla uses are become more common in the urbal as well as rural areas. In view of the above the per capita consumption for fire wood in both urban and rural area have definitely less than as mentioned above. In absence of data on actual per capita consumption of fire wood, it is not possible to calculate in realistic way.

3.1.6.3 Demand of Bamboo:

Though bamboo is called as poor man's timber for its various use at rural level i.e., for household purpose, making of baskets, mats and containers etc. by the artisans but now a days, Paper Mill Industry is the major consumer of bamboo. The bamboo is available in Kandhara R.F. and Hitinda R.F. of Hindol Range of the Division. The bamboo coupes were leased out to Titagarh Paper Mills earlier for a long time. Then from 1988 onwards the Orissa Forest Development Corporation Ltd started working the bamboo coupes. After working for five years directly, in 1993 the OFDC Ltd became the leaseholder and the working of the coupes was done by the BILT, Chaudwar as Raw Material Procurer. This arrangement continued up to 1999 and then the paper mill has backed out and they expressed their reluctance to work with the OFDC Ltd. Now the OFDC Ltd is also not working the bamboo coupes. This results in loss of employment to the rural people in the agricultural lean season and also there is a threat of forest fire with dried four year old bamboos. This problem needs immediate redressal. The OFDC Ltd is unable to exploit bamboo because bamboo in different coupe areas is unproductive. It will be surveyed during the preparation of current plan and data will be included in the new plan.

3.1.6.4 Demand of Non-Timber Forest Produces (N.T.F.Ps):

The forests of this division are rich in various non-timber forest produce (NTFP) items like Siali leaves, Sal leaves, Mahua flower, Sal seeds, Rohini fruits, Mango kernels, Simul cotton, kendu leaves, Sal resin, Myrobolans, etc. NTFPs contribute sizable portion to the livelihood of the tribals and people living around the forests.

The tribals collect different fruits from the forest and many fruits of forest become their staple food. The Kendu fruit is one among them. The yield of this fruit is predominantly high and is relished very much. The mango fruits and kernels are another important food items for the tribals. Some of the fruits are used for medicinal purposes and the animals also take fruits. Local people amd tribals depend on the forest for their raw materials. These items constitute making of bamboo mats, baskets, making of brooms from broom grass, collection of mahua and Jhuna, rope making from Siali fiber, furniture units, cart making, collection of Sal leaves, Siali leaves, collection of Kendu leaves, collection of Mahua flower, collection of Sal seed, Kusum seeds and Chara seeds etc. All these activities form a part of livelihood of many rural and tribal families. These activities generate lot of employment. Nevertheless, they are mostly unorganized. As per 2000 MFP Rule, the collection of 69 MFP items are regulated by Panchayat, except registration fees. The main idea behind the Rule 2000 is to create competition among purchasers implying better price to primary collectors but it seems no improvement on the desired goal.

3.1.6.5 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.

3.1.6.6 Pressure on Forest – Practically the people of this locality are not fully aware of the Forest Act and Rules. The forest area covers 70 % 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 motivated to utilise energy from other non- conventional sources like Biogas, LPG, Solar Chullahs, and other modern devices to meet the acute scarcity of fuel wood. But at present the pressure on forest, increased considerably and needs to reduce it through awareness.

3.1.7 METHOD OF HARVESTING AND THEIR COST:

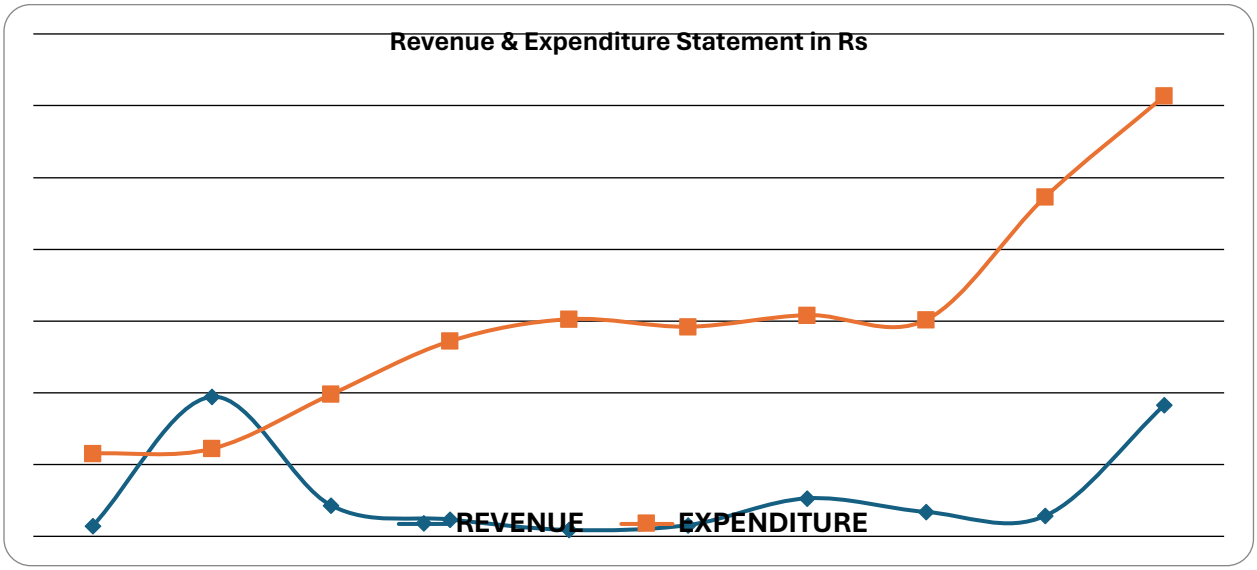
In the past exploitation and extraction were effected through contractors and purchasers earlier. The coupes were sold annually on auction sale. Coupe contractors were given time up to 30th June to fell and extract the produce except in the case of coupes in the selection working circle where time used to be given up to the end of December of the following year of sale of coupe.

The Government of Orissa imposed ban on felling of trees since 01.10.1992. Hence the regular coupe working was not carried out since then, but the irregular lots formed out of salvaged material from wind fallen, uprooted trees, and seized timbers etc were delivered to the OFDC Ltd. In 1999-2000 the Government lifted the ban and ordered for marking of timber coupes. But the ban was again imposed in the same year perhaps due to the super cyclone of 1999 in which lot of trees were uprooted. The marking and felling of trees are carried out from 2005-06 onwards in accordance with the valid working plan prescription. The extraction cost was on the increase because the operations were mostly done manually and the labour cost was escalating from time to time.

TABLE -3.27 Year wise Production of Timber, Firewood & Bamboo along with Past Revenue and Expenditure

Major Head 0406-Revenue	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
101Sale of Timber										
A1Timber	14918	120148	7030100	3273691	84330	1052440	2619270	2457629	3094831	1434471
A2 F W	21175	32393	17325	0	18900	263040	358495	73373	63320	7300
A3 Bamboo	0	0	0	0	0	0	0	0	18445	0
Total A	36093	152541	7047425	3273691	103230	1315480	2977765	2531002	3176596	1441771
B1 timber	0	0	0	0	0	0	0	0	0	0
B2 FW	0	0	0	0	0	0	0	0	0	0
B3 Bamboo	0	0	0	0	0	0	0	0	0	0
B4 Grazing	292	743	241	0	0	0	0	0	0	0
B5MFP	57364	92036	173520	150090	159540	142380	69584	70260	62940	54360
B6 Comm.	259203	261172	157240	31623	0	8514	0	0	0	0
Total B	316859	353951	331001	181713	159540	150894	69584	70260	62940	54360
C D&W	117031	1142764	536972	815231	1080365	1283220	7096359	3779991	2007015	1447737
Total-	469983	1649256	7915398	4270635	1343135	2749594	1014370	638125	524655	294386

101Sale of timber							8	3	1	8
800-Other Receipt - Rent on building	101770	100223	102919	92757	116475	107195	93223	102408	96832	98238
Other misc. receipt	2374562	37129283	617476	325476	323719	298960	357916	309718	409261	623053
Total-800 other receipt	**2476332**	**37229506**	**720395**	**418233**	**440194**	**406155**	**451139**	**412126**	**506093**	**721291**
Total-0406 Revenue	**2946315**	**38878762**	**8635793**	**4688868**	**1783329**	**3155749**	**10594847**	**6793379**	**5752644**	**3665159**
Source: Divisional Forest Officer, Dhenkanal										



3.1.7.1 Cost of Extraction: The cost of Extraction of timber and Bamboo that prevailing now is furnished in following **Table.3.28**

TABLE: 3.28 COST OF EXTRACTION OF TIMBER & FIREWOOD

Sl. No.	Item of Cost	Rate per cum in Rs.
1	Felling, logging, Debarking of Round Timber	350.00
2	Numbering, measurement and stacking	200.00*
3	Constrution/Repairing of extraction path	500.00*
3	Dragging of log to truckable point	400.00*
4	Transportation (loading & unloading) to depot	1400.00*
5	Cutting, dragging and stacking of firewood	140.00
*These expenditures are incurred by the OFDC Ltd.		
Source: Divisional Manager, OFDC, Dhenkanal		

Table No.3.29 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 depot	01 MT	150.00*
5	Repairing of extraction path	01 MT	50.00*
*These expenditures are incurred by the OFDC Ltd.			
Sources – Divisional Manager, C-KL, Division, Dhenakanal			

3.1.8 LINES OF EXPORT

The forest products of this Division are transported through Railways, roads and river routes both within the district and outside the district.

3.1.8.1 Railway line

The Talcher branch of the Eastern Railways was opened in 1927; it cuts the division almost into two equal halves and passes through the entire length of the division. The most commonly used railway stations for the purpose of handling of forest produce are Meramandali, Hindol road and Dhenkanal. The passenger train plying through the route towards Cuttack and Bhubaneswar is used for transportation of firewood, poles, Sal leaf plates and Sal tooth-stick etc. This railway line has recently been extended to Rourkela making scope for transportation of the forest produce to bigger cities like New Delhi, Bombay, Nagpur etc. easier. Distance from Meramundali to few important railheads is provided in the **Table -3.30**

Table-3.30 DISTANCE FROM IMPORTANT RAILWAY STATIONS		
Sl.No.	Railway Station	Distance in Km
1	Cuttack.	91
2	Puri	182
3	Visakhapatnum	564
4	Talcher	19
5	Paradeep	176
6	Madras.	1342
7	Howrah.	476
8	Berhampur	285

3.1.8.2 Roads

The Cuttack-Sambalpur National Highway No.42 passes through Dhenkanal Division over a length of about 58 Kms. The State Highway runs in the Division from Talcher to Jajpur road through Kamakhyanagar and Bhuban. Other district roads in the Division are Dhenkanal to Chadheidhara, Chhakia to Nihalprasad, Kamakhyanagar to Dhenkanal, Hindol road to Hindol and Dhenkanal to Angul via-Bhapur/Hindol. The forest produce is transported not only through the forest roads but also by the other village roads before reaching the metal top roads as mentioned above. The distance between some important towns and cities is provided in Table-3.31

Table-3.31 DISTANCE BETWEEN IMPORTANT TOWNS

Sl.No.	Place from	Place to	Distance by road.
1	Banarpal	Dhenkanal	52 Km
2	Hindol	Gudiakateni Chhak	29 Km
3	Gudinakateni	Dhenkanal	30 Km
4	Hindol	Rasol	18 Km
5	Rasol	Dhenkanal (via-Bhapur)	61 Km
6	Sadangi	Dhenkanal	39 Km
7	Kamakhyanagar	Jajpur road (Via-Bhuban)	68 Km
8	Kamakhyanagar	Dhenkanal (Fair weather)	35 Km
9	Dhenkanal	Cuttack	67 Km
10	Dhenkanal	Bhubaneswar	99 Km
11	Dhenkanal	Calcutta. (Via-Nergundi)	528 Km

3.1.8.3 There are 20 forest roads in the division extending over a length of 272.28 Kms and these roads are extensively used for transportation of forest produce. Most of these roads have been repaired under Food for Work Programme in the last two years. The list of the roads along with the extent of repair expenditure incurred from 2004-05 to 2013-14 is furnished in **Table- 3.31**

Table: 3.32 LIST OF FOREST ROADS IN THE DIVISION & EXPENDITURE

Sl. No	Name of the Road	Total Length	Amount spent (in Rs.)	Remark
1	Jharan-Chhanbolua	11.30	6,27,880	Repairs taken are annual Maintenance of roads, construction of Causeway & Culverts where ever required from the Scheme -Non-
2	Bhapur- Avimanpur	02.00	-	
3	Hitinda-Mahulapunji	11.50	3,61,355	
4	Hindol-Fasigan	42.00	24,59,406	
5	Bampa-Potalo	12.50	-	
6	Gurujang-Fasigan	19.20	5,04,665	
7	Dhanianali-Khankira	12.00	7,50,511	
8	Chhotentuli-Mahisiakada	05.00	1,67,334	
9	Siarimalia-Jhilli	25.30	11,50,140	
10	Aluajharan-Muktapasi	10.30	1,79,796	

11	Patharagard-Gundichanali	20.00	10,68,656	Plan and State CAMPA.
12	Vegia-Gengutia	08.00	1,25,000	
13	Basoi-Kankili	05.00	1,25,000	
14	Dadaraghati-Bulajhar	08.86	2,75,388	
15	Sundhikateni-Bileisuni	06.02	2,90,626	
16	Batagan-Keonjhar Border	20.09	3,05,463	
17	Umindra-Ekul	11.20	1,49,995	
18	Sendhaswar-Khidikidwar	15.00	7,00,067	
19	Baiganpal-Ekul	14.20	4,20,312	
20	Chilida-Khidikidwar	12.00	-	
Total		**272.28**	**96,61,594**	
Source: DFO, Dhenkanal				

3.1.8.4 **Rivers**

Brahmani River runs throughout the entire length of the division and carries mostly illegal timbers. Apart from Brahmani, Ramial and other feeder nallahs are also used for transporting the stolen timber in the form of rafts during the rainy season when there is sufficient current in the stream. The timber is smuggled to Jajpur district after rafting for 15-20 km.

3.1.9. Past and Current Prices:

Scheduled of Rate – During Durbar administration, the tenants of this division pay a cess and instead enjoy a lot of concession to meet their requirement of timber and other forest produce.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. The schedule rate is never indicative of the actual market price. But the schedule of rates of 1957 has become obsolete as the market rates have gone upconsiderably.

Table No- 3.33 Species wise average selling price of Round Timber of Dhenkanal Division for the year 2007-08 to 2013-14 (in Rs. Per cum)							
Species	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
Teak	-	23819	20990	25979	38032	24289	54858
Sal	-	9899	13584	19178	20845	20241	21195
Bija	-	22873	21483	-	-	24826	-
Haldu/Kurum	-	-	3212	20875	16278	29700	-
Tangini/ Kangada	-	5855	7957	13920	12313	11776	16007
Sahaj/Asan	-	7137	9729	11189	13238	11844	14847
Kasi	-	7777	-	15996	12443	18191	-
Jamun	-	6421	7449	12346	15225	-	-
Mundi/M.Kunia	-	-	14171	20876	16278	-	-
Kendu	-	11436	36634	33662	28730	51094	-
Sisso	-	23387	-	-	15500	24826	-
Banhana	-	-	-	-	-	-	-
Gambhari	-	11533	-	21820	-	26928	-
Dhaura	-	8403	5428	8847	10822	11278	11857
Sirisa	-	-	-	-	8821	14783	-
Mahula	-	-	21483	-	-	-	-
Simili	-	-	-	-	-	-	7213
Misc.	-	-	5314	7536	5539	8845	3384
Jack Fruit	-	-	-	22618	-	-	-
Bali Sisso	-	-	14814	-	-	-	-
Sidha	-	-	-	6137	-	-	-
Mai	-	-	-	-	7298	7972	-
L.Mai	-	9133	5577	12237	12127	11993	14337
Average		**12306**	**13416**	**16881**	**15570**	**19775**	**17967**
Sources – Divisional Manager, C-KL, Division, Dhenkanal							

CHAPTER – IV
ACTIVITIES OF FOREST DEVELOPMENT CORPORATION IN HARVESTING AND MARKETING OF FOREST PRODUCE, RESULTS OF SOCIO ECONOMIC SURVEY

4.

With an aim of marketing of Forest produce collected from different Forest floors and mitigating the needs of local people on reasonable price, the Orissa Forest Corporation Ltd, came into existence w.e.f. dt.28.09.1962. The Dhenkanal Timber Division started functioning from dt.19.10.1962. The Dhenkanal (C-K.L) Division operates for Timber and Kendu leaves working in the tract.

4.1. TIMBER COUPE WORKING

Due to ban on green tree felling by the State Government from 1990, there was no regular coupe works in this Division. However, the State Government has lifted the ban on tree felling during 2005-06. The timber, bamboo and kendu leaves are worked through OFDC Limited and produce is handed over to OFDC for disposal. The timber, bamboo and other forest working was taken up and outcome of the produce during plan period is given below:

TABLE -4.1 Timber Coupe Working

Name of the coupe	Year of working	No. of trees worked	No. of trees felled	Out turn		Royalty paid by OFDC Ltd.
				Timber (in cum)	Fire wood (in stack of size 12' x 3' x 3')	
1	2	3	4	5	6	7
Ranjagarh SWC- II	2005-06	3910	3910	1026.1230	388	39,86,128
Anantapur SWC-II	2005-06	4350	4325	300.5670	475	11,67,597
Kandhara SWC –II	2005-06	882	882	311.0942	53	12,08,492
Total		**9142**	**9117**	**1637.7842**	**916**	**63,62,217**
Ranjagarh SWC- III	2006-07	1452	747	385.6690	65.25	15,19,382
Anantapur SWC-III	2006-07	2016	1221	260.4629	232	10,69,295
Kandhara SWC –III	2006-07	252	252	89.4200	75	3,67,102
Total		**3720**	**2220**	**735.5519**	**372.25**	**29,55,779**
Ranjagarh SWC- IV	2007-08	-	-	-	-	-
Anantapur SWC-IV	2007-08	242	242	36.1951	62	2,58,810
Kandhara SWC –IV	2007-08	201	201	86.4668	22	2,79,500
Total		**443**	**443**	**122.6619**	**84**	**5,38,310**
Ranjagarh SWC- V	2008-09	-	-	-	-	-
Anantapur SWC-V	2008-09	548	548	136.3689	98	6,99,182
Kandhara SWC –V	2008-09	101	101	500148	25	1,32,860
Total		**649**	**649**	**186.3837**	**123**	**8,32,042**
Ranjagarh SWC- VI	2009-10	-	-	-	-	-
Anantapur SWC-VI	2009-10	208	208	65.2502	88.50	3,79,890
Kandhara SWC –VI	2009-10	16	-	-	-	-
Total		**224**	**208**	**65.2502**	**88.50**	**3,79,890**
Ranjagarh SWC- VII	2010-11	686	686	484.0662	158.0	11,64,807

Anantapur SWC-VII	2010-11	119	119	18.7639	62.5	2,18,290
Kandhara SWC –VII	2010-11	155	155	38.9031	65.0	1,24,859
Total		**960**	**960**	**541.7332**	**285.5**	**15,07,956** Not paid by OFDC
Ranjagarh SWC-VIII	2011-12	418	418	381.4597	136.5	9,35,088
Anantapur SWC-VIII	2011-12	275	275	41.2310	95	3,73,500
Kandhara SWC –III	2011-12	106	106	27.7411	50	1,19,700
Total		**799**	**799**	**450.4318**	**281.5**	**14,28,288**
Ranjagarh SWC-IX	2012-13	527	527	377.4601	137	13,34,324
Anantapur SWC-IX	2012-13	842	842	273.0746	181	11,44,524
Kandhara SWC –IX	2012-13	81	81	15.3761	20	64,800
Total		**1450**	**1450**	**665.9108**	**338**	**25,43,648**
Ranjagarh SWC-X	2013-14	863	774	352.2297	220.50	11,27.111
Anantapur SWC-X	2013-14	206	206	75.1733	20	3,07,360
Kandhara SWC –X	2013-14	86	-	-	-	-
Total		**1155**	**980**	**427.4030**	**240.50**	**14,34,471**
Ranjagarh SWC- I	2014-15	1401	1401			48,16,608
Anantapur SWC- I	2014-15	414	414			6,32,901
Kandhara SWC- I	2014-15	0	-	-	-	-
Total		**1815**	**1815**	**0**	**0**	**54,49,509**
Ranjagarh SWC- II	2015-16	1265	1265	2545.0000	36.50	38,53,130
Anantapur SWC- II	2015-16	52	52	74.0000	24.00	1,12,036
Kandhara SWC- II	2015-16	42	-	-	-	-
Total		**1359**	**1317**	**2619**	**60.5**	**39,65,166**
Ranjagarh SWC- I	2016-17	793	793	646.7480	74.00	30,19,791
Anantapur SWC- I	2016-17	239	239	55.5457	50.00	4,40,284
Kandhara SWC- I	2016-17	43	-	-	-	-
Total		**1075**	**1032**	**702.294**	**124**	**34,60,075**
Ranjagarh SWC- II	2017-18	581	581	499.3537	159.50	23,00,557
Anantapur SWC- II	2017-18	224	224	97.3548	95.50	6,02,873
Kandhara SWC- II	2017-18	64	-	-	-	-
Total		**869**	**805**	**596.709**	**255**	**29,03,430**
Ranjagarh SWC- III	2018-19	424	424	414.3429	84.00	16,90,294
Anantapur SWC- III	2018-19	224	224	99.1300	36.00	4,48,785
Kandhara SWC- III	2018-19	111	-	-	-	-
Total		**759**	**648**	**513.473**	**120**	**21,39,079**
Ranjagarh SWC- IV	2019-20	115	115	43.4178	40.00	4,38,365
Anantapur SWC- IV	2019-20	245	245	162.6590	48.00	7,90,639
Kandhara SWC- IV	2019-20	42	-	-	-	-
Total		**402**	**360**	**206.077**	**88**	**12,29,004**
Ranjagarh SWC- V	2020-21	848	848	799.0000	181.00	44,65,858
Anantapur SWC- V	2020-21	90	90	27.4649	50.00	3,32,996
Kandhara SWC- V	2020-21	22	22	10.9111	8.00	96,288
Total		**960**	**960**	**837.376**	**239**	**48,95,142**
Ranjagarh SWC- VI	2021-22	394	394	269.7090	188.00	24,80,505

Anantapur SWC- VI	2021-22	239	239	74.1977	84.05	3,40,404
Kandhara SWC- VI	2021-22	5	-	-	-	-
Total		**638**	**633**	**343.907**	**272.05**	**28,20,909**
Ranjagarh SWC- VII	2022-23	232	232	264.3584	78.00	14,00,319
Anantapur SWC- VII	2022-23	80	80	25.3188	30.00	2,69,667
Kandhara SWC- VII	2022-23	0	-	-	-	-
Total		**312**	**312**	**289.677**	**108**	**16,69,986**
Ranjagarh SWC- VIII	2023-24	80	80	48.9869	10.00	2,13,750
Anantapur SWC- VIII	2023-24	48	48	10.0679	28.00	1,95,750
Kandhara SWC- VIII	2023-24	24	-	-	-	-
Total		**152**	**128**	**59.0548**	**38**	**4,09,500**
Ranjagarh SWC- IX	2024-25	244	244	212.8656	24.00	4,95,522
Anantapur SWC- IX	2024-25	61	61	59.3841	24.00	3,11,723
Kandhara SWC- IX	2024-25	0	-	-	-	-
Total		**305**	**305**	**272.25**	**48**	**8,07,245**

4.2 BAMBOO COUPE WORKING

The Bamboo worked during the plan period was not in a regular manner. This was due to non availability of Commercial Bamboo and gregarious fllowring occurred during 2007-08. The production of Bamboo during the outgoing plan period is furnished below.

TABLE-4.2 Bamboo Coupe Working

Year of working	**Name of the coupe**	**Production (Industrial Bamboo) (in MT)**			**Production (Commercial Bamboo) (in No)**	**Royalty paid by OFDC, Ltd.**
		Salia	**Daba**	**Total**		
1	2	3	4	5	6	7
2004-05	Gurujang-A Talaganda-A	89.156 -	22.774 -	111.930 -	- -	55,965.00
	Total	**89.156**	**22.774**	**111.930**	**-**	
2005-06	Gurujang- B Talaganda-B	- 18.05	- -	- 18.05	- -	9,025.00
	Total	**18.05**	**-**	**18.05**	**-**	
2006-07	Gurujang- C Talaganda-C	86.877 -	12.695 -	99.582 -	- -	49,791.00
	Total	**86.877**	**12.695**	**99.582**	**-**	
2007-08	Gurujang- D Talaganda-D	Coupes not worked				-
2008-09	Gurujang-A Talaganda-A	Coupes not worked				-
2009-10	Gurujang- B Talaganda-B	Coupes not worked				-
2009-10 Flowered Bamboo coupes	Gurujang-A Gurujang- B Gurujang-D Kandhara SWC-X	- - - -	16.77 8.39 8.38 3.35	16.77 8.39 8.38 3.35	- - - -	18,445.00

	Total	**-**	**36.89**	**36.89**	**-**	
2010-11	Gurujang- C Talaganda-C	Coupes not worked				-
2011-12	Gurujang- D Talaganda-D	Coupes not worked				-
2012-13	Gurujang-A Talaganda-A	Coupes not worked				-
	Total	**Salia-194.083 +Daba-72.359= 266.442**				**133226.00**

4.3. KENDU LEAVES:

Kenduleaves is found throughout the tract of the Division.The Division covers part of Angul & keonjhar KL Division. Since 1973 after nationalization of kenduleaves, the collection and the subsequent treatment under phal system are done by K.L wing under Forest Department and marketing is done through the agent of State Government M/s O.F.D.C. Ltd.The details of year wise production and sale value from 2004-05 to 2013-14 is furnished in the following table 4.3.

TABLE -4.3

Sl No.	Year	Production in Quintal	Expenditure Incurred (in Rs.)	Sale value (in Rs.)	Avarage Rate per quintal (in Rs.)
1	2004-05	21794.4	47875316.5	50048196.00	2289.60
2	2005-06	20866.8	45988554.17	57120279.00	2662.30
3	2006-07	20009.4	46208178.83	69620466.00	4459.79
4	2007-08	22782.0	58502035.97	99550520.00	4376.26
5	2008-09	21662.2	62244918.89	139475179.00	6241.88
6	2009-10	24036.0	73952762.36	155503414.00	6470.64
7	2010-11	24128.4	79693817.06	201650083.00	8188.25
8	2011-12	16232.4	65394244.53	150134201.00	9210.47
9	2012-13	21608.4	84480131.82	179222334.00	7929.18
10	2013-14	23226.6	144082339.70	181575852.00	7822.31

Source:- D.F.O (K.L) Angul & D.F.O (K.L) Keonjhar

Besides the Salvage Timber and Fire Wood including materials involved with offence cases are taken delivery by the OFDC Ltd. for marketing. The quantity of timber, fire wood and poles collected/ Salvaged is furnished below.

TABLE No-4.4	Materials deliverd to OFDC Ltd.								
Year	Salveged materials			UD & OR case seized materials					
	Timber (Cum)	Fire Wood (Qtls.)	Poles (Nos)	Round Timber (Cum)	Sawn size (in Cum)	FireWood (Qtls)	Poles (Nos)	Tarua (Nos)	Charcola (Qtls)
2003-04	5.1812	2,265	-	158.4155	29.2999	28.55	239	115	-
2004-05	-	105	-	199.6940	46.1304	89.85	330	164	2.90
2005-06	-	1,095	-	147.8995	16.2700	104.40	210	85	4.15
2006-07	-	555.0	-	118.7163	18.6312	21.30	197	249	7.00
2007-08	-	540.0	-	138.0568	23.8118	67.20	380	455	1.50
2008-09	12.2096	1150.0	283	229.1142	9.8673	294.59	1041	-	14.50
2009-10	122.5801	2080.0	8	205.5526	18.7626	153.32	1209	48	10.55
2010-11	20.1025	1212.5	-	164.8676	31.4835	188.24	774	211	1.60
2011-12	-	1850.0	-	140.6207	42.1614	61.85	1387	06	27.83
2012-13	-	200.0	-	109.5090	23.1499	43.30	317	-	22.10
2013-14	959.9737	723.0	4568	82.8834	21.7098	21.50	511	103	7.50
Total	**1120.04**	**11784.5**	**4859**	**1695.2185**	**281.277.8**	**1074.13**	**6606**	**1436**	**99.63**
Source:- D.F.O Dhenkanal Division									

4.4. MARKETING.

4.4.1. **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.

4.4.2. **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.

Species wise average selling price of Round Timber/ Sawn Timber/Poles in Auction/Tender/Retail sale & General sale for the year 2013-14 in **Table no 4.5**

Table – 4.5

Sl No	Species	Quantity Sold in Cum/Pcs	Sale Value	Av. selling Price per Cum/Pcs	Av.Selling Priceper Cft/Pcs
A. AUCTION/TENDER SALE					
ROUND TIMBER					
1	Teak	4.4296	24300000	54858000	153300
2	Sal	387.2550	8207733	2119500	600
3	Gambhari	1.0621	28600	26928	763
4	Sirisa	1.0553	15600	14783	419
5	Kasi	3.2709	59500	18191	515
6	Kuruma	0.6827	1500	19774	560
7	Mitikina	1.2359	24000	19419	550
8	L.Mai	31.6109	453198	14337	406
9	Kangada	45.5688	729397	16007	453
10	Asan	109.2739	1622381	14847	420
11	Dhaura	183.0913	2170900	11857	236
12	Mai	5.7414	37000	6444	182

13	Neem	1.4263	11000	7712	218
14	Simili	1.0814	7800	7213	204
15	Misc.	9.9356	33726	3384	96
	Total	**786.7508**	**13657335**	**1735900**	**492**
SAWN TIMBER					
1	Teak	1.7396	53600	30812	872
2	Sal	3.2198	101200	31431	890
3	B.Kendu	1.8565	65999	35500	1007
4	Kangada	0.4753	6000	12624	357
5	Simili	0.9644	7000	7258	205
6	Mics	2.3153	37800	16326	462
	Total	**10.5709**	**271599**	**25693**	**728**
POLE					
1	Teak	153Pcs	55100	360 PP	
2	Sal	465 Pcs	89800	193 PP	
3	Non-sal	99 Pcs	15700	159 PP	
	Total	**717**	**160**	**224PP**	
(B) RETAIL SALE					
ROUND TIMBER					
1	Teak	49.4712	1287025	26016	737
2	Piasal	02949	3797	12876	365
3	Sal	55.2586	1193130	21592	611
4	Asan	0.2414	1787	7403	210
5	Dhaura	2.0456	24850	12148	344
6	Kangada	0.4025	7819	19426	550
	Total	**107.7142**	**2518408**	**23280**	**662**
SAWN TIMBER					
1	Teak	0.9907	48825	49283	1395
2	Sal	2.6257	64451	24546	695
3	Kasi	0.0680	1626	23912	677
4	Kuruma	0.1550	4889	31542	893
5	Piasal	0.2956	8576	29012	822
6	Kangada	0.1896	2869	15132	428
7	Misc.	0.1440	2491	17299	490
	Total	**4.4686**	**133727**	**29926**	**847**
POLES					
1	Sal	9 Pcs	1997	212PP	
2	Non-Sal	14 Pcs	2133	152 PP	
	Total	**23 Pcs**	**4130**	**180PP**	
(C) GENERAL SALE					
ROUND TIMBER					
1	Teak	16.8195	587305	34918	989
2	B.Kendu	3.0120	75751	25150	712
3	Sal	57.7052	1497099	25944	735
4	Kangada	5.7317	169183	29517	836
5	Asan	2.5626	67506	26343	746
6	Jamu	6.6042	11845	19604	555
7	Dhaura	1.3667	25224	18456	523
8	Mai	0.3403	6679	19628	556
9	Sidha	0.4036	13858	34336	972
	Total	**88.5458**	**2454450**	**27720**	**785**
SAWN TIMBER					
1.	B.Kendu	1.6142	102170	63295	1792
POLES					
1	Teak	203 Pcs	128681	634 PP	
2	Sal	516 Pcs	115818	224 PP	
3	Non-Sal	45 Pcs	5441	121PP	
	Total	**764 Pcs**	**249940**	327 PP	
	G.Total		**Rs. 1,95,52,339.00**		

CHAPTER – V
FIVE YEARS PLANS

Since independence, regular Five-Year Plans have been made for planned economic development of the country, aiming not merely at raising the standard of living of the people, but also opening out to them new opportunity for a richer and a more varied life. The revised Working Plan falls under 11th five year plan. (2007-08 to 2011-12) and part of 12th five year plan. (2011-12 to 2017-18).

5.1 THE 1st FIVE-YEAR PLAN (1951-52 to 1955-56):

- No significant steps have been taken up for development of forest.However the forests of this Division was managed in different working circle as per the working plan prescription.

5.2 THE 2nd FIVE-YEAR PLAN (1956-57 to 1960-61)

- The Forest transferred to State Forest Department 15.11.1957
- Dhenkanal Forest Division was created 1948.

5.3 THE 3rd FIVE-YEAR PLAN (1961-62 to 1965-66):

- Economic plantations raised to increase the economic value of the forest.
- Forest officials provided with basic amenities like quarter, tube well etc.
- Orissa Kenduleaves (Control of Trade) Act, 1961 & Orissa Kenduleaves (Control of Trade) Rules, 1962 have been framed for regularization of K.L.

5.4 ANNUAL PLAN (1967-68 to 1968-69)

Three annual plan

Emphysis on plantation on quick growing species

5.5 THE 4th FIVE-YEAR PLAN (1969-70 to 1973-74):

- Plantation of quick growing, economic species of industrial importance under E-Sowing, Planting and B-Economic plantation raised.
- Farm forestry cum fuel wood plantation to meet the demand of local people.

5.6 THE 5th FIVE-YEAR PLAN (1974-75 to 1978-79):

- Social Forestry & Economic Plantation given highest priority.
- Communication system developed.
- Orissa Forest Act, 1972 enacted.
- Kenduleaves Nationalized, marketing through O.F.C Ltd.

5.7 ANNUAL PLAN (1979-80)

One annual plan

Emphysis on plantation on degraded area

5.8 THE 6th FIVE-YEAR PLAN (1980-81 to 1984-85):

- Forest Conservation Act, 1980 came in to force.

- Social Forestry Project started during 1981-82 to meet the demand of fuel fodder & MFP.
- Plantation raised under the scheme NREP. CA, B-Economic, Development of MFP, Mixed Plantation.

5.9 THE 7th FIVE-YEAR PLAN (1985-86 to 1989-90):

- National Wasteland Development Board set up in 1985 for raising plantation in wasteland through people participation.
- In 1988 JFM resolution was introduced subsequently modified in 1990, decentralized nursery started for planting and income generation activities.
- Schemes like N.R.E.P, R.L.E.G.P launched where 25% marked specially for Social Forestry Component.
- Protection measure, Boundary maintenance, E-Sowing planting, Demarcation of Forest, Forest Farming for Rural Poor, Village Woodlot, Energy plantations received importance.

5.10 ANNUAL PLAN (1990-91 to 1991-92)

- Two annual plan
- Emphysis on plantation on degraded area & protection of environment

5.11 THE 8th FIVE-YEAR PLAN (1992-93 to 1996-97):

- Eco clubs launched in schools for environmental education.
- NAEB was constituted where schemes like NTFP, AOFFP, IAEP, Grant in Aid Scheme, Seed Development & Arial Seeding Scheme were launched.
- Joint Forest Management was promulgated through VSS by during 1993 & 1994, where people's participation entitled 50% of the usufructs sharing.
- Different other plantation schemes like B-Economic, EAS, JRY were started.
- During the plan period the plantation taken up in the Division is Block- 1817.12 ha.

  R.D.F – 170 ha.

5.12 THE 9th FIVE-YEAR PLAN (1997-98 to 2001--02) :

The major scheme implemented during this plan period are Intensification of Forest Management, Rural Fuel wood Mixed Plantation, National Afforestation Programme under F.D.A. Integrating the schemes like Integrated Afforestation and Eco-Development Project, Area Oriented Fuel Wood and Fodder Project, Association of S.T. and Rural poor in regeneration in degraded forest on contract basis and Non Timber Forest Produce including Bamboo and Medicinal Plantation. The plantations included Soil and Moisture Conservation including Entry Point Activities for development of conducive environment between the villagers and the Department. So also, the food security has been created through World Food Programme including assets creation.

- During the plan period the plantation taken up in the Division is Block- 364 ha.

5.13 THE 10th FIVE-YEAR PLAN (2002-03 to 2006-07):-

As stipulated in National Forest Policy regarding percentage of Forest cover required for the country, the Plan prescribed for bringing the Forest cover to 25% of the Geographical Area during the Plan period and 33% by end of 11th Plan period. Also the strategies proposed are:

- Watershed approach in maintenance and development of forest for soil and moisture conservation, improving ground water recharge and water regime and mitigate adverse impact of drought.
- To meet the demands for various Forest produce i.e. Food, Fodder, Fuel, Fertilizers, Timber, Bamboo, Medicinal plants etc.
- To give increased thrust on JFM for regeneration of degraded Forests.
- The greening programme under Food for Work Schemes to be implemented to ensure productive employment and food security.
- Afforestation to be carried out for sequestering atmospheric carbon.
- To promote bio-diesel by planting Jatropa curcas and Pongamia Piannata, vis-à-vis enhancement of livelihood opportunities and income generation for rural masses.
- During the plan period the plantation taken up in the Division is

  Block-1035.5 ha and R.D.F-507.82 ha.

5.14 THE 11th FIVE-YEAR PLAN (2007-08 to 2011-12)

Th e Eleventh Plan emphasized the following monitorable socio-economic targets in the environment and forests sector:

- To increase forest and tree cover by 5 percentage points
- To attain WHO standards of air quality in all major cities by 2011–12
- To treat all urban waste water by 2011–12 in order to clean river waters
- To increase energy effi ciency by 20 per cent by 2016–17
- To enhance Capacity building of forest sector
- More importance to wild life and its habitat,
- Strengthening of wild life wing
- Promotion of afforestation through NA
- During the plan period the plantation taken up in the Division is

  Block-3987.0 ha , R.D.F – 3561.48 ha. Avenue – 27.7 RKM

5.15 THE 12th FIVE-YEAR PLAN (2012-13 to continue)

- During the plan period the plantation taken up in the Division is

  Block-1118.25ha, R.D.F – 435 ha, Avenue – 116.5 RKM (Upto 2013-14)

TABLE 5.1 PROGRAMME AND SCHEMES IN OPERATION	
Scheme	**Works under taken**
2059 Public Works Non-Plan	Repair and maintenance of Non-residential Buildings
2406- Forestry and Wildlife Non-Plan	Repair and maintenance of Forest Roads / Buildings, maintenance of Boundary, forest consolidation, Forest Produces, Departmental Working of Timber, Bamboo etc.
4406- Col- on Forestry and Wildlife State Plan	Construction Building and Raising of Economic Plantation.
2406- Forestry and Wildlife State Plan	OBDA Bamboo Pltn., Plantation in PWC and out side working plan, SSO of Timber and Bamboo Coupes under TFC Grant and different work under elephant management plan.
2406- Forestry and Wildlife Central Plan	Different works under elephant management project.
2406- Forestry and Wildlife Centrally Sponsored Plan	Different works under intensification of Forest Management.
CAMPA	SMC, ANR Bamboo regeneration, Weed eradication, and Block plantation in MWS, Road repair, Construction building and other items under wildlife Management.
MG NREGS	Construction of WHS, RCP, Medicinal Garden at Sogar, Avenue Pltn., Karanja Pltn. Affn. activities in VSS area ,SWC work in R.F. area etc.
MPCA	MPCA work in Kapilash R.F.
NBM	Bamboo Plantation in Forest area, Improvement of exiting stock. , Sundarkani bamboo plantation in private land.
FDA	ANR & AR and EPA work in VSS area.

TABLE-5.2 EXPENDITURE OF DHENKANAL DIVISION DURING LAST TEN YEARS UNDER DIFFERENT SCHEMES

Year	Establishment Expenditure		Total Establishments	Works Expenditure					Grand Total (Works +Establishments)
	Salary	Others		2406-Non Plan	2406-State Plan	2406-Central Plan	2406-C.S.Plan	Total Works	
2004-05	1,46,97,924	3,31,750	**1,50,29,674**	49,66,753	4,23,468	23,75,030	2,85,687	**80,50,938**	**2,30,80,612**
2005-06	1,55,42,000	5,56,000	**1,60,98,000**	65,99,950	3,45,000	11,50,030	2,17,420	**83,12,400**	**2,44,10,400**
2006-07	1,58,60,970	6,19,000	**1,64,79,970**	1,07,75,840	1,07,96,125	10,43,180	4,57,000	**2,30,72,145**	**3,95,52,115**
2007-08	1,87,66,764	8,66,485	**1,96,33,249**	1,32,06,590	1,97,60,840	14,15,070	3,65,000	**3,47,47,500**	**5,43,80,749**
2008-09	2,76,00,196	13,93,785	**2,89,93,981**	1,39,70,660	1,55,46,290	16,55,000	3,50,250	**3,15,22,200**	**6,05,16,181**
2009-10	3,09,33,069	15,50,900	**3,24,83,969**	1,24,79,940	1,21,17,180	13,30,000	-	**2,59,27,120**	**5,84,11,089**
2010-11	3,57,35,396	19,46,451	**3,76,81,847**	44,13,750	1,60,77,785	14,35,910	20,47,675	**2,39,75,120**	**6,16,56,967**
2011-12	3,09,41,507	17,43,840	**3,26,85,347**	49,04,830	2,12,23,460	15,46,290	12,500	**2,76,87,080**	**6,03,72,427**
2012-13	3,76,76,474	17,19,427	**3,93,95,901**	56,94,850	4,62,52,821	30,25,000	2,70,875	**5,52,43,546**	**9,46,39,447**
2013-14	4,12,99,447	9,31,673	**4,22,31,120**	3,04,45,560	1,40,05,272	57,86,000	2,52,050	**8,4,88,882**	**12,27,20,002**
			28,07,13,058					**24,70,26,931**	

CHAPTER – VI

STAFF AND LABOUR SUPPLY

6.1 STAFF AND ORGANIZATIONAL STRUCTURE

Divisional Forest Officer in the rank of Deputy Conservator of Forests remains in charge of the Division, with headquarters at Dhenkanal.Normally 02 Assistant Conservator of Forests is posted to assist the DFO. The Division has originally 05 Ranges namely Dhenkanal, Sadangi, Kamakhya Nagar (East), Kamakhya Nagar (West) and Hindol. During re-organization of the Orissa Forest Department with effect from 1-10-2003, three new ranges namely Kapilas, Bhuban and Odapada (Mahabir Road) were created and they are carved out of the existing five ranges.

6.1.1 An incumbency list of D.F.Os who held charges of the Division as on June 2014 is furnished in the following **Table.6.1**

Table: -6.1 INCUMBENCY CHART OF THE DFOS

S. No.	Name of the DFO	From	To
1	Sri HP Sengupta	--	26.07.1948
2	Sri P Champati	27.07.1948	28.02.1950
3	Sri AP Mohanty	01.03.1950	04.11.1952
4	Sri HP Sengupta	05.08.1953	20.12.1953
5	Sri AP Mohanty	05.08.1953	20.12.1953
6	Sri Bramhananda Das	21.12.1953	01.02.1956
7	Sri AP Mohanty	02.02.1956	21.05.1956
8	Sri PC Nath	22.05.1956	31.05.1956
9	Sri SS Das	01.06.1956	15.07.1957
10	Sri AN Mohakud	16.07.1957	16.08.1958
11	Sri SR Mahapatra	15.08.1957	26.09.1960
12	Sri NR Sanayal	27.09.1960	02.01.1963
13	Sri RL Rath	03.01.1963	18.07.1965
14	Sri SB Das	19.07.1965	29.09.1966
15	Sri PK Patnaik	30.06.1966	13.10.1968
16	Sri GG Das	14.10.1968	17.11.1968
17	Sri MN Mitra	18.11.1968	29.05.1970
18	Sri MC Das	30.05.1970	08.10.1972
19	Sri NN Mohanty	09.10.1972	09.11.1972
20	Sri NC Patnaik	10.11.1972	29.06.1974
21	Sri BN Nayak	30.06.1974	07.07.1974
22	Sri LK Jagdev	08.07.1974	11.06.1976
23	Sri BK Mishra	12.06.1976	23.06.1978
24	Sri DS Mohapatra	30.06.1978	03.07.1978
25	Sri P Pradhan	04.07.1978	31.12.1980
26	Sri PN Padhi	31.12.1980	05.01.1981
27	Sri L Satpathy	05.01.1981	30.09.1982
28	Sri P Mohapatra	30.09.1982	11.03.1983
29	Sri BK Swain	11.03.1983	03.08.1984
30	Sri PC Roy	03.08.1984	06.08.1984

31	Sri S Swain	06.08.1984	04.08.1986
32	Sri Sidhant Das	04.08.1986	20.09.1989
33	Sri PC Mishra	20.09.1989	04.10.1989
34	Sri G Sahoo	04.10.1989	28.05.1990
35	Sri P Krishnamohan	28.05.1990	19.11.1993
36	Sri GB Reddy	19.11.1993	06.09.1996
37	Sri PC Sarangi	06.09.1996	30.04.2000
38	Sri SK Popli	30.04.2000	26.05.2000
39	Sri A Mohapatra	26.05.2000	22.10.2001
40	Sri SK Popli	22.10.2001	11.02.2002
41	Sri EL Yanger Aier	11.02.2002	25.02.2002
42	Sri Sashi Paul	25.02.2002	07.05.2004
43	Sri Prem Kumar Jha	07.05.2004	21.06.2004
44	Sri Sashi Paul	26.06.2004	07.07.2005
45	Sri Prem Kumar Jha,IFS	07.07.2005	27.05.2005
46	Sri Sashi Paul,IFS	27.05.2005	07.10.2005
47	Sri Prem Kumar Jha,IFS	09.10.2005	16.01.2006
48	Sri M.M Panigrahi,IFS	16.01.2006	03.08.2007
49	Sri B.M. Mohanty,IFS	03.08.2007	17.10.2007
50	Sri M.M Panigrahi,IFS	17.10.2007	26.03.2010
51	Sri S.K Dalei,OFS	26.03.2010	05.06.2012
52	Sri H.N Maharatha,OFS	05.06.2012	27.07.2013
53	Sri P.K Sahoo,OFS	27.07.2013	22.02.2017
54	Miss Rinku Kumari, IFS	22.02.2017	22.03.2018
55	Sri Sudarsan Patra, OFS	22.03.2018	15.04.2018
56	Miss Rinku Kumari, IFS	15.04.2018	30.08.2018
57	Mirase Pradeep Devidas, IFS	30.08.2018	25.09.2018
58	Sri Sudarsan Patra, OFS	25.09.2018	04.09.2019
59	Sri Bimal Prasanna Acharya, OFS	04.09.2019	08.07.2020
60	Dr. Prakash Chand Gogineni, IFS	08.07.2020	03.03.2023
61	Sri Sumi Kumar Kar, IFS	03.03.2023	(Cont.)
Source: DFO, Dhenkanal			

6.1.2 Cadre strength and staff position in Dhenkanal Division is furnished in the following **Table no 6.2**

TABLE-6.2 STAFF POSITION OF DHENKANAL DIVISION

SL. No.	Name of the Post	Sanctioned strength	Present Position
(1)	(2)	(3)	(4)
1	D.F.O.	01	01
2	A.C.F.	03	01
3	Forest Ranger	10	05
4	Dy. Ranger	06	09
5	Sr. Grade F.E.O.	03	02
6	Forester	52	40
7	Forest Guard	130	93
8	Jeep Driver	02	02
10	Head Clerk	01	-
11	Jr. Accountant	02	01
12	Sr. Clerk	06	06
13	Jr. Steno	01	01

14	Jr. Clerk	11	07
15	Group – D	07	06
	Total	**235**	**174**
Source: Divisional Forest Officer, Dhenkanal			

TABLE – 6.3 ADMINISTRATIVE SETUP OF THE DIVISION		
Forest Range	**Section**	**Beat**
1.Dhenkanal	07	16
2.Mohabirod	05	13
3.Hindol	06	17
4.Kapilas	04	07
5.Sadangi	03	14
6.K.Nagar (West)	04	16
7.K.Nagar (East)	05	14
8.Bhuban	03	07
Total	**37**	**104**
Source: Divisional Forest Officer, Dhenkanal		

TABLE-6.4 RANGE, SECTION & BEAT POSITION OF DHENKANAL DIVISION			
Sl. No	**Range**	**Section**	**Beat**
1	Dhenkanal	1-Sadar (Dhenkanal)	1. Kunjakanta
			2. Mahisapat
			3. Bhagabanpur
		2-Baldiabandha	4. Baldiabandha
			5. Kurumtangara
		3-Badagila	6. Badagila (A)
			7. Badagila (B)
			8. Mangalpur
		4-Bhapur	9. Bhapur
			10. Chandrasekharprasad
			11. Indipur
		5-Ghatipiri	12. Kalikaprasad
			13. Gobindaprasad
		6-Meramandali	14. Meramandali
		7-Gadasila	15. Korian
			16. Kaunriapal
2	Mahabirod	8-Dihadol	17. Dihadol
			18. Sanda
			19. Ambapalash
		9-Dadaraghati	20. Domuhani
			21. Rangathali

			22. Vejia
			23. Ghagarmunda
		10-Mahabirod-I	24. Jhilli
			25. Kuturia
		11-Mahabirod-II	26. Gadapalasuni
			27. Dasipur
		12-Pangatira	28. Pangatira
			29. Biribolei
3	Hindol	13-Hindol	30. Hindol
			31. Karnapur
			32. Sinkol
			33. Kantamilla
		14Bampa	34. Babandha
			35. Brahmaniapal
		15Rasol	36. Rasol
			37. Pasasing
		16Dandiri	38. Dandiri A
			39. Dandiri B
			40. Kanaka A
			41. Kanaka B
			42. Gurujanga
		17-Bimbori	43. Bimbori
			44. Khaliborei
			45. Fasigaon
		18-Khajuriakata	46. Sarasing
4	Kapilash	19-Deogaon	47. Deogaon
			48. Biradia
		20-Sorisiapada	49 Sorisiapada
			50 Mahisiakada
			51 Bania
		21-Chatighara	52 Chatighara A
			53 Chatighara B
		22-Kapilash Zoo	
5	Sadangi	23-Sadangi	54. Sadangi
			55. Nabakasipur
			56. Dolar
			57. Odisinga
			58. Baniapada
		24-Khankira	59. Khankira
			60. Tolarpasi
			61. Nihalprasad (Nischinta)
			62. Chhotatentuli

			63. Mundamari
		25-Joranda	64. Joranda
			65. Raitala
			66. Goradapal
			67. Nathua
6	K.Nagar West	26-Muktapasi	68. Muktaposi
			69. Kamarda
			70. Kankili
			71. Kadabasanta
			72. Pakatamunda
			73 Baghamunda
			74 Rangamatia
		27-Kamakhyanagar	75Kamakhyanagar
			76. Sahala
			77. Gundichanali
			78.Mahulapal
		28-Anlabereni	79. Anlabereni
			80.Kadalipal
		29-Kirtanpur	81Kirtanpur
			82.Kalbudhia
			83.Phuljhar
7	K Nagar East	30-Kankadahad-I	84 Kankadahad
			85.Rodanga
		31-Kankadahad-II	86.Childa
			87.Bahadapal
		32-Jiridamali	88.Batagaon
			89. Khateibereni
		33-Birasal I	90. Birasal
			91. Haladikundi
			92. Khanheipal
		34-Birasal-II	93. Kandar
			94. Koi
			95. Baradakota
			96. Ekul
			97. Khidikidwar
8	Bhuban	35-Bhuban	98. Bhuban
			99. Mahulpal(B)
			100.Nilakanthapur
		36-Mathakaragola	101.Mathakaragola
			102.Marthapur
		37-Jiral	103. Jiral
			104.Rankia

Source: Divisional Forest Officer, Dhenkanal

6.2 LABOUR SUPPLY AND WAGES: -

Various categories of labours are required for forestry operation and other development works executed in the Division. The Division is having a number of industries; hence there is acute shortage of skilled labourers. However for forestry related activities unskilled labourers are available. The categories of labourers are as under.

6.2.1 **Skilled labourer:** Skilled labourer like sawyers, carpenters, masons black smiths, tile burners etc. are not readily available in the remote forest areas. They are generally available only near townships like Dhenkanal, Kamakhyanagar, Hindol and Bhuban due to which they quote high wage rate thereby hampering forest work.

6.2.2 **Unskilled labourer:** Unskilled labourers are normally available abundant in number throughout the Division. Scarcity is felt to some extent only in Birasal area and Dhenkanal town due to prevalence of higher wage rate in mining and industries. Unskilled labourers are generally engaged in plantation work, road repair works and other construction works.

In order to reduce exploitation of the rural poor, the Government of Orissa prescribed a minimum wage rate, which is revised from time to time keeping in pace with inflation and high cost of living. The latest wage rate in force is from 01.07.2013 vide notification No.8304 dated 01.08.2013 of Labour Commissioner, Odisha is given below.

Present Wage Rate of Unskilled/Semiskilled/Skilled/Highly Skilled Labourer (in Rs)

Labour Category	Unskilled	Semiskilled	Skilled	Highly Skilled	Remarks
Mandays Mulia	RS.150/-	RS.170/-,	Rs.190/-	Rs.205/-	

6.3. Past and Present Wages – Forest Department needs all categories of labourer in different forestry operation and development works.The rate of all the commodities have increased substantially day by day. Accordingly the wages of different categories of labourer are in increasing order. 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 **Table No 6.5.**

Table No.6.5 Rate of Wages of all category of labourers

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.											

CHAPTER – VII
PAST SYSTEMS OF MANAGEMENT

7.1. GENERAL HISTORY OF THE FOREST:

The present Dhenkanal Forest Division was constituted in 1948 after the merger of two Ex-States of Dhenkanal & Hindol prior to this it was ruled by the different dynasties. At that time there was no Forest Conservancy of any kind. Indiscriminate felling and uncontroll shifting cultivation were the order of that day. Heavy unregulated felling of sal trees for sleeper was made during the construction of East Coast Railway resulting over exploitation of large trees. In October 1918, after the death of late Ruler, Raja Surapratap Mohendra Bahadur, the State came under Government management.After that the forest are managed with scheme and plan. The Dhenkanal Forest Division was originally consisting of five Forest Ranges, Dhenkanal, Odapada, KamakhyaNagar East, Kamakhya Nagar West and Sadangi. During reorganization of Forest Department from 01.10.2003, three more Ranges were carved out from existing Ranges namely Kapilas, Bhuban and Mohabir Road.

In the past the forests of this division were managed through different working circles in different working plans. The details of the working circles with area allotted in the earlier plans are given below:

1. H.F.MOONEY (1928-43)
    a. Coppice with standard working circle- Area 41,821 Ac
    b. Miscellaneous Working Circle- 1,28,684 Ac
    c. Bamboo Working Circle- 3093 Ac
2. H.F.MOONEY (1943-63)
    a. Selection Working Circle- 96,965Ac
    b. Coppice Working Circle- 1,22,197 Ac
    c. Bamboo Working Circle- 17,027 Ac
    d. Teak Working Circle- 1000 Ac
    e. Miscellaneous Working Circle- 9133 Ac
3. M.AHAMEDULLAH (1958-78)
    a. Selection Working Circle- 1,56,304 Ac
    b. Coppice Working Circle- 91,447 Ac
    c. Bamboo Working Circle- 1,67,787 Ac
    d. Plantation Working Circle- 15,133 Ac
    e. Protection Working Circle- 15,383 Ac
4. S.N.MOHANTY (1979-99)
    a. Selection/Improvement Working Circle- 60,408.6 Ha
    b. Coppice with Reserve Working Circle- 3767.6 Ha
    c. Rehabilitation &Plantation Working Circle- 32,801.6 Ha
    d. Bamboo Working Circle- 14,341.31 Ha
    e. Bamboo Rehabilitation Working Circle- 5333.99 Ha
    f. Teak Plantation Working Circle- 6879.07 Ha
    g. MFP Working Circle- Overlapping
    h. Bio-aesthetic working Circle- 1461.64 Ha
5. UMA NANDURI (2004-05 to 2013-14)
    a. The Selection Working Circle – 28861.04 Ha.
    b. The Eco- Restoration Working Circle – 64785.06 Ha
    c. The Plantation Working Circle – 17066.35 Ha.
    d. The Bamboo (Overlapping) Working Circle 7966.61 Ha.
    e. The Non- Timber- Forest Produce (Overlapping) Working Circle – 110712.456 Ha.
    f. The Wild Life (OL) Working Circle - Entire Division

7.2. PAST SYSTEM OF MANAGEMENT AND THEIR RESULTS

The Working Plan of Dhenkanal Division prepared by Mrs. Uma Nanduri for the period was operational from 2004-05 to 2013-14 at present. The results of the past management do not indicate considerable increase in density of forest and increase in area of forest cover. Emphasis was given on conservation of flora, fauna and soil but it has been found to be inadequate. Silvicultural operations essential for the subsidiary operations were inadequate. There was no shortage of bamboo plantation work, gap plantations, plantation for bio-aesthetic purposes, socio-economic plantations and above all enrichment plantations. Adequate allotment was provided for plantations and subsidiary silvicularal operations.

The management of NTFP working circle and plantations of new NTFP species were neglected. The prescriptions on wild life management were found to be inadequate. Man-elephant conflict has increased tremendously. Though massive plantations were raised during the last 30-40 years, no plantation was harvested during the last seven years. Details of achievement in different working circles are mentioned below:

7.2.1 THE SELECTION WORKING CIRCLE

The forest area having crop density more than 0.4 was allotted. The total area of the working circle was 28,861.04 Ha. The working circle has 3 felling series with 10 nos of annual coupes and the felling cycle was fixed for 10 years. The working plan prescribes marking of 2 Sal trees and 2 other miscellaneous trees per hectare on average.In the outgoing working plan following Forest Blocks were included under this working circle. These were: 1. Ranjgarh RF 2. Aanatapur RF, 3. Kandhara RF.

OBJECTIVES OF MANAGEMENT

The objectives of the management of the Selection Working Circle were as follows:

1. To conserve and improve the forest cover by soil and water conservation method following the principles of watershed development.
2. To maintain and improve the biodiversity of the forest blocks.
3. To build up the growing stock and improve stand structure by Silvicultural Operations.
4. To establish natural regeneration of indigenous species.
5. To obtain the yield on sustainable basis to cater the need of the people subject to environmental and silvicultural availability and lifting of ban on green felling imposed by the State Government.

RESULTS

As per field verification and inspection of coupes during coupe working in various years of plan, it was found that crop for selective felling exists over extensive areas of hilly portion. Regeneragtion of Sal is adequate in Sal bearing areas and advance growth was available. The tree felling was not done from 1995-96 to 2004-05 due to ban on felling by Government of Odisha. The coupe working started from 2005-06. The subsidiary silvicultural operation (S.S.O) work was not taken up during the ban period i.e. upto 2004-05.

(i) The area of Ranjagarh felling series is 11956.43 Ha and as per working plan prescriptions 47800 trees should have been marked. But it is observed from the marking list and field verification that 7856 nos of trees were marked and felled 7062 nos. From Ranjagarh felling series, 3007.0077 cum of timber and 1105.25 stacks of fire wood were obtained. There was no working of Timbers coupes in the 2007-08, 2008-09 & 2009-10 by the OFDC ltd.due to Maoist problem, hence the less in marking and felling.

(ii) Anantapur felling series has 11089.17 Ha of area and as per working plan prescriptions about 44350 trees are required to be removed from the coupe area. But it is observed that 8806 nos of trees were marked, felled 7986 nos and about 1207.0869 cum of timber and 1314 stacks of fire wood were removed from the coupe areas.

(iii) Kandhara felling series has an area of 5815.44 Ha and about 11600 miscellaneous trees should have been marked. From the division data it was found that 1880 nos of trees were marked, felled 1778 nos and about 619.0161 cum of timber and 310 stacks of fire wood have been removed from the coupe area. In this felling series there was no coupe work in the year 2009-10 & 2013-14 by the OFDC ltd. due to less no of tree & defective in nature being non economical.

The estimated coupe wise yield of trees prescribed in working plan is much higher than the numbers of trees marked and felled in the field which is below 20 percent. There was scope for more marking of trees in coupe area. There is possibility of illicit felling and smuggling of trees and fire wood also from the coupe area.

Subsidiary Silvicultural Operation (SSO) has been taken up in many areas during the plan period under 13th FC. Sal is the most common species and regeneration of different species is very good. The hillocks and plateau have a mixed crop predominated by Sal and its associate species such as Dhaura, Asan and Kendu etc. The regeneration is found to be Deficient to fair except in some compartments of Ranjagarh where the Sal regeneration is moderate to good.

The details of coupe allotted for working and coupe worked out are given below; **Table-7.1, 7.2 &7.3**

CW= Coupe working (done by OFDC Ltd.)
SSO= Subsidiary silvicultural operation (done by Deptt.)

TABLE-7.1 COUPE WORK DETAIL OF Anantapur Felling Series

Year	Coupe No.	No. of trees marked	No. of trees felled / delivered		Amount spent	Timber production (in cum)	Firewood (in stack)	Remarks
			Delivered	Felled				
1	2	3	4 (a)	4 (b)	5	6	7	8
2001-02 to 2003-04	-	-	-	-	-	-	-	Coupe not worked due to ban on felling
2004-05	I	-	-	-	SSO -7,13,338	-	-	
2005-06	II	4350	4350	4325	CW- 2,58,948 SSO- 7,33,950	300.5670	475	
2006-07	III	2016	2016	1221	CW- 1,76,962 SSO- 7,33,882	260.4629	232	
2007-08	IV	242	242	242	CW- 31,282 SSO- 2,66,430	36.1951	62	

2008-09	V	548	548	548	CW- 1,13,506 SSO- 8,32,000	136.3689	98	
2009-10	VI	208	208	208	CW- 79,818 SSO- 5,51,528	65.2502	88.5	
2010-11	VII	119	119	119	CW- 33,380 SSO- 10,12,509	18.7639	62.5	
2011-12	VIII	275	275	275	CW-65,482 SSO11,86,500	41.2310	95	
2012-13	IX	842	842	842	CW-3,61,975 SSO- 7,71,000	273.0746	181	
2013-14	X	206	206	206	CW-1,06,129 CM- 36,300	75.1733	20	
Total		8806	8806	7986	SSO-68,01,137 CW-12,27,482 CM- 36,300 Total-80,28,619	1207.0869	1314	

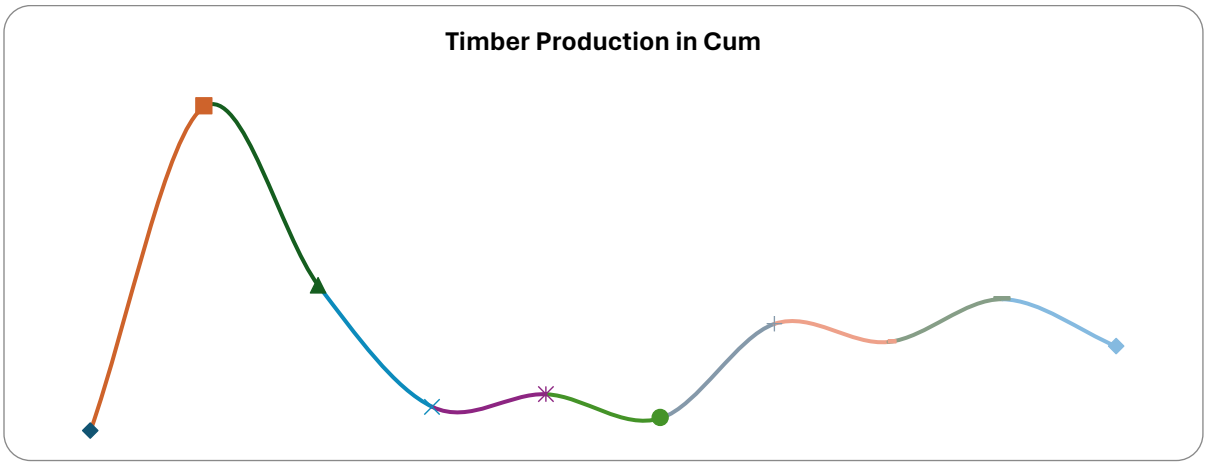
TABLE-7.2 COUPE WORK DETAIL OF RANJAGARH FELLING SERIES

Year	**Coupe No.**	**No. of trees marked**	**No. of trees felled / delivered**		**Amount spent**	**Timber production (in cum)**	**Firewood (in stack)**	**Remarks**
			Delivered	**Felled**				
1	2	3	4 (a)	4 (b)	5	6	7	8
2004-05	I	-	-	-	-	-	-	
2005-06	II	3910	3910	3910	CW- 5,90,621 SSO- 45,912	1026.1230	388	
2006-07	III	1452	1452	747	CW- 2,25,155	385.6690	65.25	
2007-08	IV	-	-	-	-	-	-	Maoist problem coupe not worked
2008-09	V	-	-	-	-	-	-	
2009-10	VI	-	-	-	-	-	-	
2010-11	VII	686	686	686	CW- 4,54,077 SSO- 9,33,942	484.0662	158	
2011-12	VIII	418	418	418	CW-58,316 SSO 12,66,360	381.4597	136.50	
2012-13	IX	527	527	527	CW-4,72,169 SSO-6,75,000	377.4601	137	
2013-14	X	863	774	774	CW-5,36,355 CM-59,000	352.2297	220.50	
Total		**7856**	**7767**	**7062**	**SSO-29,21,214 CW- 23,36,693 CM- 59,000 Total- 53,16,907**	**3007.0077**	**1105.25**	

TABLE-7.3 COUPE WORK DETAIL OF KANDHARA FELLING SERIES								
Year	**Coupe No.**	**No. of trees marked**	**No. of trees felled / delivered**		**Amount spent**	**Timber production (in cum)**	**Firewood (in stack)**	**Remarks**
			Delivered	**Felled**				
1	2	3	4 (a)	4 (b)	5	6	7	8
2004-05	I	-	-	-	-	-	-	
2005-06	II	882	882	882	CW- 1,91,487 SSO- 3,90,750	311.0942	53	
2006-07	III	252	252	252	CW- 43,081 SSO- 5,32,118	89.4200	75	
2007-08	IV	201	201	201	CW- 30,132 SSO- 4,05,570	86.4668	22	
2008-09	V	101	101	101	CW- 64,025 SSO- 5,93,000	50.0148	25	
2009-10	VI		-	-	-	-	-	OFDC not worked since 16 trees only marked
2010-11	VII	155	155	155	CW- 89,107 SSO- 6,07,549	38.9031	65	
2011-12	VIII	106	106	106	CW- NA SSO- 6,20,777	27.7411	50	
2012-13	IX	81	81	81	CW- NotAvailable SSO-4,50,000	15.3761	20	
2013-14	X	86	-	-	CW- Nil CM- 20,000	-	-	OFDC not worked.
Total		**1880**	**1778**	**1778**	**SSO- 35,99,764 CW – 4,17,832 CM- 20,000 Total-4 0,37,596**	**619.0161**	**310**	

Abstract of Timber & Fire Wood production

Year	Coupe No	Production of Timber in Cum			Total	Production of F.W In Stack			Total
		Anatapur	Ranjagarh	Kandhara		Anatapur	Ranjagarh	Kandhara	
2004-05	I	-	-	-		-	-	-	0
2005-06	II	300.567	1026.123	311.0942	1637.784	475	388	53	916
2006-07	III	260.1329	385.669	89.42	735.2219	332	65.25	75	472.25
2007-08	IV	36.1951	-	86.4668	122.6619	62	-	22	84
2008-09	V	136.3689	-	50.0148	186.3837	98	-	25	123
2009-10	VI	65.2502	-	-	65.2502	88.5	-	-	88.5
2010-11	VII	18.7639	484.0662	38.9031	541.7332	62.5	158	65	285.5
2011-12	VIII	41.231	381.4597	27.7411	450.4318	95	136.5	50	281.5
2012-13	IX	273.0746	377.4601	15.3761	665.9108	181	137	20	338
2013-14	X	75.1733	352.2297	-	427.403	20	220.5	-	240.5
Total		**1206.757**	**3007.008**	**619.0161**	**4832.781**	**1414**	**1105.25**	**310**	**2829.25**



7.2.2 The Eco-Restoration Working Circle

The area allotted to this working circle was 64785.06 Ha. The forest block that are various stages of degradation due to illicit felling, fire, grazing, encroachment having root stock were allotted to this circle

OBJECTIVES OF MANAGEMENT

The following objectives of management have been prescribed as detailed below:

1. To improve the condition of forests through protection against grazing, fires & illicit felling.
2. To enhance soil productivity through soil and moisture conservation measures.
3. To stabilize the ratio between water runoff during rainy season and that of during dry season.
4. To restock barren areas through artificial regeneration of most desirable indigenous species.
5. To involve the local community in protection and management of the forests.
6. To restore and improve the microclimate and micro-edaphic conditions.
7. To increase the biodiversity and heterogeneity in the forest crop by encouraging natural regeneration.

RESULTS

In this working circle plantation, R.D.F. work and Soil Moisture Conservation work have been taken up and different R.Fs have been afforested. Protection was given to forest area and grazing, fire and illicit felling were controlled. Water harvesting structure was created to check water runoff. Artificial regeneration has been taken up with indigenous species in barren areas. Climber cutting, singling of shoot, high stump cutting have also been taken up. The help of VSS has improved the forest cover. The Division has 326 nos of VSS. During the plan period the VSS has been strengthened and motivated. The sense of responsibility for protection of forest and wild life has improved among the VSS members. Also sense of belongingness on natural forest and plantation raised increased. Many degraded forest has regained its greenery. Unauthorised encroachment of forest land prevented.

The details of area planted and expenditure incurred on different activities is furnished in **Table-7.4**

TABLE-7.4 (A)		Details of RDF Plantation				
Sl. No.	**Name of the Range**	**Name of the R.F**	**Area covered in Ha.**	**Amount spent. (in Rs.)**	**Work done**	**Remarks**
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
			2004-05			
1	KNagar East	Rupabeda KF	10.170	88,700	RDF Plantationunder Comp.Affn Prog.	
2		Patabeda- I & II KF	8.995		-do-	
3	K Nagar West	Jhanjiriberena KF	1.835		-do-	
4	KNagar East	Birasal RF	4	2,800	-do-	
5		Birasal RF	6.12	4,284	-do-	
6		Birasal RF	12	31,280	-do-	
7	Sadangi	Rupabalia RF	18	52,200	-do-	
8	Hindol	Rajamohanpur KF	46.7	79,490	-do-	
			2005-06			
1	Kapilash	KapilashRF	2	1,56,420	RDF Plantation(Bela)under SGRY scheme	
			2006-07			
1	Dhenkanal	Charkhola RF	50	1,90,125	RDF Plantation under 12th FC Grant	
2	Hindol	Koi RF	25	95,063	-do-	
3	Sadangi	Lahada RF	25	95,063	-do-	
4	KNagar East	Ranjagarh RF	25	95,063	-do-	
5	KNagar West	Anantapur RF	25	95,063	-do-	
6	Kapilash	Kapilash RF	25	95,063	-do-	
7	Odapada	Dolia RF	25	95,063	-do-	
			2007-08			
1	Dhenkanal	Patapuri RF	100	2,25,000	RDF Plantation under 12th FC Grant	
2		Megha RF	50	1,84,400	-do-	
3		Saptasajya RF	200	7,37,600	-do-	
4		Charkhola RF	50	1,84,400	-do-	
5		Matharagadi RF	50	1,84,400	-do-	
6	Hindol	Ambithi RF	100	3,68,800	-do-	
7		Hitinda RF	50	1,84,400	-do-	
8		Koi RF	250	9,22,000	-do-	
9	Sadangi	Rupabalia RF	100	3,68,800	-do-	
10		Lahada RF' A'	200	7,37,600	-do-	

11		Lahada RF 'B'	100	3,68,800	-do-	
12	KNagar East	Maulabhanja RF	200	7,37,600	-do-	
13	KNagar West	Anantapur RF	250	9,22,000	-do-	
14		Sunaghari RF	250	9,22,000	-do-	

15	Kapilash	Ramei RF(Compt.3)	100	3,68,800	RDF Plantation under 12th FC Grant	
16		Kapilash RF(Compt.14)	50	1,84,400	-do-	
17		Kapilash RF(Compt.18)	150	5,53,200	-do-	
18		Kapilash RF(Compt.19)	100	3,68,800	-do-	
19		Kapilash RF(Compt.21)	100	3,68,800	-do-	
20	Mahabirod	Anantapur RF	100	3,68,800	-do-	
21		Barabanka South RF	100	3,68,800	-do-	
22		Dolia RF	150	5,53,200	-do-	
23	Bhuban	Bhuban RF	100	3,68,800	-do-	
14		Bhairpur RF	200	7,37,600	-do-	
15	Dhenkanal	Charkhola RF	40	1,26,280	RDF Plantation under Support to VSS scheme	
16		Patapuri RF	40	1,26,280	-do-	
17	K. Nagar East	Maulabhanja RF	40	1,26,280	-do-	
18	Kapilash	Kapilash RF	40	1,26,280	-do-	
19	Mahabirod	Barabanka South RF	40	1,26,280	-do-	
2008-09						
1	Hindol	Kandhara RF	25	50,000	RDF Plantation under B.Economic	
2		Koi RF	25	50,000	-do-	
3	KNagar East	Jiridamali RF	50	1,00,000	-do-	
4	KNagar West	Madhi RF	50	1,00,000	-do-	
5	Mahabirod	Anantapur RF (Near Darangabadi Compt.No.3,7)	50	1,00,000	-do-	
	2009-10 - Nil					
2010-11						
1	Dhenkanal	Budhiparbata KF	61.48	2,45,287	RDF Plantation under Comp.Affn Programme.	
2011-12 Nil						
2012-13						
1	Dhenkanal	Charkhola RF	80	2,83,581	RDF Plantation under MG NREGS	
2	-do-	Saptasajya RF	60	3,04,683	-do-	
3	-do-	Matiamundia RF	60	2,84,019	-do-	
4	Hindol	Kandhara RF	100	1,67,969	-do-	
5	-do-	Kandha VF	75	1,41,787	-do-	
6	-do-	Balipasi VF	60	80,118	-do-	
2013-14 -Nil						

TABLE-7.4 (B) SMC work done in Dhenkanal Division from 2004-05 to 2014-15.

Scheme	Year of work	Range	Forest Block	Work done	Ha.	Expenditure (in Rs.)
CAMPA APO- 2009-10	2009-10	Hindol	Kandhara RF	SMC	135.00	2,03,000
		Kapilash	Ramei RF		40.00	60,200
		Mahabirod	Dolia RF		85.10	1,28,000
			Total		**260.10**	**3,91,200**
	2010-11	K.Nagar East	Maulabhanja RF	SMC	24.49	36,850
		K.Nagar West	Anlabereni RF		269.00	4,04,700
			Total		**293.49**	**4,41,550**
CAMPA APO- 2010-11	2010-11	Dhenkanal	Kapilash RF	SMC	100.00	1,68,400
		Hindol	Kandhara RF		100.00	1,68,400
		Sadangi	Sadangi RF		100.00	1,68,400
		K.Nagar East	Jiridandi RF		100.00	1,68,400
		K.Nagar West	Siarimalia RF		100.00	1,68,400
			Total		**500.00**	**8,42,000**
	2011-12	Dhenkanal	Saptasajya RF	SMC	100.00	1,68,400
			Matharagadi RF		100.00	1,38,400
		Hindol	Koi RF		200.00	3,36,800
			Bompa RF		105.00	1,76,700
		Sadangi	Lahada RF		200.00	3,36,800
		K.Nagar East	Maulabhanja RF		200.00	3,36,800
		K.Nagar West	Suniamaru RF		200.00	3,36,800
		Kapilash	Rumei RF		75.44	1,27,000
		Mahabirod	Anantapur RF		233.22	3,92,500
		Bhuban	Sunajhari RF		200.00	3,36,420
			Total		**1613.66**	**27,16,620**
CAMPA APO- 2011-12	2011-12	Dhenkanal	Godabolua RF	SMC	75.00	2,18,000
			Saptasajya RF		25.00	72,700
			Matharagadi RF		20.00	58,000
		Hindol	Koi RF		105.40	3,06,500
			Kandhara RF		59.95	1,74,500
		Sadangi	Gondia RF		20.00	58,000
		K.Nagar East	Ranjagarh RF		118.50	3,44,500
		K.Nagar West	Siarimalia RF		37.50	1,09,000
		Kapilash	Ramei RF		90.00	2,61,700
		Mahabirod	Anantapur RF		200.00	5,81,000
		Bhuban	Tipilei RF		150.00	4,36,000
			Total		**901.35**	**26,19,900**
	2012-13	Dhenkanal	Megha RF	SMC	45.00	1,30,800
			Mayuri RF		65.00	1,89,000
		Hindol	Bompa RF		89.00	2,59,000
		K.Nagar West	Sunajhari RF		92.00	2,67,500
		Mahabirod	Anantapur RF		135.122	3,94,961
		Bhuban	Balibo RF		10.00	39,000
			Total		**436.122**	**12,70,261**
State Plan	2014-15	Bhuban	Bhuban RF	SMC & percolation pit 9375 Nos.	200.00	10,00,000
			Total		**200.00**	**10,00,000**

7.2.3 THE PLANTATION WORKING CIRCLE

This working circle includes those forest blocks having permanent blank patches and encroached lands having negligible or no natural root stock. The area allotted to this working circle was 17066.355 ha,(Old-14157.188 ha. New plantation - 2909.167 ha) .

OBJECTIVES OF MANAGEMENT

The objectives of the management of this Working Circle are as follows:

1. To restock the degraded and blank areas through artificial regeneration.
2. To enhance the land productivity through soil and moisture conservation.
3. To increase the biodiversity for improvement of local ecology.
4. To reduce the grazing pressure on forest by supply of fodder grasses.
5. To carry out suitable tending operations in the existing old plantations.
6. To augment fodder, fuel wood, and small timber requirement of the local people.
7. To carryout the gap plantations in the old plantation areas wherever it is necessary.
8. To harvest matured plantations and to replant the area with suitable species.

RESULTS

The planation taken up during last plan period was 5679 ha against the allotted plantable area of 2909.167 ha.. At some places plantation have been taken up in forest blocks other than prescribed in the working plan for which Divisional Forest Officer has been requested to submit Compartment History, Deviation Statement. The plantations show different survival percentages which varies from 10% to 80%.In most of places plantations have been cut illegally and removed by local people and coppice crops are coming up. At many places browsing has taken place and growth is less. The plantations taken up in different forest blocks are successful at many places where the VSS has been involved.

No plantation done in the past has reached harvesting stage in this Division and no old plantation has been harvested. The Divisional Forest Officer has not submitted any scheme for harvesting of old plantations and thinning of old plantation raised in the past have not been done.

As a result of massive plantation taken up forest cover has increased, encroached forest land has been recouped, bio-diversity /greenery in the Division increased, Sense of belongingness on plantation raised among theVSS members increased.

The details of plantations taken up in different blocks and expenditure incurred during last plan period is given below **Table-7.5**

Table-7.5 Details of Block Plantation

2004-05						
Sl.No.	**Name of the Range**	**Name of the R.F**	**Area covered in Ha.**	**Amount spent.**	**Work done**	**Remarks**
1	Dhenkanal	Kankadahad RF	15	1,72,170	Block Plantation under Comp.Affn Scheme	
2		Godabolua RF	15	1,72,170	-do-	
3	Hindol	Nandinia RF	20	2,29,560	-do-	
4	Sadangi	Sadangi RF	15	1,72,170	-do-	
5	K Nagar East	Jiridamali RF	25	2,86,950	-do-	
6		Ranjagada RF	15	1,72,170	-do-	
7	K Nagar West	Anantapur RF	20	2,29,560	-do-	
8		Machhia RF	15	1,72,170	-do-	
9	Kapilash	Kapilash RF(Compt-19)	20	2,29,560	-do-	
10		Kapilash RF (Compt. 23)	15	1,72,170	-do-	
11	Odapada	Dolia RF	20	2,29,560	-do-	
12		Talcher border RF	15	1,72,170	-do-	
13	Bhuban	Sunajhari RF	20	2,29,560	-do-	
14		Bhuban RF	20	2,29,560	-do-	
		Total-	**250**			
2005-06						
1	K Nagar East	Maulabhanja RF	13	1,95,000	Block Plantation under Comp.Affn Prog.	
2		Ranjagarh RF	12	1,80,000	-do-	
3	K Nagar West	Machhia RF	13	1,95,000	-do-	
4	Kapilash	Kapilash RF(Compt.-20)	12	1,80,000	-do-	
		Total-	**50**			

1	2	3	4	5	6	7
2006-07						
1	Dhenkanal	Megha RF	35	3,51,540	Block Plantationundedr Comp.Affn Prog.	
3	Hindol	Ambithi RF	35	3,51,540	-do-	
4	Sadangi	Rupabalia RF	24	2,41,056	-do-	
5		Aswakhola RF	11	1,10,484	-do-	
6	K Nagar East	Jiridamali RF	15	1,50,660	-do-	
7		Maulabhanja RF	25	2,51,100	-do-	
8	K Nagar West	Anantapur RF	20	2,00,880	-do-	
9		Anlabereni RF	20	2,00,880	-do-	
10	Kapilash	Kapilash RF(Compt-22)	20	2,00,880	-do-	
11		Ramei RF	20	2,00,880	-do-	
12	Odapada	Anantapur RF	20	2,00,880	-do-	
13		Khalpal RF	20	2,00,880	-do-	
14	Bhuban	Bhuban RF	35	3,51,540	-do-	
15	Dhenkanal	Tamanda RF	25	3,45,000	-do-under B.Economic	
16	Hindol	Ambithi RF	25	3,45,000	-do-	
		Total-	**350**			
2007-08						
1	Dhenkanal	Ghantabaja RF	15	1,58,100	Block Plantation under Comp.Affn	
2		Jaripal RF	30	3,16,200	-do-	
3		Godabolua RF	30	3,16,200	-do-	
4	Hindol	Kandhar RF	20	2,10,800	-do-	
5	K Nagar West	Sunajhari RF	25	2,63,500	-do-	
6	Kapilash	Kapilash RF (Compt-22)	20	2,10,800	-do-	
7	Mahabirod	Barabanka South	20	2,10,800	-do-	
8	Bhuban	Bhairpur RF	20	2,10,800	-do-	
9	Dhenkanal	Patapuri RF	35	1,96,805	Block Plantation under 12th FC Grant.	
10		Charkhola RF	15	84,345	-do-	
11	Hindol	Koi RF	30	1,68,690	-do-	
12		Kandhara RF	153	8,43,450	-do-	
13	Sadangi	Baliposi RF	40	2,24,920	-do-	
14		Lahada RFB	160	8,99,680	-do-	
15		Gondia RF	35	1,96,805	-do-	
16	K.Nagar East	Maulabhanja RF	30	1,68,690	-do-	
17	K.Nagar West	Sunajhari RF	45	2,53,035	-do-	
18		Anantapur RF	35	1,96,805	-do-	
19	Kapilash	Ramei RF (Compt-3)	20	1,12,460	Block Plantation under 12th FC Grant -	
20	Mohabirod	Anantapur RF	50	2,81,150	-do-	

21		Talcher Border RF	30	1,68,690	-do-	
22	Bhuban	Bhuban RF	35	1,96,805	-do-	

23	Bhuban	Dhalpada RF	15	84,345	-do--	
24	Hindol	Hitinda RF	65	2,23,773	-do-(Bamboo)	
25		Kandhara RF	135	4,64,760	-do-	
		Total-	**1105**			
2008-09						
1	Dhenkanal	Godabolua RF	40	7,21,666	Block plantation under B.Economic	
2	Hindol	Kandhara RF	50	9,02,100		
3	Sadangi	Bega RF	30	5,41,260	-do-	
4	Dhenkanal	Kapilash RF	50	5,27,000	Block Plantation under Comp.Affn Prog.-	
5		Saptasajya RF	30	3,16,200	-do-	
6		Nimidha RF	30	3,16,200	-do-	
7		Megha RF	15	1,58,100	-do-	
8		Kankadahad RF	35	3,68,900	-do-	
9	Hindol	Koi RF	40	4,21,600	-do-	
10	Sadangi	Lahada RF	20	2,10,800	-do-	
11	K.Nagar East	Jiridamali RF	30	3,16,200	-do-	
12	K.Nagar West	Anantapur RF	20	2,10,800	-do-	
13	Bhuban	Tipilei RF	30	3,16,200	-do-	
14	Sadangi	Sadangi RF	10	1,07,630	-do-	
		Total-	**430**			
2009-2010						
1	Dhenkanal	Majuri RF	25	2,63,500	Block Plantation under Comp.Affn Prog	
2		Matiamundia RF	25	2,63,500	-do-	
3		Jaripal RF	30	3,16,200	-do-	
4		Megha RF	25	2,63,500	-do-	
5	Hindol	Kandhara RF	25	2,63,500	-do-	
6	Sadangi	Lahada RFB	60	6,32,400	-do-	
7	K.Nagar East	Maulabhanja RF	25	2,63,500	-do-	
8	K.Nagar West	Suniamaru RF	30	3,16,200	-do-	
9	Mohabirod	Barabanka(N)RF	25	2,63,500	-do-	
10	Bhuban	Tipilei RF	30	3,16,200	-do-	
11	Dhenkanal	Godabolua RF	25	4,51,040	Block plantation under B.Economic	
12	Hindol	Kandhara RF	25	4,51,043	-do-	
13	Sadangi	Rupabalia RF	10	45,000	-do-under OBDP	
		Total-	**360**			

2010-11						
1	K.Nagar West	Kankili RF	50	6,12,376	Block plantation under B.Economic	
2	Hindol	Bampa RF	20	87,000	-do-under OBDP	
3	Hindol	Ambithi RF	30	3,74,953	-do-under NBM	
4	Dhenkanal	Kapilash RF	150	26,84,361	Block Plantation Under CAMPA	
5		Saptasajya RF	60	12,06,064	-do-	
6		Kotaberena RF	120	18,96,686	-do	
7	Hndol	Koi RF	70	15,42,815	-do	
8		Kandhara RF near Bankual	60	13,26,403	-do-	
9		Kandhara RF near Kanka-Rajanga	60	12,58,066	-do	
10	Sadangi	Bega RF	62	11,67,506	-do	
11		Kapilash RF	33	7,55,579	-do-	
12		Lahada RF	60	11,23,281	-do	
13		Aswakhola RF	55	10,01,701	-do	
14	K.Nagar East	Maulabhanja RF	45	10,33,481	-do-	
15		Maulabhanja RF	35	8,47,828	-do	
16	K.Nagar West	Anlaberini RF	50	10,02,229	-do	
17	Kapilash	Ramei RF	10	2,03,570	-do-	
18	Mahabirod	Dolia RF	40	8,26,297	-do	
19		Barabanka(N)RF	40	7,94,595	-do	
20	Bhuban	Balibo RF	85	18,05,425	-do-	
21		Bhairpur RF	65	14,03,234	-do	
22	Dhenkanal	Kotaberena RF	40	6,36,840	Block Plantation under Compensatory Affn Programme	
23		Majuri RF	40	6,69,110	-do	
24	Hindol	Koi RF	25	3,78,785	-do	
25		Patalu RF	35	6,86,133	-do-	
26	Sadangi	Lahada RF	40	5,79,778	-do	
27	K. Nagar East	Maulabhanja RF	15	2,59,248	-do	
28	K.NagarWest	Anantapur RF	20	5,05,703	-do-	
29		Suniamaru RF	30	2,80,943	-do	
30	Mahabirod	Khalpal RF	25	2,74,266	-do	
31	Bhuban	Tipilei RF	30	4,79,690	-do-	
		Total-	**1500**			

2011-12						
1	Dhenkanal	Charkhola RF	60	9,53,400	B.Economic	
2	Hindol	Kandhara RF	40	6,35,600	-do-	
3	Dhenkanal	Majuri RF	40	3,95,333	TFC.Grant	
4	-do-	Megha RF	40	3,95,333	-do-	
5	Hindol	Hitinda RF	40	3,95,333	-do-	
6	-do-	Kandhara RF	30	2,96,500	-do-	
7	-do-	Koi RF	25	2,47,083	-do-	
8	Sadangi	Aswakhola R.F	25	2,47,083	TFC.Grant	
9	-do-	Lahada R.F	40	3,95,400	-do-	
10	-do-	Bega R.F	40	3,95,400	-do-	
11	Bhuban	Balibo R.F	20	1,97,670	-do-	
12	Dhenkanal	Tamanda RF	100	21,83,164	Comp. Affn.	
13	-do-	Matiamundia RF	40	8,73,265	-do-	
14	-do-	Majuri RF	40	8,73,264	-do-	
15	-do-	Charkhola RF	30	6,54,949	-do-	
16	Hindol	Bampa RF	40	8,69,608	-do-	
17	-do-	Nandinia RF	30	6,52,131	-do-	
18	-do-	Kandhara RF	50	10,86,864	-do-	
19	K.Nagar East	Jiridamali RF	20	4,01,279	-do-	
20	Bhuban	Tipilei RF	30	6,52,721	-do-	
21	-do-	Balibo RF	27	5,87,448	-do-	
		Total-	**807**			
2012-13						
1	Bhuban	Tipilei RF	20	4,12,140	B. Economic	
2	-do-	Dhalapada RF	30	6,18,210	-do-	
3	Hindol	Kandhara RF	50	10,30,350	-do-	
4	Dhenkanal	Belabania RF	20	3,46,550	TFC Grant	
5	-do-	Matiamundia RF	50	8,66,375	-do-	
6	Hindol	Kandhara RF	40	6,93,100	-do-	
7	Hindol	Kandhara RF	20	3,46,550	-do-	
8	-do-	Hitinda RF	40	6,93,100	-do-	
9	-do-	Nandinia RF	40	6,93,100	-do-	
10	-do-	Patalu RF	40	6,93,100	-do-	
11	Mahabirod	Dolia RF	30	6,18,210	-do-	
12	-do-	Anantapur RF	40	6,93,100	-do-	
13	Dhenkanal	Patapur RF	10	2,64,491	MG NREGS	
14	Hindol	Bampa RF	10	2,26,408	-do-	
		Total-	**440**			

			2013-14			
1	Hindol	Kandhara RF	50	9,25,000	Economic Plantation	
2	Mahabirod	Barabanka (S) RF	25	4,63,500	-do-	
3	K.Nagar West	Suniamaru RF	25	4,63,500	-do-	
6	Dhenkanal	Jaripal RF	50	7,65,000	TFC Grant	
7	Hindol	Kandhara RF	40	6,12,000	-do-	
8	Hindol	Hitinda RF	40	6,12,000	-do-	
9	Hindol	Koi RF	30	4,59,000	-do-	
10	Hindol	Bampa RF	30	4,59,000	-do-	
11	K.Nagar West	Anantapur RF	25	3,82,500	-do-	
12		Siarimalia RF	25	3,82,500	-do-	
13	Mahabirod	Anantapur RF	20	3,06,000	-do-	
14		Dolia RF	24	3,67,200	-do-	
		Total-	**384**			
		G.Total-	**5679**			
Source: Divisional Forest Officer, Dhenkanal						

7.2.4 THE BAMBOO (OVERLAPPING) WORKING CIRCLE

This is an overlapping working circle and the blocks included in the current working plan will continue as such in all the bamboo areas. The extraction of bamboo was taken up in two forest blocks and results are given below:

OBJECTIVES OF MANAGEMENT

The objectives of management of Bamboo (Overlapping) Working Circle are as follows:

1. Systematic management of the bamboo forests to obtain sustained yield.
2. Meeting the demand of the local people and artisans from the depots of the Orissa Forest Development Corporation.
3. Meeting the demand of raw materials for the paper mills.
4. Employment to forest dwellers and local people.

RESULTS

The total area allotted to this working circle is 7966.613 Ha and 2 cutting Series namely Talaganda and Gurujanga have been constituted. Salia and Daba bamboo were worked for 2004-05, 2005-06, and 2006-07. In total 266.45 M.T bamboo was exploited from the coupe area. During 2007-08, 2008-09, 2010-11, 2011-12, 2012-13 and 2013-14 the coupe have not been worked. The coupe has not been worked out because available bamboo clumps are not commercially viable. There is degradation with regards to quality and density of the bamboo. However Silvicultural operation has been taken up in all the areas of coupe. SSO carried out in previous year have shown encouraging result. Natural regeneration of bamboo is also observed in some forest blocks.

The details of bamboo worked, production and SSO work taken up in different forest areas are furnished in the following **Table-7.6**

TABLE-7.6 PRODUCTION OF BAMBOO FROM COUPE AREAS						
Year of working	**Name of the coupe**	**Production (Industrial Bamboo) (in MT)**			**Production (Commercial Bamboo) (in No)**	**Royalty paid by OFDC, Ltd.**
		Salia	**Daba**	**Total**		
1	2	3	4	5	6	7
2004-05	Gurujang-A Talaganda-A	89.156 -	22.774 -	111.930 -	- -	55,965.00
	Total	**89.156**	**22.774**	**111.930**	**-**	
2005-06	Gurujang- B Talaganda-B	- 18.05	- -	- 18.05	- -	9,025.00
	Total	**18.05**	**-**	**18.05**	**-**	
2006-07	Gurujang- C Talaganda-C	86.877 -	12.695 -	99.582 -	- -	49,791.00
	Total	**86.877**	**12.695**	**99.582**	**-**	
2007-08	Gurujang- D Talaganda-D	Coupes not worked				-
2008-09	Gurujang-A Talaganda-A	Coupes not worked				-
2009-10	Gurujang- B Talaganda-B	Coupes not worked				-
2009-10 Flowered Bamboo coupes	Gurujang-A Gurujang- B Gurujang-D Kandhara SWC-X	- - - -	16.77 8.39 8.38 3.35	16.77 8.39 8.38 3.35	- - - -	18,445.00
	Total	**-**	**36.89**	**36.89**	**-**	
2010-11	Gurujang- C Talaganda-C	Coupes not worked				-
2011-12	Gurujang- D Talaganda-D	Coupes not worked				-
2012-13	Gurujang-A Talaganda-A	Coupes not worked				-
2013-14	Gurujang-B Talaganda-B	Coupes not worked				-
Total		Salia – 194.083 Daba- 72.359 **266.442**				**133226.00**

TABLE -7.7 SSO taken up in Bamboo coupes					
Year of working	**Name of the Coupe**	**Forest Block & Comptt. No.**	**Area worked (in Ha)**	**Clumps treated (No.)**	**Scheme**
2004-05					
2005-06	Talaganda-A	Kandhara-6	200.00	NA	T.F.C Grant
	-do-	-do-	230.00	NA	Non Plan
	Gurujanga-A	Kandhara-22	302.50	NA	T.F.C. Grant
	-do-	Kandhara-23		NA	-do-
2006-07	Gurujanga-B	Hitinda-2	120.00	3360	Non Plan
2007-08	Gurujanga-C	Kandhara-11	60.00	1680	-do-
2008-09	Talaganda-D	Kandhara-2	504.062	8069	N.B.M
	-do-	Kandhara-3	267.00	7290	-do-
	Gurujanga-D	Kandhara-19	583.981	16172	-do-
	-do-	Kandhara-21 Part	190.00	5048	-do-
	Talaganda-A	Kandhara-6	180.00	4222	-do-
2009-10	Gurujanga-D	Kandhara-21 Part	165.00	5508	N.B.M
	Talaganda-A	Kandhara-6	28.00	NA	Non Plan
	Talaganda-B	Kandhara-5	450.00	NA	State Plan
	-do-	Kandhara-8	200.00	NA	-do-
2010-11	Gurujanga-C	Kandhara-16	125.81	NA	N.B.M
	-do-	-do-	380.00	7270	T.F.C.
2011-12	Nil				
2012-13	Talaganda-B	Kandhara-8	73.23	724	T.F.C.
	Talaganea-D	Kandhara-2 & 3	740.00	7380	T.F.C.
		Total-	4799.583	66723	

7.2.5 THE N.T.F.P. (OVERLAPPING) WORKING CIRCLE

This is an overlapping working circle comprising of all forest area of Dhenkanal Forest Division i.e. 1, 10,712.45 Ha. The Non- Timber- Forest Produce (Overlapping) Working Circle does not provide information about quality and quantity of NTFP items as the NTFP items are being worked through Gram Panchayats and details of extraction of different items are not available.

OBJECTIVES OF MANAGEMENT

The objectives of management are as follows:

a. To regulate the collection and extraction of various NTFPs with a view to promote sustainable management, desired species composition, regeneration of forests,

b. To optimize collection and extraction of various NTFPs consistent with the first objective.

c. To enhance the value of forests by way of developing new NTFPs, Creating opportunities for value-addition in existing NTFPs, and Strengthening marketing and other local institutions.

d**.** To enhance the stakes of local people in NTFPs and to extend skills to local people for sustainable collection, extraction and utilization of various NTFPs.

e. To encourage greater financial and managerial inputs in forests to promote regeneration of most valuable and desirable NTFPs and to enhance productivity of forests.

RESULTS

The area included in this working circle was 1,10,712.45 Ha. The NTFP items are regulated by Grampanchayat and Forest Department is unaware about procurement, quantity collected, marketing and utilization pattern of NTFP. The Grampanchayats are not following the procedure for registration, transportation and collection of NTFP items. Also the procurement price of the NTFP not fixed regularly. No information about the quantity of NTFP procured, transported and sold is available in the District Panchayat Office. The scientific management of NTFP items and marketing of local produce has not been practiced as a result the local villagers are not getting adequate return from NTFP items.Also some times the primary Collectors are underpaid.

Inventorization of NTFP items has been taken up in 08 ranges during out going plan period (2011-12 to 2013-14). This study gives the potentiality of the different NTFP items in the Division area is given in the **Table no 7.8,7.9 & 7.10.**

Table- 7.8 NTFP inventorization.

Name of the Range	Forest Block	Ara in Ha.	Sampling Intensity in ha.	Name of different NTFP found
Dhenkanal	Charkhola	808.36	1.7	Kendu leaves, Mahua flowers, Neem Seeds, Char Seeds, Mahua Seeds
	Mayuri	957.11	0.4	Kendu leaves, Mahua flowers, Mahua seeds, Char seeds
	Saptasajya	2096.75	0.8	Mahua flower, Mahua seeds, Kendu leaves
	Ghantabaja	1274.4	0.2	Bahada, Chara seeds, Mahua seeds, Mahua flowers
	Patapuri	506.7	0.2	Anla, Kendu leaves
	Megha	603.9	0.6	Chara seeds, Mahua flowers, Mahua seeds, kendu leaves, Siali leaves, siali fibers ans sunari bark, Sal leaves.
	Korean	387.7	0.5	Sal seeds, Siali leaves, siali fibers, Sal leaves, Mahua flowers, Mahua seeds
	Kankadahada	380.4	0.2	Kendu leaves, Chara seeds, Sunari bark
	Tamanda	566.17	0.3	Mahua flowers, Mahua seeds, Kendu leaves, Siali leaves, sal leaves, Siali fibres, Sunari Bark.
	Kotaberena	1039.7	0.2	Mahua flowers, Mahua seeds, Kendu leaves
	Jaripal	289.8	0.2	Mahua flowers, Mahua seeds, Sal seeds, Sal leaves
	Belabania	603.8	0.2	Siali leaves, siali fibers, Sunari bark, Char seeds
	Sulia	259	0.3	Chara seeds, Anla, Sal leaves, Kendu leaves, Mahua flowers, Mahua seeds

Matia Mundia	1110.9	0.9	Kendu leaves
Matharagadi	285.31	1.4	Sal seeds, Sal leaves, Siali leaves, siali fibers, Anla, Bahada, Chara seeds
Nimidha	160.7	0.2	Kendu leaves
Godabalua	436.6	0.3	Char seeds, Kendu leaves, Mahua flowers & Mahua seeds
Kapilas (p)	1820.13	0.6	Sal seeds, Sal leaves, Siali leaves, siali fibers, Mahua flowers, Mahua seeds, Sunari Bark, Sal Resin, Honey, Lac, Anla, Harida, Bahada, Kendu leaves.
Balibo	659.7	1.4	Sal leaves, Kendu leaves
Bhairpur	490.5	1	Sal leaves, Char seeds, Kendu leaves, Mahua flower, Mahua seeds
Bhuban	457.3	0.4	Sal leaves
Dhalpada	372.3	1.2	Sal leaves, Sal seeds, Kendu leaves, Char seeds
Sunajhari (Part)	1278.853	2	Sal leaves, Sal seeds, Siali leaves, Siali fibre, Mahua flower, Mahua seeds, Kendu leaves, Honey, lac
Tipilei	947.00	3	Sal leaves, Sal seeds, Kendu leaves, Char seeds, Mahua flower, Mahua seeds
Maulabhanja	1367.48	1.1	Sal leaves, Sal seeds, Siali leaves, Siali fibre, Mahua flower, Mahua seeds, Kendu leave, Chara seeds
Ranjagarh	13822.1	6.3	Sal leaves, Sal seeds, Mahua flower, Mahua seeds, Kendu leaves
Jiridamali	815.06	0.4	Kendu leaves, Sal leaves, Char seeds
Birasal	1362.9	0.5	Kendu leaves, Sal leaves, Sal leaves, Char seeds
Ramei RF	1877.81	2.9	Bahada, Anla, Sal leaves, Mahua flower, Mahua seeds, Siali leaves, Siali fibre
Kapilash RF (P)	9042.01	6.3	Sal leaves, Mahua flower, Mahua seeds, Sal seeds, Siali leaves, Siali fibre, Sunari Bark, Sal resin, Honey, Lac, Anla, Harida, Bahada, Kendu Leaves
Anatapur (P)	10699.1	3.9	Sal leaves, Sal seeds, Sal Resins, Siali leaves, Siali fibre, Mahua flower, Mahua seeds, Kendu leaves, Honey, Lac
Sundarakhol	2206.42	0.4	Sal leaves, Sal seeds, Siali leaves, Siali fibre, Mahua flower, Mahua seeds, Kendu leave, Chara seeds
Nandabir	145.7	0.1	Sal leaves, Sal seeds, Mahua flower, Mahua seeds, Kendu leaves
Kankili	1786.3	0.1	Kendu leaves, Sal leaves, Sal leaves, Char seeds
Siarimalia	1405.1	0.3	Sal leaves, Sal leaves, Char seeds, Mahua

			flower, Mahua seeds, Kendu leaves
Kadalipal	246.00	0.3	Sal leaves, Char seeds, Kendu leaves
Madhi	457.7	0.2	Sal leaves, Sal seeds, Mahua flower, Mahua seeds
Sunajhari (P)	1511.843	1	Sal leaves, Sal seeds, Sal Resins, Siali leaves, Siali fibre, Mahua flower, Mahua seeds, Kendu leaves, Honey, Lac
Machhia	279.00	0.4	Kendu leaves, Sal leaves, Char seeds
Suniamaru	1855.2	0.2	Kendu leaves, Sal leaves, Char seeds
Anlabereni	502.2	0.5	Sal leaves, Sal seeds, Mahua flower, Mahua seeds, Kendu leaves
Aswakhola RF	2464.62	1.2	Sal leaves, Char seeds, Mahua Flowers, Mahua Leaves, Siali Leave, Hunny, Lakha, Sunari bark etc.
Raigada RF	363.8	0.2	Kendu leaves,
Lahada-B RF	2428	0.8	Kendu Leaves, Sal Leaves
Lahada-A	1339.6	2	Sal leaves, Char seeds, Kendus leaves , Siali leaves,
Sadangi-B RF	448	0.6	Sal leaves, Sal seeds, Char seeds, Kendu leaves
Gondia RF	926.8	0.5	Kendu Leaves
Raitola RF	535	0.2	Sal leaves, Sal seeds, Char seeds, Kendu leaves
Rupabalia RF	961.2	0.9	Sal leaves, Sal seeds, Char seeds, Kendu leaves
Bega	569.8	0.4	Kendu Leaves, Sala Leaves
Khankira	474.3	0.9	Kendu Leaves, Sala Leaves
Anantapur (P)	8116.998	3.5	Sal leaves, Sal seeds, Sal rasinging, Sialis leaves, Sial firber, Mahua flower, Mahua seeds Kendu leaves, Hunney, Lac
Talcher Border	784.3		Kendu leave, char seeds, Sal seeds
Dolia	1766.23	3.1	Kendu leaves, Sal leaves, Sal seeds Mahua flower, Mahua seeds
Khalpal	692.9	0.6	Kendu leaves, Sal leaves, Sal seeds, Char seeds
Barabanka (N)	433.8	1,3	Kendu leaves, Sal leaves, Char seeds
Barabanka (S)	974.5	0.4	Kendu leaves, Sal leaves, Char seeds
Kandhara	11172.94		Sal leaves, Char seeds, Mahua Flowers, Mahua Leaves, Siali Leave, Hunny, Lakha, Sunari bark etc.
Patalu	660.47		Kendu leaves,
Bampa	1653.6		Kendu leves, Sal Leaves, Char seeds
Nandinia	527.7		Kendu Leaves, Sal Leaves
Hindia	705.79		Sal leaves, Char seeds, Kendus leaves , Siali leaves,

	Koi	2266.3		Sal leaves, Sal seeds, Char seeds, Kendu leaves
	Kansara	50.6		Kendu leaves
	Ambithi	447.6		Kendu leves

Table- 7.9 NTFP inventorization: Report Generation.

Name of the Range	Name of Species	Name of product	Total production (in Qtl.)	Total consumption by Collector (in Qtl)	Total sold (in Qtl.)
1	**2**	**3**	**4**	**5**	**6**
Dhenkanal	Sal	Leaf (Green)	200	100	100
	Sal	Seeds	150	-	150
	Kendu	Leaf	900	-	900
	Suam Lai	Fibre	80	80	-
	Beta (Cane)	Sticks	2000 Sticks	2000 Sticks	-
	Chara	Seeds	1.5	1.5	-
	Kochila	Seeds	180	-	180
	Rohini	Fruits	250 Bags	-	250 Bags
	Bela	Fruits	10000 Nos	5000 Nos	5000 Nos
	Mushroom (Edible)	Entire body	2	2	-
	Mushroom (Medicinal)	Entire body	1	-	1
Kapilash	Sal	Leaf (Green)	200	100	100
	Sal	Seed	100	-	100
	Kendu	Leaf	120	-	120
	Suam Lai	Fibre	100	50	50
	Beta (Cane)	Sticks	1000 Sticks	1000 Sticks	-
	Kochila	Seeds	100	-	100
	Bela	Fruits	8000 Nos	3000 Nos.	5000 Nos.
	Myrabolan	Fruits	5	5	-
	Mushroom (Edible)	Entire body	3	3	-
	Tamarind	Fruits	15	10	5
	Mango	Cornel	20	-	20
Sadangi	Sal	Leaf	200	100	100
	Sal	Seeds	200	-	200
	Kendu	Leaf	500	-	500
	Kochila	Seeds	5	-	5
	Bela	Fruits	8000 Nos.	4000 Nos.	4000 Nos.
	Tamarind	Fruits	15	10	5
	Mahula	Flower	25	10	15
	Bana Khajuri	Leaf	200 Cart Load	200 Cart Load	-
	Chara	Seeds	5	5	-
	Asan	Tassar Cocoon	30 Kahan	-	30 Kahan
Hindol	Sal	Leaf	150	100	50
	Sal	Seeds	100	-	100

	Mahula	Flower	250	50	200
	Kendu	Leaf	800	-	800
	Kochila	Seeds	10	-	10
	Bela	Fruits	15000 Nos	5000 Nos	10000 Nos
	Siali	Leaf	50	50	-
	Suam Lai	Fibre	10	-	10
	Dantari	Fibre	10	-	10
	Sunari	Bark	4	-	4
	Myrabolan	Seeds	15	10	5
	Rohini	Fruits	200 Bags	-	200 Bags
Bhuban	Sal	Leaf	200	100	100
	Sal	Seeds	100	-	100
	Kendu	Green Leaf	700	-	700
	Kendu	Fruits	5	5	-
	Mahula	Flower	100	50	50
	Mahula	Seeds	50	25	25
	Myrabolan	Fruits	5	5	-

K.Nagar East	Sal	Leaf	1000	450	550
	Sal	Seeds	600	-	600
	Kendu	Leaf	1200	-	1200
	Mahula	Flower	450	150	300
	Mahula	Seeds	180	80	100
	Siali	Leaf	100	50	50
	Siali	Fibre	20	10	10
	Myrabolan	Seeds	50	25	25
	Suam Lai	Fibre	10	10	-
	Kusum	Lac	5	-	5
	Sal	Resin	2	2	-
	Mushroom (Edible)	Entire body	20	20	-
	Mushroom (Medicinal)	Entire body	20	-	20
	Tamarind	Fruits	20	10	10
	Asan	Tassar Cocoon	100 Kahan	-	100 Kahan
K.Nagar West	Sal	Leaf	1000	400	600
	Sal	Seeds	500	-	500
	Sal	Resin	2	1	1
	Kendu	Leaf	1800	-	1800
	Kendu	Fruits	20	20	-
	Mahula	Flower	600	100	500
	Mahula	Seeds	250	150	100
	Siali	Leaf	80	40	40
	Siali	Fibre	30	5	25
	Myrabolan	Fruit	20	10	10
	Kusum	Lac	1	-	1
	Asan	Tassar Cocoon	100 Kahan	-	100 Kahan
	Mushroom (Edible)	Entire body	20	10	10
	Mushroom (Medicinal)	Entire body	20	-	20
	Tamarind	Fruits	20	10	10
Mahabirod	Sal	Leaf	200	100	100
	Sal	Seeds	300	-	300
	Kendu	Leaf	1200	-	1200

	Kendu	Fruits	20	20	-
	Mahula	Flowers	250	50	200
	Mahula	Seeds	150	100	50
	Siali	Leaf	100	50	50
	Siali	Fibre	35	5	30
	Myrabolan	Fruits	10	5	5
	Mushroom (Edible)	Entire body	20	15	5
	Mushroom (Medicinal)	Entire body	5	-	5
	Char	Seeds	2	2	-

Table- 7.10 NTFP inventorization: Market study.

Name of the Range	Name of product	Price per Unit (Rs. / Qtl)	Name of local market
1	**2**	**3**	**4**
Dhenkanal	Sal Leaf	500/ (Green Leaf plate 1000)	Dhenkanal, Cuttack & Athagarh
	Sal Seed	500/ Qtl	Through local vendors
	Kendu Leaf	1750/ Qtl (Green Leaf)	Through Govt. Phadi house
	Suam Lai	3000/ Qtl	Through local middleman
	Beta (Cane)	-	Bonafide use
	Chara	-	Bonafide use
	Kochila Seeds (Nux vomica)	500/ Qtl	Through local middleman
	Rohini Fruits	100/ Bag	Through local middleman
	Bela	2- 4/ Kg	Cuttack, Bhubaneswar
	Mushroom (Edible)	-	Bonafide consumption
	Mushroom (Medicinal)	1000/ Qtl (Dry)	Through local middleman
Kapilash	Sal Leaf	500/ Qtl (Green Leaf plate 1000)	Cuttack, Dhenkanal
	Sal Seeds	500/ Qtl	Through local Vendors
	Suamlai	3000/ Qtl	Through local middleman
	Beta (Cane)	-	Bonafide consumption
	Kochila Seeds (Nux vomica)	500/ Qtl	Through local middleman
	Myrabolan	1650/ Qtl	Through local middleman
	Mushroom (edible)	-	Bonafide consumption
	Mushroom (Medicinal)	1000/ Qtl (Dry)	Through local middleman
	Tamarind (Uncured pulp)	1500/ Qtl	Through local middleman
	Mango cornel	250/ Qtl	Through local middleman
	Kochila	500/ Qtl	Through local middleman
	Mahula Flower	1200/ Qtl	Through local middleman
	Kendu Leaf	1750/ Qtl (Green Leaf)	Through Govt. Phadihouse
Sadangi	Sal Leaf	500/ Qtl	Chandikhol, Badchana
	Sal Seeds	500/ Qtl	Through local Vendors
	Kendu Leaf	1750/ Qtl (Green Leaf)	Through Govt. Phadi house
	Kochila Seeds (Nux vomica)	500/ Qtl	Through local middleman
	Tamarind (Un-curred Pulp)	1500/ Qtl	Through local middleman
	Mahua Flower	1200/ Qtl	Through local middleman
	Bela	2-4/ Kg	Cuttack, Bhubaneswar
	Bana Khajuri	-	Bonafide Consuption
	Chara	-	Bonafide Consuption
	Tasar Cocoons	2000/ Kahan	Through SERIFED
Hindol	Sal leaf	500/ Qtl (Green Leaf plate 1000)	Angul, Hindol
	Sal Seeds	500/ Qtl	Through local Vendors
	Mahula Flower	1200/ Qtl	Through local middleman
	Bela	2-4/ Kg	Cuttack, Angul

	Siali fibre	1500/ Kg	Through KL Phadies
	Suam Lai	3000/ Qtl	Through local middleman
	Dantari bark	2000/ Qtl	Through local middleman
	Sunari bark	2000/ Qtl	Through local middleman
	Myrabolan	1650/ Qtl	Through local middleman
	Rohini fruit	100/ Bag	Through local middleman
	Kochila (Nux vomica)	500/ Qtl	Through local middleman
	Kendu Leaf	1750/ Qtl (Green Leaf)	Through Govt. Phadi house
Bhuban	Sal leaf	500/ Qtl (Green Leaf plate 1000)	Bhuban, Sukinda, Jajpur Road
	Sal seeds	500/ Qtl	Through local Vendors
	Kendu Leaf	1750/ Qtl (Green Leaf)	Through Govt. Phadi House
	Mahua Flower	1300/ Qtl	Through local middleman
	Kendu	-	Bonafide Consuption
	Myrabolan	-	Bonafide Consuption
	Mahua Seed	3000/ Qtl	Through local middleman

K.Nagar East	Sal Leaves	500/ Qtl (Green Leaf plate 1000)	K.Nagar, Cuttack, Bhubaneswar, Puri
	Sal Seeds	500/ Qtl	Through local Vendors
	Myrabolan	1500/ Qtl	Through local middleman
	Kendu Leaf	1750/ Qtl (Green Leaf)	Through Govt. Phadi House
	Mahua Flower	1300/ Qtl	Through local middleman
	Mahua Seed	3000/ Qtl	Through local middleman
	Siali Leaf	700/ Qtl	Through local middleman
	Siali Fibre	1500/ Kg	Through KL Phadies
	Suam Lai	3000/ Qtl	Through local middleman
	Lac	7000/ Qtl	Through local middleman
	Resin (Sal)	-	Bonafide Consuption
	Mushroom (Edible)	-	Bonafide Consuption
	Mushroom (Medicinal)	1000/ Qtl (Dry)	Through local middleman
	Tamarind (Un-curred Pulp)	1500/ Qtl	Through local middleman
	Tasar Cocoons	2000/ Kahan	Through SERIFED
K.Nagar West	Kendu leaf	1750/ Qtl (Green Leaf)	Through Govt. Phadi House
	Suam Lai	2500/ Qtl	Through local middleman
	Sal Leaf	500/ Qtl (Green Leaf plate 1000)	K.Nagar, Cuttack, Bhubaneswar, Puri
	Sal Seeds	500/ Qtl	Through local Vendors
	Sal Resin	-	Bonafide Consuption
	Kendu Fruits	-	Bonafide Consuption
	Mahua Flower	1300/ Qtl	Through local middleman
	Mahua Seeds	3000/ Qtl	Through local middleman
	Siali leaf	700/ Qtl	Through local middleman
	Siali Fibre	1500/ Kg	Through KL Phadies
	Myrabolan	1500/ Qtl	Through local middleman
	Lac	7000/ Qtl	Through local middleman
	Mushroom (Edible)	-	Bonafide Consuption
	Mushroom (Medicinal)	1000/ Qtl	Through local middleman
	Tamarind (Un-curred Pulp)	1500/ Qtl	Through local middleman

Mahabirod	Mahua flower	1200/ Qtl	Through local middleman
	Siali leaf	500/ Qtl	Talcher, Angul
	Siali fibre	1650/ Qtl	Through KL Phadi house
	Lac	7000/ Qtl	Through local middleman
	Tassar Cocoon	2000/ Kahan	Through SERIFED
	Mushroom (Medicinal)	1000/ Qtl (Dry)	Through local middleman
	Sal Leaf	500/ Qtl	Talcher, Angul
	Sal Seeds	500/ Qtl	Through local Vendors
	Mahua Seeds	3000/ Qtl	Through local middleman

7.2.6 THE WILDLIFE (OVERLAPPING) WORKING CIRCLE

The area of Wild Life Overlapping Working Circle extends to entire Division of 1,10,712.45 ha. The commonly found wild animal in this Division are Elephant,Leopard, Wild boar, Spotted deer, Barking deer, Sambar, Bear, Hyena, Monkey, Porcupine, Jackal, Pangolin and Peacocks etc. There are many herds of elephants in the Division.

OBJECTIVES OF MANAGEMENT

The objectives of the management of the Wildlife (overlapping) Working Circle are as follows:

1. Conservation, protection and improvement of existing wildlife habitat.
2. Protection of wildlife in general and endangered species in particular.
3. Eco tourism and People's participation to create awareness.
4. Increase in biodiversity and wildlife population.

RESULTS

The number of elephants in the Division has increased but other herbivores animals remain at the same position. The carnivores have reduced in number and their sighting is very less.Some cases of elephant death due to disease, poaching and electrocution have been noticed. However the number of Elephant has increased substantially. The man-elephant conflict is increasing day by day because elephants are coming out to open village areas due to non-availability of food, water and cover inside forest.

However some efforts have been made to conserve the flora and fauna of this Division through enforcement, awareness to the people. In pursuance to Sec-26 AN (I) (b) of the Wildlife Protection Act 1972 (53 of 1972) the State Govt. has declared Kapilash R.F. area as sanctuary named Kapilash Wildlife Sanctuary vide Notification No. 8F (WL) -25/11 5937 / F & E in the year 2011(Annexure-XVII). Also one Zoo at Kapilas is established which imparts some idea and knowledge about the animals to become more familiar.

The details on wildlife census and other information are as under.

TABLE -7.11 WILD LIFE POSITION OF DHENKANAL DIVISION.			
Sl No.	**Name of wild animal**	**Year of census**	**Total**
(1)	**(2)**	**(3)**	**(4)**
1	Elephant	2005	102
		2007	132
		2010	157
		2013	162
2	Wolves	2004	150
3	Wild Dog	2004	20
4	Bear	2004	409
5	Wild Bear	2004	304
6	Sambar	2004	40
7	Spotted Deer	2004	130
8	Mouse Deer	2004	150
9	Barking Deer	2004	298
10	H.Langur	2004	605
11	Rh. Macaque	2004	690
12	Porcupine	2004	260
13	Pangolin	2004	98
14	Mongoose	2004	708
15	G.Squirrel	2004	445
16	F. Squirrel	2004	208
17	G.Hornbill	2004	25
18	Peafowl	2004	1000
19	Rabbit	2004	230
20	Peacock	2004	50
21	Jackal	2004	1102
22	Monkey	2004	1002
23	Tiger	2006	Nil
		2010	
		2013	
		2014	

Source: Divisional Forest Officer, Dhenkanal

Table -7.12 CROP DAMAGE BY WILD ELEPHANT AND PAYMENT OF COMPENSATION				
Year	Crop damage		House Damaged	
	Area (in Acr.)	Compensation	No. of House	Compensation
2004-05	414.670	6,42,870/-	-	-
2005-06	16.300	3,00,000/-	-	-
2006-07	124.870	5,24,610/-	-	-
2007-08	752.010	9,26,100/-	-	-
2008-09	779.300	7,79,300/-	-	-
2009-10	1147.720	8,39,300/-	-	-
2010-11	1241.570	12,41,570/-	42	85,500/-
2011-12	2104.770	35,37,210/-	72	1,44,000/-
2012-13	1107.062	72,10,616/-	143	3,02,000/-
2013-14	1604.881	1,33,25,501/-	64	1,36,000/-
Source: Divisional Forest Officer, Dhenkanal				

TABLE -7.13 KILLING AND INJURY BY WILD ANIMALS (ELEPHANT)		
Year	Human kill/Injury	Compensation paid
2004-05	09	6,00,000/-
2005-06	03	3,00,000/-
2006-07	02	1,00,000/-
2007-08	04	4,00,000/-
2008-09	05	5,00,000/-
2009-10	06	6,00,000/-
2010-11	19	19,00,000/-
2011-12	10	18,00,000/-
2012-13	07	8,00,000/-
2013-14	10	14,00,000/-
Source: Divisional Forest Officer, Dhenkanal		

7.3. Special work of improvement under taken: -

The Forest Conservation in Outgoing Plan, most of the prescriptions of the outgoing plan and schemes could not follow for want of sufficient funds during the plan period. However, with the available scanty budgetary allotments, some works of improvement have been carried out.

7.3.1. Boundary Maintenance:

In Dhenkanal Division the DGPS survey of boundaries of 35 no of R.Fs and maps have been prepared by M/S. SPARK. Besides GPS survey of other forests have been taken up under different scheme and map prepared.

7.3.2 Rights settled under Forests Rights Act, 2006

Rights settled under Forests Rights Act, 2006 during the outgoing plan period is 4408.51 Ha for individual and 61.52 Ha for community claim.

7.3.3 Creation of water body: A good number of WHS have been created during the out going plan period for use of human habitation as well as wild life as detailed below:

Table-7.14	List of WHS constructed		
Year	**No of WHS created**	**Amount spent(In lakh)**	**Scheme**
2004-05	6	11.41	CP/NFFWP
2005-06	4	9.2	-do-
2006-07	5	21.88	CP/NREBS
2007-08	3	19.16	SP/NREGS
2008-09	1	3.0	CP
2009-10	2	6.1	CP/NREBS
2010-11	9	26.0	SP/NREGS/CAMPA
2011-12	3	3.37	CP/NREGS
2012-13	8	18.5	SP/CAMPA
2013-14	25	64.75	SP/CAMPA
Source: Divisional Forest Officer, Dhenkanal			

7.3.4 Plantation Activities: The massive plantation have been raised in the Division during the outgoing plan under different scheme such as Block-6039.00Ha, RDF-4506.03 ha.and Avenue143.2 Rkm, Urban- 15,000 no of saplings

7.3.5 Infrastructure development: A number of new buildings for front line staff and the Range Office building and residence have been constructed. Also the non-residential buildings those are in dilapidated condition have been renovated with lthe fund made available to the Division from 13th F.C. and State CAMPA.

7.3.6 Communication: For the protection of forest and wild life Ranges have been strengthened by providing anti smuggling squad, provision of four wheeler,Maintaining of forest road, installation of communication net work- VHF, imparting theme based training like handling of arms and ammunition, forestry technique, forest law etc. training to the field staff.

7.4 PAST YIELD, REVENUE AND EXPENDITURE

Due to ban on green tree felling by the State Government from 1990, there was no regular coupe works in this Division. However, the State Government has lifted the ban on tree felling during 2005-06.and timber coupe carried subsequently

The list of timbers, Fire wood and Bamboo produced along with past revenue and expenditure to be furnished in the following format.

Table-7.15 Year wise Production of Timber, FW& Bamboo along with Past Revenue and Expenditure (In Rs.)

Major Head 0406-Revenue	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**2012-13**	**2013-14**
101Sale of Timber										
A1Timber	14918	120148	7030100	3273691	84330	1052440	2619270	2457629	3094831	1434471
A2 F W	21175	32393	17325	0	18900	263040	358495	73373	63320	7300
A3 Bamboo	0	0	0	0	0	0	0	0	18445	0
Total A	**36093**	**152541**	**7047425**	**3273691**	**103230**	**1315480**	**2977765**	**2531002**	**3176596**	**1441771**
B1 Timber	0	0	0	0	0	0	0	0	0	0
B2 FW	0	0	0	0	0	0	0	0	0	0
B3 Bamboo	0	0	0	0	0	0	0	0	0	0
B4 Grazing	292	743	241	0	0	0	0	0	0	0
B5MFP	57364	92036	173520	150090	159540	142380	69584	70260	62940	54360
B6 Comm.	259203	261172	157240	31623	0	8514	0	0	0	0
Total B	**316859**	**353951**	**331001**	**181713**	**159540**	**150894**	**69584**	**70260**	**62940**	**54360**
C D&W	117031	1142764	536972	815231	1080365	1283220	7096359	3779991	2007015	1447737
Total-101Sale of timber	**469983**	**1649256**	**7915398**	**4270635**	**1343135**	**2749594**	**10143708**	**6381253**	**5246551**	**2943868**
800-Other Receipt.Rent on building	101770	100223	102919	92757	116475	107195	93223	102408	96832	98238
Other misc.receipt	2374562	37129283	617476	325476	323719	298960	357916	309718	409261	623053
Total-800 other receipt	**2476332**	**37229506**	**720395**	**418233**	**440194**	**406155**	**451139**	**412126**	**506093**	**721291**
Total-0406 Revenue	**2946315**	**38878762**	**8635793**	**4688868**	**1783329**	**3155749**	**10594847**	**6793379**	**5752644**	**3665159**
Source: Divisional Forest Officer, Dhenkanal										

CHAPTER - VIII
STATISTICS OF GROWTH & YIELD

8.1 STATISTICS OF GROWTH

8.1.1 PAST STATISTICS:

The statistics of growth and yield are not only required for assessment of the exploitable quantum of produce in a given area but also to arrive at the growing stock of the area. Further statistics help in analysis of outcome or any prescriptionThe growth and yield of a particular patch of forest is affected by different parameters like geology, soils, mineral contents, climatic factors etc. Even changing of climatic factors like rainfall, temperature, wind, etc. put considerable impact upon the growth and there by the yield. The tract comprises of mainly Moist and dry deciduous forests of both Sal and Sal bearing forests of course the retrogression of Sal has changed the species composition in many blocks resulting scrub forests.

There are no research stations in Dhenkanal division. Systematic study of any species has so far not been done in the division. No sample or preservation or experimental plot exists in the division. In absence of time series data at local level and for want of appropriate analytical tools, the past plans relied mainly on the following literatures.

Table No.-8.1 Bibliography of Published Statistics

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
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		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
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

8.1.2. The research papers as above are 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.

8.1.3. **Mean Annual Increment -** In 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 are not readily, available. Illicit felling is regular features in most Forest Blocks.Also there is no such record on illicit removal of timber from the forest which makes the calculation of M.A.I. difficult.

8.1.4. **Local Volume Equation:** For the purpose of this plan, the volume equations of different species developed by the Forest Survey of India (FSI) on the basis of data obtained from the forests of Koraput, Sambalpur and Dhenkanal have been used.

The local volume equations used in this Working Plan is presented in **Table-8.2**

Table-8.2 Local Volume Equations Of different species

Species	Local Volume Equations
Asan	$V = 0.103171 - 1.684599\ D + 10.107586\ D^2$
Bahada	$V = 0.035142 - 0.839708\ D + 8.157614\ D^2$
Bandhan	$V = 0.057424 - 1.153088\ D + 8.542648\ D^2$
Dhaura	$V = 0.015731 - 1.020606\ D + 9.656667\ D^2$
Jamun	$\sqrt{V} = 0.08444 - 1.26801\ D + 8.75274\ D^2$
Kasi	$V = 0.035142 - 0.839708\ D + 8.157614\ D^2$
Kendu	$V = (-)\ 0.009124 - 0.494103\ D + 7.610416\ D^2$
Kurum	$\sqrt{V} = (-)\ 0.153360 + 2.802965\ D$
Mahula	$V = 0.030925 - 0.567037\ D + 5.709471\ D^2$
Mai	$V = 0.057424 - 1.153088\ D + 8.542648\ D^2$
Mundi	$V = 0.030925 - 0.567037\ D + 5.709471\ D^2$
Piasal	$V = 0.058424 - 1.233468\ D + 9.433633\ D^2$
Sal	$V = 0.109884 - 1.804754\ D + 10.297714\ D^2$
Salai	$\sqrt{V} = (-)\ 0.188655 + 3.021335\ D$
Simili	$V = 0.136196 - 2.076740\ D + 10.156600\ D^2$
Sisoo	$V = 0.00965 + 0.58546\ D - 2.5605\ D^2 + 24.34215\ D^3$
Others (Misc)	$V = 0.088074 - 1.449236\ D + 8.760534\ D^2$

N.B: 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.

8.1.5. Quality Class of Sal – In this plan the quality class for sal as laid down in All India yield and stand table is adopted as given in the **Table No 8.3.**

Table No.8.3 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.			

8.2. ENUMERATION.

The Working Plan Committee while approving the 1st PWPR has recommended for 5% strip enumeration in Selection Working Circle & 1% enumeration of other Working Circle. Accordingly 5% enumeration done in the compartments of 3 RFs namely Ranjagarh, Anantapur and Kandhara those included in the Selection Working Circle and 1% in all other Compartments/R.Fs included in Other Working Circles (Except Kapilas being declared Sanctuary).

8.2.1 Methodology: The intensity of sample enumeration in the 3 RFs was 5%, done by "strip sampling" method. Before taking up any fieldwork a map of the forest block intended for enumeration was traced out. In the field, the first strip was randomly chosen. Then parallel strips of two chain width were drawn 40 chains apart and length of each strip was measured. Counting and enumeration are being done on both sides of the lines inside the strip width. The data collected are as under.

1) Number of tree of different species (25) of each girth class.
2) Actual measurement of all tree species above 30 cm girth at breast height.
3) Tabulating the measurement in 5 girth classes 30 to 60, 60 to 90, 90 to 120, 120 to 150 and 150 to 180 and 180 to above.
4) Total length of the enumeration in chains.

8.3. ANALYSIS OF ENUMERATION RESULTS

8.3.1 Each enumeration strip was taken as a sample. The number of trees recorded in each enumeration strip was classified as per girth at breast height for twenty-five different species. All enumeration strip of a particular compartment is summed up. In this way, the species wise number of trees per girth class was determined for each compartment. Enumeration results of 3 RFs namely Ranjagarh, Anantapur and Kandhara are given in **Annexure-XVIII.** The enumeration result of other Compartments/RFs are given in the Compartment History concerned.

8.3.2 The result obtained is used to estimate the number of trees present per hectare species wise in different girth classes. The number of trees per hectare of every compartment of Forest Blocks i.e. Ranjagarh, Anantapur and Kandhara is added up. This gives the number of trees per hectare in each girth class of various species in different forest blocks. For the Division the number of trees per hectare of every compartment of all the Forest Blocks (64nos) is added up. This result is given in **Annexure-XIX**. The percentage of various species, which constitute the forest crop and their girth wise contribution, is also calculated. In the ideal selection forests, the number of trees in successive diameter classes should be in a geometric series as per De Liocourt's Law. It follows that if the number of trees is plotted against diameter classes (or girth class), the resultant curve will be a laterally inverted J shape. Those forests, where the number of stems by diameter class (or girth class) decreases in a constant geometric progression, can be termed as balanced forest. The smooth inverted J curve will indicate the balanced stand structure of the forest block. These curves for the three Forest blocks Ranjagarh, Antapur& Kandhra and for the Division are presented in **Annexure- XX.**

8.4 ANALYSIS OF De Liocourt's "J" CURVE FOR EACH BLOCK

8.4.1 Ranjagarh: The De Liocourt's quotient for successive girth classes from 30-59 is 2.68, 1.28, 1.86, 1.66 and 1.26. These value shows that the forest is imbalanced, having less number of trees in the higher girth classes. The average number of trees is 244 per ha. Sal constitutes 31.82 % of the total crop. The percentage of trees in the 30-59 cm girth class is 50.27.

8.4.2 Anantapur: The De Liocourt's quotient for successive girth classes from 30-59 is 2.14, 2.51, 2.44, 1.15 and 1.25. The crop composition is quite imbalanced with less number of trees in higher girth classes. The percentage of trees in the 30-59 cm girth class is 54.08. The average number of trees per ha is 272. Sal constitutes 41.58 % of the total crop.

8.4.3 Kandhara: The De Liocourt's quotient for successive girth classes from 30-59 is 2.42, 2.55, 2.82, 2.34 and 0.93. The average number of trees per ha is 187. The percentage of Sal is only

11.21 and the matured sal trees are very limited (less than one per ha). The percentage of trees in the 30-59 cm girth class is 59.35%. The average number of trees per ha is 187.

8.4.4 Dhenkanal Division: The De Liocourt's quotient for successive girth classes from 30-59 is 2.79, 5.12, 3.90, 1.44, and 1.39. Over all the forest crop of the division can be termed as balanced. Nevertheless it is only average and varies widely in different blocks. The matured trees are very much limited. The Sal crop constitutes 40% of the total stock.

8.5 ESTIMATION OF TOTAL POPULATION OF DIVISION SPECIES WISE AND GIRTH CLASS WISE

8.5.1 The enumeration has been carried out in 64 nos of forest blocks/ 190 nos of compartments. In order to ascertain the number of trees per hectare, species wise and girth class wise in the given forest block, the total number of trees enumerated in all the strip (gridlines) of the particular sample forest block have been added up and then divided by the total area of the enumeration carried out in the said block. This sample mean (X) of each enumerated forest block has been taken as sample point (X_i), and the number of blocks where partial enumeration was taken up, has been taken as sample size (N), to estimate population mean i.e. species wise and girth class wise number of trees / ha. Population mean (Y); Standard Deviation (S_y) and the Population Standard Deviation(Standard Error of Mean) species wise & girth class wise per hectare have been computed using the following formulae for the Division.

(i) Population Mean = $Y = \sum X_i / N$

(ii) Standard Deviation = $S_y = \sqrt{(X_i - Y)^2 / (N - 1)}$

(iii) Population Standard Deviation (Standard error of Mean) = $\int = S_y / N$

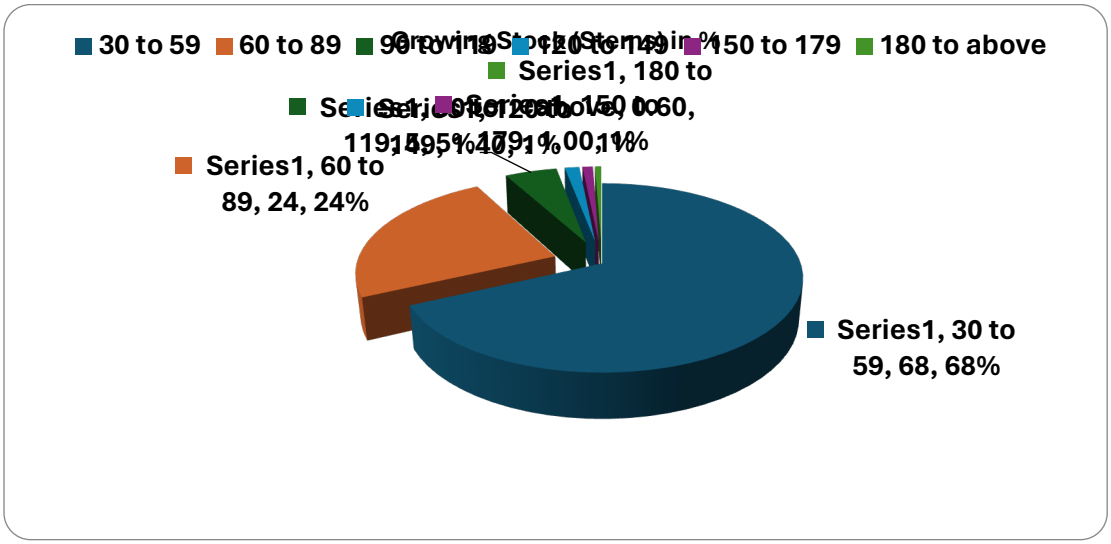
The result of total number of trees of different species per girth class wise is presented in the **Annexure-XIX**

8.6 ESTIMATION OF GROWING STOCK OF THE DIVISION

8.6.1 The summary of above analysis is presented in the form of the total number of trees species wise and girth class wise in the entire Division (where the enumeration has been done) in table 8.4. The total area of enumeration is 98101.34 ha and the actual area enumerated is 2138.862 ha. Thus, the overall intensity of enumeration is 2 %.

The growing stock of the Selection WC, Eco-Restroration WC & Protection WC is furnished in the **Aneexure XXVII, XXVIII & XXIX** respectively.

TABLE NO-8.4 ESTIMATEED TOTAL NUMBER OF TREES IN FOREST BLOCKS OF DHENKANAL DIVISION							
Total area of Enumuration - 98101.34 Ha.					**Area Enumerated -2138.862**		
Number of Trees speies wise and Girth class wise							
Species	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
ASAN	903194	337501	60009	8123	1487	1165	1311479
AMLA	56648	34456	506	9289	0	0	100899
BELA	327926	94856	3379	204	169	0	426534
BANDHAN	57111	20114	2487	1800	1927	1498	84937
BAHADA	259681	99631	24795	14167	3637	1113	403024
CHARA	1072843	227301	7085	781	572	357	1308939
DHAURA	396431	179035	46286	13659	10496	1361	647268
GAMBHARI	7153	1347	333	257	272	195	9557
HARIDA	57309	10887	4367	705	521	460	74249
JAMUN	325630	120142	20421	5628	1967	5384	479172
KASI	174521	41068	6431	527	144	31	222722
KURUM	201076	59142	6897	3001	414	939	271469
KENDU	506437	212446	40994	15432	3968	6157	785434
KANGADA	669441	204825	53471	20141	4706	1833	954417
KARADA	270710	165291	3939	107	92	628	440767
MAHULA	467583	183992	61842	19705	9436	9274	751832
MUNDI	5970	1402	929	343	66	61	8771
MAI	335825	158759	63247	13660	5079	2464	579034
MISC	5461617	1631364	354359	119564	164028	80723	7811655
PIASAL	90836	28783	3219	971	215	582	124606
SAL	7798498	3132506	653739	90582	33250	18129	11726704
SISOO	73012	27259	628	15	31	15	100960
SIDHA	368084	137397	7336	934	949	46	514746
SIMILI	33312	39588	14833	7556	2158	2072	99519
TEAK	482020	173546	28964	19579	7618	49572	761299
TOTAL	**20402868**	**7322638**	**1470496**	**366730**	**253202**	**184059**	**29999993**

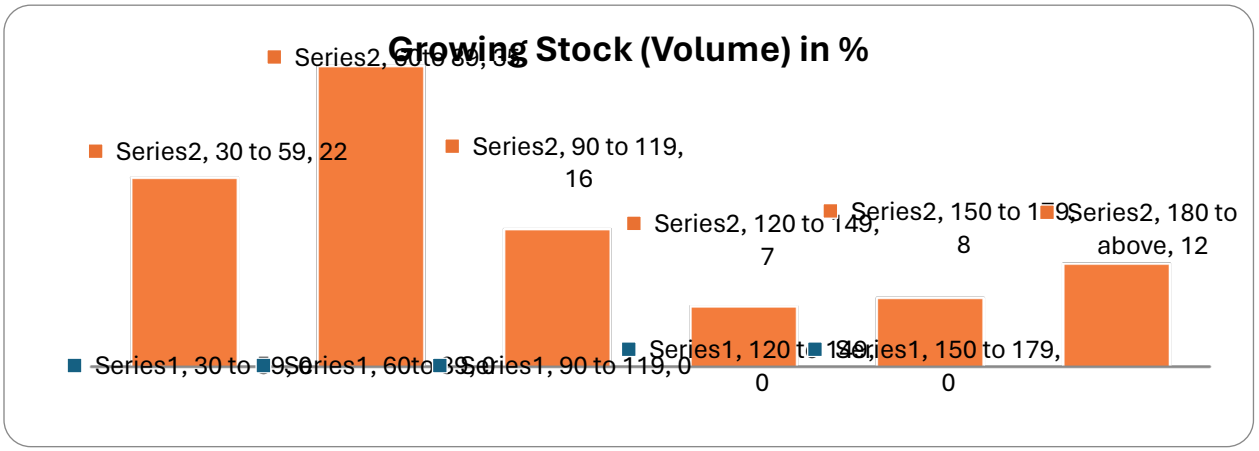


8.6.2 The total growing stock of the Division is calculated by the multiplication of the total number of the trees present and the local volume equations developed by the Forest Survey of India (Table 8.5). The diameter corresponding to mid girth class has been taken as the representative of that girth class. The value of 'D' in meters for 30 - 59 cm, 60 - 89 cm, 90 - 119 cm, 120 - 149 cm, 150 - 179 cm and 180 + cm is 0.14, 0.24, 0.33, 0.43, 0.53 and 0.62 respectively. The total growing stock of the Division is presented in the **Table - 8.5**

Table - 8.5 VOLUME OF GROWING STOCK IN DHENKANAL DIVISION

Total area of Enumuration -98101.34 Ha.					**Area Enumerated -2138.862**		
Volume by speies wise and Girth class wise in Cubie Meter							
Species	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
ASAN	59101.25	94859.45	38884.0	10135.0	3047.7	3429.8	209457.2
AMLA	3222.6	8437.0	285.3	10076.0	0	0	22020.9
BELA	18654.87	23226.83	1905.2	221.3	301.0	0	44309.2
BANDHAN	3622.4	5485.9	1510.1	1952.5	3431.6	3830.5	19833.1
BAHADA	20118.0	30237.1	16027.6	2128.3	3625.8	3970.2	76107.0
CHARA	61031.28	55657.86	3994.9	847.2	1018.6	912.9	123462.7
DHAURA	24625.0	58546.2	33813.9	18608.9	22958.6	3283.8	161836.3
GAMBHARI	406.9	329.8	187.8	278.8	484.4	17569.6	19257.3
HARIDA	3260.162	2665.8	2462.3	764.7	927.8	1176.3	11257.1
JAMUN	2005.22	9709	7828.8	7541.4	6886.0	38176.0	72146.6
KASI	13520.5	12463.8	4157.0	623.1	270.9	82.2	31117.5
KURUM	942.7	15952.1	4106.4	3320.7	734.8	2357.4	27414.1
KENDU	35889.03	65996.61	26916.5	18295.8	8482.4	161184.3	316764.7
KANGADA	38082.78	50154.29	30149.5	21847.5	8380.5	4687.2	153301.7
KARADA	15400	40473.8	2221.0	116.1	163.8	1605.9	59980.6
MAHULA	29666.0	41159.3	28791.4	16607.0	12589.4	17380.2	146193.4
MUNDI	378.8	313.6	432.5	289.1	88.1	114.3	1616.4

MAI	21300.57	43299.8	38403.5	15587.9	9375.4	6471.2	134438.4
MISC	310697.3	399462.5	199804.7	129694.1	292103.2	206416.5	1538178.4
PIASAL	6416.4	8800.9	2184.7	1235.4	441.7	1699.4	20778.7
SAL	460529.6	845436.3	415605.6	112130.3	68029.2	53469.3	1955200.3
SISOO	37859.3	38293.0	1717.8	69.1	199.6	131.2	78270.0
SIDHA	20939.35	33643.6	4136.4	1013.1	1690.0	117.6	61540.1
SIMILI	1483.1	8820.1	8260.9	8471.4	4075.4	5703.8	36814.8
TEAK	27420.88	42495.2	16331.3	21237.8	13566.2	126760.4	247811.8
TOTAL	1216574.1	1935920.1	890119.3	403092.5	462872.2	660530.1	5569108.2



8.7 BAMBOO ENUMERATION AND ANALYSIS.

8.7.1 At the time of carrying out the growing stock enumeration, the bamboo clumps in the Bamboo (OL) Working Circle have been enumerated. The enumeration of bamboo clumps have been taken up along with tree species enumeration. The intensity of enumeration is 1%.The bamboo clumps occurring within 20 metres width on either side of the gridline i.e. 40 metre strip, have been enumerated and number of bamboo culms have been recorded in each clump.The enumeration has been done in two stages. At first stage, numbers of clumps species wise occurring in different gridlines have been enumerated.

The bamboo forest has been classified into three qualities depending on the culm height as per the criteria shown in **Table-8.5**

Table No.8.6 Different quality classes for Bamboo Clumps	
Quality class	Criteria
Quality Class- I	Culm height of 9 meters and above.
Quality Class - II	Culm height between 6 meter to 9 meters.
Quality Class- III	Culm height less than 6 meters.

8.7.2 In the second stage, numbers of culms in individual clumps have been counted duly differentiating and recording the culms age wise into 1st years, 2nd year, 3rd year & up. The abstract is furnished in **Table 8.7**

Table No- 8.7 Details Enumeration Result in the Bamboo WC area.						
Bamboo Block details				Enumeration Data		
Range	Block	Comptt. No.	Area (in ha.)	Area enumerated (in ha)	No. of Clumps	No of Culms
Hindol	Kandhra	2	502.342	5.02	42	936
Hindol	Kandhra	3	268.72	2.68	36	303
Hindol	Kandhra	4	507.898	5.078	44	1174
Hindol	Kandhra	5	570.626	5.706	71	1499
Hindol	Kandhra	6	470.666	4.706	52	1189
Hindol	Kandhra	7	514.373	5.14	67	2100
Hindol	Kandhra	8	605.43	6.05	30	193
Hindol	Kandhra	9	448.812	4.48	54	927
Hindol	Kandhra	11	356.54	3.56	26	159
Hindol	Kandhra	16	553.224	5.53	26	734
Hindol	Kandhra	19	583.981	5.839	33	803
Hindol	Kandhra	21	443.146	4.431	4	49
Hindol	Kandhra	22	318.498	3.18	1	30
Hindol	Kandhra	23	346.018	3.46	3	19
Hindol	Kandhra	24	378.799	3.78	10	160
Hindol	Kandhra	25	391.749	3.91	8	200
Hindol	Hitinda	1	286.527	2.86	4	170
Hindol	Hitinda	2	419.263	4.19	1	30
			7966.613	**79.6**	**512**	**10675**

On perusal of enumeration data clearly reveals that majority of bamboo forests in the Division comprises mainly of Daba bamboo (Bambusa arundaneaceae) and majority of the bamboo forest is of quality II.

Table No- 8.8 Abstact of Enumeration Result vis-à-vis its analysis.						
Bamboo Block details				Analysed Data		
Range	Block	Compartment	Area (in ha.)	A	B	Q
Hindol	Kandhra	2	502.342	8	22	II
Hindol	Kandhra	3	268.72	13	8	II
Hindol	Kandhra	4	507.898	9	27	II
Hindol	Kandhra	5	570.626	12	21	II
Hindol	Kandhra	6	470.666	11	23	II
Hindol	Kandhra	7	514.373	13	31	II
Hindol	Kandhra	8	605.43	5	6	II
Hindol	Kandhra	9	448.812	12	17	II
Hindol	Kandhra	11	356.54	7	6	II
Hindol	Kandhra	16	553.224	5	28	II
Hindol	Kandhra	19	583.981	6	24	II
Hindol	Kandhra	21	443.146	1	12	II
Hindol	Kandhra	22	318.498	1	30	II
Hindol	Kandhra	23	346.018	1	6	II

Hindol	Kandhra	24	378.799	3	16	II
Hindol	Kandhra	25	391.749	2	25	II
Hindol	Hitinda	1	286.527	2	43	II
Hindol	Hitinda	2	419.263	1	30	II
Total			**7966.613**			
Total Area – 7966.613 ha, Area Enumerated – 79.6 ha Average Clumps per ha – 6 Nos and Culms per Clump – 21 Nos A = Nos of Clumps per ha, B = Nos of Culms per Clump. Q-I = Culm height equal to or more than 9 metres, Q-II = Culm height in between 6 to 9 metres & Q-III is less than 6 metres						

8.7.3 An attempt has been made to estimate the total growing stock of the Bamboo forest by adopting the standard statistical methods. The total numbers of clumps enumerated have been divided by the total area of enumeration to get number of clumps per hectare. This has been subsequently multiplied by the total bamboo Working Circle area of the Division to estimate total number of clumps in the entire Division. The second stage enumeration data has been similarly used to assess the number of culms per clump. The total number of clumps in the Division when multiplied by number of culms per clumps gives the total number of culms in the entire Division.

8.7.4 Further analysis of the data has been done to estimate the total bamboo growing stock of the Division in terms of Sale Unit (SU). Though the quality class of the Bamboo forests is varying from Q.1 to Q.III, the average height of culms has been taken as 7.5 meters for the purpose of the present calculations since majority of the clumps have quality II (Culm height in between 6 M to 9 M & thus average length is 7.5 M). The total number of culms in the Division when multiplied with average length of a Culm gives total length of the culms of all the estimated bamboo clumps of the Division in RMT (Running Meters). It is then divided by 2400 to get total growing stock of the bamboo in terms of the standard Sale Units since one standard SU is equal to 2400 RMT.)

Table No.8.9 Abstract of Growing Stock of Bamboo in Dhenkanal Forest Division.	
Total Bamboo W.C. Area in the Division (in Ha)	7966.612
Bamboo area enumerated (in HA.)	79.66
Total Bamboo clumps enumerated) in Nos)	512
Total culms in the enumerated Area (in Nos)	10675
Average Clumps Per Hectare in enumerated Area (in Nos)	6.43
Average culms Per Clump in enumerated Area (In Nos)	134.10
Total clumps in the Division (in Nos)	51225.32
Total culms in the Division (in Nos)	1068322.67
Average height of the culms (in meters)	7.5
Total culm length in the Division (in meters)	8012420.03
One sale unit (SU) of Bamboo (in meters)	2400
Total Sale Units of the Bamboo Forest (in SUs)	3338.51.

CHAPTER-IX

ESTIMATION OF CAPITAL VALUE OF FOREST

9.1 GENERAL CONSIDERATIONS

9.1.1 The revised plan covers 64 RF blocks comprising an area of 99,755.50 Ha. As experienced in all these Blocks the type of forest, crop composition and density varies considerably. Hence for the estimation of capital value it is essential to have the details of the total growing stock of all the blocks. With the help of the data collected from the field exercises attempt has been made to calculate the capital value of the forest.

9.1.2 The facts based on which the capital value of the forest has been estimatedare furnished below.

- Enumeration has been conducted in all the 64 forest blocks @ 5% in Selection Working Circle & 1% in other Working Circle area.
- Total area of enumeration of Selection Working circle area is 28,148.57 ha & Other Working circle area is 70,084.42 ha.
- The total area enumerated is 2190.0 ha (Selection Working circle area is 1410.0 ha & Other Working circle area is 780.0 ha including bamboo)
- The method chosen for for 5% & 1% enumeration is systematic strip sampling.
- Enumeration conducted for the growing stock above 30 cmasgbh.
- The volume of the growing stock below 30 cms gbh is taken as same as that corresponding to 30-59cms gbh and the entire such volume is converted to firewood.
- One MT of firewood is equal to three CUM as one standard stock of firewood of size 12'X3'X3' or 108 cft or 3CUM is equal to one MT.
- Entire growing stock of bamboo clump is coverted into industrial bamboo.
- Stock mapping of growing stock has been carried out for complete division and stock maps have been prepared.
- Local volume equations, developed by the Forest Survey of India (FSI) based on the inventory studies conducted in different parts of Orissa, have been used for estimating the volume of the growing stock.
- Thus, the capital value of the forest for timber and firewood is calculated for the division.

9.2. PARAMETERS FOR ESTIMATION OF CAPITAL VALUE:

9.2.1. The estimated capital value of the forests of the Division not only comprises of the monetary value of timber, firewood and the bamboo but also the imputed capital value in the form of environmental services provided by these forests. Thus, the estimation can be broadly categorized into the following two major heads.

- In situ capital value of the growing stock of the forests.
- Imputed capital value of the environmental services provided by these forests.

9.3 IN SITU CAPITAL VALUE:

9.3.1 The average selling price of timber by OFDC Ltd. for the year 2013-14 works out to be Rs. 17967 or Rs. 18000 per CUM (Refer Table on : 3.33 of Chapter No. 3) and the selling price of billet firewood is taken Rs.2000 per MT. Similarly the selling price of one SU of bamboo is taken as Rs.3450 per Sale Unit.

9.3.2. The cost of production of timber is taken as Rs.350/- per CUM (refer Table – no.3.28 of Chapter No.3) and that of firewood is Rs.140/ per MT (refers Table no.3.28 of Chapter No.3). Similarly, the cost of production of one sale Unit of bamboo comprising of 50 bundles is Rs.400/- (cost of production of one standard bundle is about Rs.8/-) as in Table no.3.29 of Chapter No.3.

9.3.3. The above mentioned selling prices and cost of production have been taken only for the purpose of calculation of the capital value of the Dhenkanal Forest Divisions.

9.3.4. Capital value of the forests of Dhenkanal Forest Division.

9.3.4.1. The total volume of growing stock of the Dhenkanal Forest Division above 30 cms gbh has been estimated in Chapter -6 to be 5569108.2 CUM inclusive of 1216574.1 CUM of crop with 30-59 cms gbh (refers Table no.8.5 of Chapter No.8).Thus with the assumptions as shown above in paragraph no. 9.3.1.

9.1.2, The quantity of timber and firewood on clear felling works out to be as follows.

- Timber production is 4455287 CUM i.e. 80% of the total estimated growing stock of 5569108.2 CUM.
- The total firewood production in the Division works out to be 2330396 CUM or 2330396 MT with contribution from following sources.

  - 1113822 CUM of firewood production from the growing stock of 30 cms gbh above i.e. 20% of the total estimated growing stock of 5569108.2 CUM.
  - 1216574 CUM of firewood production from the growing stock of less than 30 cms gbh i.e. such volume is equal to volume of growing stock corresponding to gbh class of 30 – 59 cms which is 1216574 CUM.

9.3.4.2. Similarly the total volume of growing stock of bamboo clumps of the Division has been estimated to be 128144 SUs (Refer Table no.6.8 of chapter no.6).

9.3.4.3. Thus, the total in situ capital value of the forests of the Division comes to about Rs. 2,150 Crores as per the details reflected in **Table No.9.1.**

Table No.9.1. Estimation of in-situ Capital value of forests in Dhenkanal Division (in Rs. Crores)

Forest produce	Total Production	Selling price/Unit	Cost of Production/ Unit	In-situ capital value.
Timber (CUM)	4455287	18000	350	7864
Firewood(MT)	2330396	2000	140	433
Bamboo(SU)	3340	3450	400	1
TOTAL IN-SITU CAPITAL VALUE				**8298**

9.4 IMPUTED CAPITAL VALUE OF ENVIRONMENTAL SERVICES

9.4.1. Many forest values are not easily quantifiable. Most of the environmental services like nutrient cycle, hydrological cycle, pure air, carbon sink & many more fall in this category and are often categorized as intangible benefits. The Ministry of Environment and Forests, GOI, in their letter No. 11-61/85 FRY(CONS) dated 15.01.1985 have prescribed that ecological (environmental) value of a forests of density 1.00 (One) i.e. 100% density is 126.74 lakh rupees per ha over a period of 50 years which works out to be Rs.2.5348 lakhs per hectare per year.

9.4.2. The density of the forests of the division varies from fully stocked to blank patches. The density class wise list of forest blocks is furnished in Table no. 2A.2 of Chapter No.2. The Gross area has been reduced to net area of 100% density by applying the density factor to different density classes of the forest blocks using the standard Weighted Arithmetic Mean formula. For dense Forest, the weightage is taken as 55%, for partly degraded forests, it is average of 25& 40 i.e. 32.5%. Similarly, for highly degraded & scrub forests, it works to be 17.55 & 0.05 respectively. The net forest area of density 'One' have been multiplied with annual per hectare ecological value of Rs.2.5348 Lakhs to calculate the total annual ecological value of the forests of Dhenkanal Division. The said data vis a vis calculation is reflected in **Table no 9.2** for Dhenkanal Forest Division.

Table No- 9.2 Assessment of Environmental Value of Forests of Dhenkanal Division (in Rs. Crores)

Density class wise forest	Density Class	Average density	Gross Area (Ha)(Actual Density)	Net Area(Ha) (one density)	Ecological value
Dense/Good Forest	> 40%	0.55	59,334.61	32634	827
Partly Degraded	25 – 40%	0.325	29,119.44	9464	239
Highly Degraded	10 – 25%	0.175	17,655.24	3090	78
Fully Degraded/Scrub.	< 10%	0.05	4,603.16	230	6
Total Inputed Capital Value			**1,10,712.45**	**45418**	**1150**

9.5 TOTAL CAPITAL VALUE OF THE FORESTS.

9.5.1. The total capital value of the forests of Dhenkanal Division has been estimated by adding the In Situ and Imputed Capital Values.

(i) In situ Value Rs. 8298 Crores.
(ii) Imputed value Rs. 1150 Crores.
Total Capital Value Rs. 9448 Crores.

9.5.2. The capital value assessment as done above is a very conservative estimation based on may assumptions. The methodology adopted for this assessment leaves much to be desired. However, with available resources and infrastructure, the laborious exercise and efforts gone into such estimation will certainly help in future for more quantified & better evaluation of the management practices.

PART-II
FUTURE MANAGEMENT DISCUSSED AND PRESCRIBED

CHAPTER - X
BASIS OF PROPOSALS

10.1 GENERAL CONSIDERATION:

The National Forest Policy 1988 emphasizes highest priority to the environmental role of forests, forests should be managed priority wise to maintain environmental stability through preservation and whenever necessary by restocking / reafforestation of depleted forests, increasing the productivity of forests to meet the needs of essential goods and services which the forest provide, should not be managed as a source of revenue but should be conservation oriented with the active involvement of local stake holders specially women and poor people those who are living in and around the forests.

10.2 GENERAL OBJECTS OF MANAGEMENT:

The results of the past management do not indicate considerable increase in density of forest and area of forest cover.Rather degradation of natural forests has dwindled the biodiversity of the tract. This is due to different form of biotic pressure and inadequate implementation of out going working plan prescriptions like on protection, eco-restoration, plantation, silvicultural operation, NTFP and wild life management. Hence the thrust of management strategy has to be on conserving and restocking the forest for maintaining the ecological balance with active participation of the stake holders in the process of regeneration and development. The general objects of this plan are as follows.

(i) To prevent further degradation of the forests by regulating felling of trees and giving more emphasis on conservation and protection of the existing flora and fauna.

(ii) To maintain permanent closed canopy on the hill slopes and catchments of rivers and reservoirs to check soil erosion, to regulate water yields and maintain hydrological balance.

(iii). To restock the barren, degraded and unproductive area through appropriate technique and prescriptions.

(iv) To improve the composition and productivity of these forests by increasing investments and scientific management.

(v) To conserve the wildlife resources in the tract of the Division pun and help to enrich the biodiversity.

(vi) To meet the requirement of fuel wood, small timber and other non timber forest produce needs of the local people in keeping with the aforesaid environmental imperatives.

(vii) To provide opportunities for sustainable livelihood security to the people depends on forests living in and around.

(viii) To create massive peoples movement with the involvement of women and particularly weaker sections of the society for efficient utilization. of forest products and minimizing pressure on existing forests.

10.3 METHODS OF TREATMENT TO BE ADOPTED, INDENTIFIED FOREST OR CROPS

There is general degradation of the forest for various forest produce mostly for fire wood, small timber and other timber during the last plan period. The human population and cattle population have increased many folds during this plan period. The demand for supply of fuel, fodder, bamboo, agricultural small timber, valuable timber, grazing lands have increased tremendously. There is wide gap between supply and demand. The demand of land for landless laborers, marginal farmers leads to encroachment of forest land. The lack of adequate fodder and water leads to dependence of the wild animals on village grazing lands and village ponds respectively and ultimately poaching of wild animals and spreading of disease takes place.

It is high time to protect the existing forest with involvement of the villagers dwelling in the villages adjoining to forest areas and in the vicinity of forest and proper planning is to be devised in revision of this plan for protection of existing forest, so that people will protect forest for their survival. Many patches of peripheral R.F. areas were entrusted to villagers for protection and rendering usufruct rights to them by formation of V.F.C. Many resolutions came into effect for Joint Forest Management plan later on.

Thus, in this changed situation, the treatment proposed in the revision should commensurate with these requirements. As seen some blocks have good growth which require silvicultural operations to further boost the existing stock by thinning and canopy manipulation, some blocks require congestion removal through thinning to create condition for better and adequate natural regeneration, some blocks further needed complete protection from biotic interference with active participation of local people, some area needed plantation measure beside thinning or harvesting of old existing plantation. Again after the decontrol of most of the NTFP items and transfer of their rights of collection and disposal to the local bodies, there is necessity of going in for efforts to increase the productivity of all such NTFP items so as to gain the confidence and cooperation of the local masses in the process of improvement of the forest.

10.4 CONSTITUTION OF WORKING CIRCLES:

The revised plan includes all 65 nos of RF, 217 nos VF and 04 nos PF area over an area of 99755.50 ha. (RF-98152.86 ha, VF-1478.18 ha & PF-124.46 ha). As per recommendatation of the Working Plan Committee, the following Working Circles have been constituted for the management of forests.

1 .	Selection Working Circle	15,271.29 Ha
2.	Eco-Restoration Working Circle	35,448.66 Ha.
3.	Plantation Working Circle	21,916.09 Ha.
4.	Protection Working Circle	27,119.59 Ha.
5.	Bamboo (OL) Working Circle	7,966.61 Ha.
6.	Wild Life Management (OL) Working Circle	99,755.50 Ha.
7.	NTFP (OL) Working Circle	99,755.50 Ha.
8.	Joint Forest Management (OL) Working Circle	38,193.80 Ha.

10.5. Reasons for Constitution of Working Circle:

10.5.1. **Selection Working Circle:**In this working circle an area of 15,271.29 ha allotted which includes pure sal forest in plain area and miscellaneous forest in the hilly terrain having various age groups. 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. The regeneration status is adequate. The area, which was allotted to the Selection Working Circle in outgoing plan, has been disturbed. The degraded area of the out going working circle has been excluded and areas having good density from outgoing Eco-Restoration Working Circle have been included in the revise plan.

10.5.2. **Eco-Restoration Working Circle:** The area of the outgoing plan has been more or less adopted. Total area allotted is 35.448.66 ha. Since the Division has sustained degradation, the continuation of the Working Circle is essential. 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, 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 Working Circle is constituted for increasing the number of growing stock by artificial regeneration through gap planting and soil moisture conservation measures.

10.5.3 **Plantation Working Circle**: An area of 21,916.09ha as per plantation record has been allotted to this Working Circle. These conists of existing plantation and new area proposed. The working circle is continued as still there are number of blank patches where artificial regeneration can be made to increase the growing stock. All degraded area with blank patches is included in this Working Circle. Plantation by clearing existing vegetation is discouraged. Only in the blank area, plantation of suitable species has been prescribed. Also the working circle is essential for maintenance and tending operation of the existing old plantation.

10.5.4. **Protection Working Circle:** This is a new working circle where the eco-fragile area like catchment area of reservoirs, river, high steep area, heavy biotic interference area etc. have been included. The area allotted to this working circle is 27,119.59 Ha carved out from the Eco-Restoration Working Circle and area of Selection Working Circle of outgoing working circle coming under Tiger Landscpe area has been included. This is kept independent to give more importance to the area for protection and to restore the degraded growing stock and to keep the tiger and elephant movement area inviolate and undisturbed.

10.5.5. **Bamboo (Over lapping) Working Circle**: An area of 7966.61 ha of bamboo bearing forest has been allotted to this Working Circle without disturbing any area statement of the outgoing working plan. Bamboos occur as an under story and the area included in Behera's Plan has not been disturbed. The bamboo area has been drastically degraded due to over exploitation, illicit cutting and collection of edible '*Karadi* '. There is need of restocking of the bamboo by scientific harvesting and proper silviculture operation.

10.5.6. **Non Timber Forest Produce (Over lapping) Working Circle**: An area of 99,755.50 ha have been allotted to this Working Circle. This Working Circle overlaps the entire forest area. The economy of the local inhabitant depends to a large extent on forest produce. Good quality and quantity of non timber forest produce are available in the locality. The method adopted for collection,

storage is traditional one. These are not collected and stored in proper systematic manner. This working circle is need for potential study of the NTFP, scientific harvesting, proper storage, value addition, marketing including fixation minimum procurement lprice for the primary collectors so that income of the forest fringe village can be improved.

10.5.7. **Joint Forest Management (Over lapping) Working Circle**: An area of 38,193.80 ha as per JFM record has been allotted to this Working Circle. During the year 1993 vide resolution No.16700/ F & E dt.03.07.1993 the Government have initiated Joint Forest management concept involving the forest fringe villagers for management of the forest. The Division has 326 no of VSS and area assigned to them for protection is 38,193.80 ha. 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. The main objective of the working circle is to create more awareness among the people for protection of the forest and wild life through formation of more and more VSS and also to give some source of income through engagement in forestry operation and other developmental activities.

10.5.8**. Wildlife (Over lapping) Working Circle**: This over lapping Working Circle has been constituted to prescribe management technique for the improvement of the habitat of wildlife an area of 99,755.50 ha has been allotted to this Working Circle. The population of other wildlife is also decreasing due to habitat destruction, poaching and forest fire. Due to degradation of forest man animal conflict especially man-elephant conflicts have become regular phenomenon. All animals are entering to the human habitation causing damaged to the property and life. It is now necessary to protect the existing wildlife and create favorable condition for their multiplication. The working circle is aimed at proper protection of the wild life and their habitat through enforcement, awareness to the people and taking up the development activities of the forest area.

10.6 FOREST BLOK WISE ALOCATION OF AREA TO DIFFERENT WORKING CIRCLE:

This plan covers 65 RF blocks. All the blocks and compartments have been shown in the management, stock and other maps. No new compartments are created. The compartment boundaries are based on permanent features like ridges/nallahs, forest roads, village boundaries etc.

Allocation of different forest blocks and compartments into the prescribed working circles is summarized in **Table 10.1.**

The abstract of different blocks allotted to various working circles range-wise is given in the **Table: 10.2.**

The details of each compartment and block wise area allotted to different working circles are given in the **Aannexure-XXI.**

TABLE-10.1 ALLOTMENT FOREST BLOKS TO WORKING CIRCLES									
Sl. No	**Range**	**Name of the R.F**	**Area adopted in the WP**	**Selection Working Circle (in Ha.)**	**Eco-Restoration w.c**	**Plantation WC**	**Protection W.C**	**Bamboo (OL) W.C**	**Remarks**
(1)	(2)	(3)	(4)	(5)	-6	(7)	(8)	(9)	-10
1	**Dhenkanal Range**	Belabania	603.80	0.00	563.80	40	0		**NTFP Working Circle, WL Working Circle & JFM Working Circle Overlap the entire Working Plan area and hence not shown separately.**
2		Charkhola	808.36	0.00	80.76	639.20	88.40		
3		Ghantabaja	1274.4	0.00	405.66	515.00	353.74		
9		Godabole	436.60	0.00	7.60	429.00	0		
5		Jaripal	289.80	0.00	151.80	138.00	0		
6		Kankadahada	380.40	0.00	40.40	340.00	0		
7		Korian	387.70	0.00	387.70	0.00	0		
8		Kotaberena	1039.70	0.00	479.70	560.00	0		
9		Matharagadi	285.31	0.00	55.31	30.00	200.00		
10		Matiamundia	1110.90	0.00	725.90	385.00	0		
11		Mayuri	957.11	0.00	477.34	479.775	0		
12		Megha	603.90	0.00	192.90	411.00	0		
13		Nimidha	160.70	0.00	37.70	123.00	0		
14		Patapuri	506.70	0.00	204.90	301.80	0		
15		Saptasajya	2096.75	0.00	504.37	838.60	753.78		
16		Sulia	259.00	0.00	259.00	0.00	0		
17		Tamanda	566.17	0.00	265.17	301.00	0		
18		Kapilas(Part)	1820.13	0.00	0.00	0.00	0.00		
18			**13587.43**	**0.00**	**4840.01**	**5531.38**	**1395.92**		
19	**Kapilas**	Kapilas (Part)	9042.01	0.00	0.00	0.00	51.67		
		Ramei	1877.81	0.00	1237.01	640.80	0.00		
			10919.82	**0.00**	**1237.01**	**640.80**	**51.67**		
	Sadangi	Kapilas(Part)	1749.12	0.00	0.00	0.00	0.00		
20		Aswakhola	2464.62	0.00	1469.20	201.00	794.42		
21		Baliposi	267.10	0.00	0.00	40.00	227.10		
22		Bega	569.80	0.00	377.80	192.00	0.00		
23		Gondia	926.80	0.00	696.80	230	0.00		
24		Kankira	474.30	0.00	374.30	100	0.00		
25		Lahada-A	1339.60	0.00	489.60	600	250		
26		Lahada-B	2428.00	0.00	1958.00	470.00	0.00		
27		Nischinta	696.90	0.00	0.00	0.00	696.9		
28		Raigoda	363.40	0.00	243.40	120	0.00		
29		Raitola	535.00	0.00	175.00	360.00	0.00		

30		Rupabalia	961.20	0.00	797.20	164.00	0.00		
31		Sadangi A	60.70	0.00	20.70	40.00	0.00		
32		Sadangi B	448.00	0.00	78.00	370.00	0.00		
			13284.54	**0.00**	6680.00	2887.00	1968.42		
33	**K.Nagar East Range**	Birasal	1362.90	0.00	1292.90	70	0		
34		Jiridamali	815.06	0.00	565.06	250	0		
35		Moulabhanja	1367.48	0.00	701.50	665.98	0		
36		Ranjagarh	13822.10	7140.92	535.38	427	5718.8		
			17367.54	**7140.92**	**3094.84**	**1412.98**	**5718.8**		
37	**Bhuban**	Balibo	659.70	0.00	230.70	229.00	200		
38		Bhairpur	490.50	0.00	0.00	365.00	125.5		
39		Bhuban	457.30	0.00	0.00	330.00	127.3		
40		Dholapada	372.30	0.00	192.30	130.00	50		
41		Tipiloi	947.00	0.00	277.00	470.00	200		
42		Sunajhari (Part)	1278.85	0.00	781.85	297.00	200		
			4205.65	**0.00**	**1481.85**	**1821.00**	**902.8**		
	K.Nagar West Range	Sunajhari (Part)	1511.15	0.00	1094.71	25.00	391.436		
43		Anlabereni	502.20	0.00	342.20	160.00	0		
44		Kadalipal	246.00	0.00	61.00	35.00	150		
45		Kankili	1786.30	0.00	1546.30	240.0	0		
46		Machhia	279.00	0.00	60.00	219	0		
47		Madhi	457.70	0.00	217.70	40.00	200		
48		Nadabir	145.70	0.00	0.00	0.00	145.70		
49		Siarimalia	1405.10	0.00	1119.10	286.00	0		
50		Sundarkhol	2206.42	0.00	1493.74	0.00	712.676		
51		Suniamaru	1855.20	0.00	1320.20	535.00	0		
52		Anantapur(Part)	10699.102	3419.599	914.82	681.997	5682.689		
			21093.87	**3419.599**	**8169.77**	**2222.00**	**7282.501**		
	Mahabirod	Anatapur(Part)	8116.998	2376.80	1000.486	681.283	4058.427		
53		Barabank(N)	433.80	0.00	118.800	165.00	150		
54		Barabanka(S)	974.50	0.00	429.500	545	0		
55		Dolia	1766.23	0.00	1352.230	414	0		
56		Khalpal	692.90	0.00	417.900	275	0		
57		Talcher Boarder	784.30	0.00	159.300	275.00	350		
			12768.73	**2376.80**	**3478.216**	**2355.283**	**4558.427**		
58	**Hindol Range**	Ambithi	447.60	0.00	323.60	124.00	0		
59		Bompa	1653.60	0.00	1353.60	300	0		
60		Hitinda	705.79	0.00	470.79	235.000	0	705.79	
61		Kai	2266.30	0.00	1203.90	863.213	200		

62		Kandhara	11172.94	2333.973	884.11	3113.814	4841.049	7260.823	
63		Kansara	50.60	0.00	40.42	10.18	0.00		
64		Nandania	527.70	0.00	207.70	120.00	200		
65		Patalo	660.47	0.00	505.47	155.00	0		
			17485.00	**2333.97**	**4989.59**	**4921.207**	**5241.05**		
		Total	**110712.58**	**15271.29**	**33970.468**	**21791.63**	**27119.59**	**7966.613**	
		VF (217 nos)	1478.18	0	1478.18	0	0		
		PF (4no)	124.46	0		124.46	0		
		Grand Total	**1,12,315.22**	**15271.29**	**35,448.648**	**21916.09**	**27119.59**		**WL/NTFP-99,755.50, JFM-38,193.80**

N B: Out of total Kapilas RF area of 12,611.26 Ha.an area of 12,559.59 Ha has been declared as sanctury, hence no prescription made and area not included in any WC.

TABLE-10.2	**ALLOTMENT OF WC AREA IN VERIOUS RANGES**							
RANGES	**AREA (IN HA.)**	**SELECTION WC**	**ECO-RESTRORATION WC**	**PLANTATION WC**	**PROTECTION WC**	**BAMBOO (OL) WC**	**NTFP,& WL (OL)WC**	**JFM (OL)WC**
Dhenkanal	11767.30	0.00	4840.01	5531.38	1395.92	0.00	11767.30	5147.22
Kapilas	1929.48	0.00	1237.01	640.80	51.67	0.00	1929.48	3843.00
Sadangi	11535.42	0.00	6680.00	2887.00	1968.42	0.00	11535.42	5637.04
K.Nagar (E)	17367.54	7140.92	3094.84	1412.98	5718.8	0.00	17367.54	5735.66
Bhuban	4205.65	0.00	1481.85	1821.00	902.80	0.00	4205.65	1908.50
K.Nagar (W)	21093.87	3419.599	8169.77	2222.00	7282.501	0.00	21093.87	6749.54
Mohabirod	12768.73	2376.80	3478.216	2355.283	4558.427	0.00	12768.73	3180.98
Hindol	17485.00	2333.97	4988.78	4921.20	5241.05	7966.61	17485.00	5992.44
Total (RF area)	**98152.99**	**15271.29**	**33970.48**	**21791.63**	**27119.59**	**7966.61**	**98152.99**	**38,193.80**
VF area	**1478.18**		**1478.19**				**1478.19**	
PF area	**124.46**			**124.46**			**124.46**	
G. TOTAL	**99,755.50**	**15271.29**	**35448.648**	**21916.09**	**27119.59**	**7966.61**	**99755.50**	**38,193.80**

10.7 COMPARATIVE AREA OF EXISTING AND PROPOSED WORKING CIRCLES

A comparative view of the facts stated above in the past system of management and area alloted to future prescriptions in proposed plan is given below in the **Table-10.3**

TABLE-10.3 COMPARATIVE AREA OF EXISTING AND PROPOSED WORKING CIRCLES

Working Circles	Area as per outgoing WP (in Ha)	Area proposed in new WP (in Ha)	Remarks
1. Selection Working Circle	28,861.04 Ha	15,271.29 Ha	(i) Excluded from SWC-12655.25 ha (Anatapur RF-10 comptt.-4806.21,Ranjagarh RF-11 comptt.-4815.51,Kandhara RF- comptt.-3033.53) being coming under Tiger landscape area. (ii) Excluded from SWC-1104.83 ha (Anantapur-C4-426.556, Kandhra-C1-409.556 , C3- 268.72) being degraded. (ii) Excluded Plantation area 272.00 Ha.- raised in SWC area during last plan period(Antapur RF C13-40,C20-20, Kandhra RF-C12-102,C15-110) (iii) RWC area included in SWC- Kandhara C2-442.342 being good crop density.
2.Eco-Restoration Working Circle	64,785.06 Ha	35,448.66 Ha. (RF-33,970.48 + VF-1478.18)	(i)Transferred to other WC-18,418,69 ha. (SWC -Kandhra RF-C2 – 442.342 ha., Pr WC – 14527.942, Pl. WC – 3448.406 ha.) (ii) Kapilas Sanctuary area excluded – 12,559.59 ha. (iii)SWC area included – Kandhra RF-C3-163.72 ha. (iv)Included 217 no notifaied VF area -1478.18 ha.
3. Plantation Working Circle	17,066.355 Ha (Old-14157.188 + Proposed - 2909.167)	21,916.09 Ha (Old-19,131.09 +Proposed 2785.00)	(i)Total Plantation area = 22,746.46 ha. (Old – 14,157.188 ha + Raised during last plan – 5,804.278 ha including CA. + Newly proposed area – 2785.00 ha) (ii) Area excluded – 830.37 ha. (Old – 510.37 ha. + During last plan-320.00 ha.) being inside Kapilas Sanctuary.
4. Protection Working Circle	Not included	27,119.59. Ha	(i) From SWC- 13,596.37 ha (Tiger landscape area-12655.25, outside T L area-941.112) (ii) From RWC – 13,523.22 ha.
5. Bamboo(OL) Working Circle	7,966.613 Ha	7,966.613 Ha	Same area of out going plan taken.
6. WL (OL) Working Circle	Entire Division	99,755.50 Ha	Entire Working plan area taken...
7. NTFP (OL) Working Circle	110,712.45 Ha	99,755.50 Ha	Entire Working plan area taken
8. J. F. M. (OL) Working Circle	Not included	38,193.38 Ha	Assigned area of 326 no of registered VSS for protection
Total	**1,10,712.456 Ha**	**99,755.50 Ha**	

N. B. Kapilas RF having area of 12,559.59 Ha has been declared as Sanctuary and the same has not been included in any circle in the revised plan.

. 10.8 PERIOD OF WORKING PLAN AND NECESSITY FOR INTERMEDIATE REVISION:

This Working Plan has been prepared for a period of 10 years i.e. form 2016-17 to 2025-26. The prescriptions made in this plan may be reviewed after 5 years and if so required the Regional Chief Conservator of Forests in consultation with the Chief Conservator of Forests (P&SM), shall submit a proposal with that effect for approval of the competent authority.

The working plan year shall be reckoned from 1st July to 30th June of the following calendar year.

CHAPTER – XI

SELECTION WORKING CIRCLE

11.1 GENERAL CONSTITUTION OF WORKING CIRCLE

Three forest blocks namely Ranjagarh, Anantapur and Kandhara alloted to SWC in outgoing working plan have now been allotted to the Selection Working Circle in the revised working plan.However some area of Anantapur and Kandhara R.F. which have become degraded due to heavy biotic interference, have been excluded and new area of eco-restoration having good density of crop have been included in this Circle. As pointed out by the Regional Chief Conservator of Forests-Cum-Field Director, Satkosia Tiger Reserve, Angul during the discussion of 2nd PWPR meeting of the Division in the Working Plan Committee Meeting, the some compartments of Ranjagarh, Anantapur and Kandhara R.Fs coming under Tiger landscape area (frequent movement area of tiger) included in Selection WC in the out going plan have been excluded from SWC in the Revised Plan. As per the demarcation of the tiger landscape area and ground truthing report of the DFO, Dhenkanal Division, 27 no compartments over an area of 12,655.25 ha (AnantapurRF- 10 no comptts- 4806.212 ha, Ranjagarh RF – 11 no comptts -4815.51 ha and Kandhara RF – 6 no comptts. – 3033.532 ha) those coming under Selection WC in the out going plan is kept out side Selection WC in the Revised Plan. The total area of this working circle is now 15271.29 ha. It constitutes 15% of the total Working plan area of the Division. In most of areas, the density is more than 0.4. Some areas with density less than 0.4 have been included in this working circle since these bear some matured to over-matured trees.

This working circle possesses Sal and other miscellaneous species above exploitable diameter for exploitation. The vegetation characteristics differ considerably in all the three blocks. In Ranjagarh the proportion of Sal is high with a good number of pure patches of Sal. In Anantapur the proportion of Sal is less than other miscellaneous species whereas Kandhara is composed mostly of miscellaneous species. The basis of allotment of forest blocks to the Selection Working Circle is the detailed analysis of crop condition, which has been dealt in Chapter 6.

During the survey it was observed that in Ranjagarh and Anantapur forest blocks some encroachment has taken place. Some area of Khandhar R.F was diverted to Sapua Badjhara Irrigation Project. These three forest blocks face biotic interference. However, natural regeneration is also taking place in these RFs. The boundary lines and boundary pillars have not been maintained. Large number of people from near by villages smuggle timber from these blocks. There is severe degradation of the crop in these forest blocks. Prescriptions will be made for salvaging of dead, dying, diseased trees and left over smuggled materials. This will reduce fire hazards and generate revenue. Prescription for protection will be made in this working circle

11.2 GENERAL CHARACTER OF VEGETATION

The detailed description of the vegetation has been given in Chapter 2. The Northern Indian Tropical Moist Peninsular Sal Forests are generally found in Ranjagarh and some portion of Anantapur and Kandhara RF. Among the three forest blocks included in this working circle, the quality of Sal in Ranjagarh is better with general site quality of II/III. Anantapur and Kandhara

contain mostly pole crops and inferior quality of Sal (III/IV). The Northern Indian Tropical Moist Mixed Deciduous Forest and Dry Deciduous Forest are mostly found in Anantapur and Kandhara Reserved forests. Moist Bamboo Brakes are found in Kandhara RF. These forests have been subjected to biotic interference like illicit felling, grazing and repeated fire over the years resulting in numerous blank patches. Regeneration status is average. Encroachments are seen in all the blocks, which is most severe in Ranjagarh.

The forest allotted to this Working Circle fall mainly under Tropical Moist Peninsular Sal Forests. The regeneration is adequate but fire hazard is limiting factor for the establishment of seedlings. The common associates of sal are *Terminalia tomentosa, Anogeissus latifolia* and *Syzygium cumunii* etc. The soil in these localities is clayey loam or alluvium. Sal constitutes 40 to 50 percent of standing crop and the crop density varies from 0.4 to 0.8. Due to occurrence of annual fire and severe biotic pressure, establishment of seedlings is poor. In general, the quality of Sal is III. The bamboo occurs extensively in all three RF. Among the bamboo species, *Dendrocalamus strictus* (Salia bamboo) is the most important species available in these blocks.

11.3. FELLING SERIES AND CUTTING SECTIONS

There are three blocks in this working circle. Three Felling Series (FS) have been constituted, namely Anantapur FS in Kamakhyanagar (West) & Mohabirod Range, Ranjagarh FS in Kamakhyanagar (East) Range and Kandhara FS in Hindol Range and each of which has further been subdivided into 10(Ten) annual coupes for treatment, for better implementation of the prescription and administrative convenience restricted to within the range jurisdiction to which the Forest Blocks belong.

11.4. BLOCKS AND COMPARTMENTS:

During the last plan, exploitation of mature trees was much less than prescribed in the working plan. It revealed during field inspection that fresh enumeration of compartment and coupe areas is required to assess the actual potential of exploitable trees. The tentative allotment of areas under this working circle in three blocks in the current plan is as follows:

TABLE-11.1 BLOCKS AND COMPARTMENTS:

Sl. No.	Name of the Range	Name of the Forest Block	Total area in Ha	Area included in WorkingCircle
1	Kamakshyanagar (East)	Ranjagarh	16,414.63	7140.92
2	Kamakshyanagar (West)	Anantapur	10,699.102	3419.599
3	Mohabirod	Anantapur	8,116.889	2376.80
4	Hindol	Kandhara	11,172.94	2333.97
	TOTAL		**46,403.361**	**15271.29**

TABLE-11.2 Allotment of Blocks & Compartments to Different Selection Felling Series					
Name of the Range	**Name of the Felling Series**	**Name of the Forest Block**	**Legal Status**	**Compartments No.**	**Total area in (Ha.)**
Kamakshyanagar (East)	Ranjagarh	Ranjagarh	R.F	1 to 3,6,11,12,18,23,25 to 33 = 17 Nos	7140.92
Kamakshyanagar (West)	Anantapur	Anantapur	R.F	11,13,14,16 to 20 = 8 Nos	3419.599
Mohabirod	Anantapur	Anantapur	R F	21 to 24,29& =05 Nos	2376.80
Hindol	Kandhara	Kandhara	R.F	2,6,9,12,15, 20, = 06Nos	2333.97
Total	**3Nos**	**3 Nos**	**RF**	**36Nos**	**15271.29**

11.5. SPECIAL OBJECTIVES OF MANAGEMENT:

The special objectives of the management of the Selection Working Circle are within the scope of general objectives of the management of the entire division. These are as follows:

1. To conserve and improve the forest cover by soil and water conservation method following the principles of watershed development.
2. To maintain and improve the biodiversity of the forest blocks.
3. To build up the growing stock and improve stand structure by silvicultural operations.
4. To establish natural regeneration of indigenous species.
5. To obtain the yield on sustainable basis to cater the need of the people subject to environmental and silvicultural availability and lifting of ban on green felling imposed by the State Government.
6. To remove the mature and silviculturally available trees on sustainable basis before they become unsound.
7. To build up the growing stock and improve the stand structure and encourage natural regeneration by taking suitable silvicultural operations with emphasis on soil and water conservation measures.

11.6. ANALYSIS AND VALUATION OF THE CROP:

5% enumeration of trees of different girth classes varying from 15 cm to 180 cm and above with 30 cm interval was carried out in the last plan. Analysis of result revealed that Sal was the principal species in Ranjagarh, whereas in Anantapur Sal was present but its associates like Dhaura, Asan, Jamu, Mundi, Kurum, Kasi, Bandhan, Mai, Kangada were predominant. Kandhara contains purely miscellaneous species with negligible Sal.

The regeneration is found to be Deficient to fair except in some compartments of Ranjagarh where the Sal regeneration is moderate to good. The reasons for poor regeneration status is due to repeated fire, sweeping of forest floor for seed collection, grazing and trampling by cattle. The details of the regeneration survey are given in the chapter 2. It has been seen from enumeration result that the number of trees of class I (exploitable girth class) is disproportionately lower than the Class II (pre exploitable girth class). This is due selective illicit felling of healthier approach class trees. The average density of the crop varies from 0.4 to 0.6.

11.7. SILVICULTURAL SYSTEM

The Selection system will be adopted with emphasis on conservation, sustainable production and stability of the ecosystem. Conservative felling or no felling has been prescribed in eroded and steep hill slopes and along nallah beds. Marking is therefore a very important

exercise, requiring judicious application of skill. It should therefore be carried out by a Range Officer under proper supervision. There will be post felling operation like SSO, climber cutting, SNC, control of biotic factors, boundary and compartment line maintenance etc.

11.8. ROTATION AND CONVERSION PERIOD/FELLING CYCLE:

As per Letter No. 13-FCWP/BH/KOLHAN, Dated 13.01.1997 of the Chief Conservator of Forests (Central), Ministry of Environment & Forests, Govt. of India, Regional Office, Bhubaneswar, the silvicultural rotation period of 120 years is fixed for all the species.

In the last plan there was no presciption for exploitation followed by any cultural operation leading to quite open in places and show congestion and suppression in elsewhere. Also due to ban of green tree felling, the annual coupe work was stopped since 1990. This has resulted dearth of trees of higher girth classes, a preponderance of middle age classes. Therefore, the felling cycle has been fixed to 10 years, which synchronizes to the Plan period. In case of a longer felling cycle the crop will remain unattended for over a long period of time. With a shorter felling cycle improvement operations can be taken up at short intervals to bring back the forests to nearly normal conditions at the earliest.

11.9. EXPLOITABLE DIAMETERS

The parameters that have been taken into consideration for fixing the exploitable girth for Sal and other different species in this circle are as follows:

- The annual increments of the trees,
- The size after which the unsoundness develops
- The market demand and nevertheless the stand table available for different species.

The quality of the Sal forests varies from III to IV and the increment put up by the trees after 150 cm girth is negligible. So also, the unsoundness starts after attending the diameter of 40 cm. The market demand for Sal is maximum for logs of 120 cm to 150 cm for building materials.

Thus considering the silviculture and market demand of the different tree species, the following exploitable girth at breast height is fixed.

TABLE-11.3 EXPLOITABLE GIRTH AT BREAST HEIGHT

Species	Exploitable Girth At Breast Height
1. Sal, Piasal, Sissoo, Gambhar, Halanda, Kasi, M. Mundi, Asan, Mai, Kusum, Jamun.	120 cm & above
2. Bandhan	90 cm and above
3. Miscellaneous	120 cm& above

11.10 CALCULATION OF YIELD AND ITS REGULATION

11.10.1 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 Ranjagarh, Anantapur and Kandhara forest blocks.

(i) The exploitable (Selection) trees already exist and are being recruited every where (and not in any particular compartments only) and that fellings pass regularly through the forests in consecutive annual coupes in a felling cycle of 10, 15, 20, 25 or 30 years.

(ii) The basic object of management is to ensure, as far as possible, sustained yield of exploitable trees above the exploitation limit at every felling cycle.

(iii) 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) will not decrease for quite a few decades.

(iv) 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 fellings come round again.

11.10.2 According to the Smythies safeguarding formula the number of Class - II trees (X) per hectare that pass into Class - I within the felling cycle is determined by following formula.

$$X = \frac{F}{T} (II - Z\% \text{ of } II) \quad \text{----------} \quad (1)$$

Where

II = No. of trees in pre exploitable girth class or approach class (90-120 cm for Sal and others; 60-90 cm for Bandhan.)

X = Number of trees in approach class, which passes into the exploitable class.

F = Felling cycle (10 years)

T = Time period in years that takes approach class to pass into exploitable class (40 years)

Z = Percentage of Class II trees that do not pass into class I in 'T' years, due to mortality or removal in thinnings etc. It is taken 45%

11.10.3 The percentage of the trees available for exploitation (Y) is calculated as follows.

$$Y = \frac{X}{(I + X / 2)} \times 100 \pm A \quad \text{----------} \quad (2)$$

Where A = Arbitrary value to get the round figure of Y

X = Number of trees in approach class which passes into the exploitable class

I = Number of trees already existing in the exploitable class.

If the value of 'X' as in equation (1) is substituted in the equation (2) the resulting equation is as follows

$$Y = \frac{2\ F\ II\ (100 - Z)}{200\ I\ T + F\ II\ (100 - Z)} \times 100 \pm A \qquad \text{----------} \qquad (3)$$

11.10.4 The value of 'T' is 36 years for average site quality III in respect of irregular Sal forests of Ramnagar Forest Division. This is slightly less than that obtained from the yield table. The values of 'T' and 'Z' as per yield table are 39 years and 43 %. Since it is hill forests, the value of 'T' and 'Z' is taken as 40 years and 45 %. Substitution of these values of 'T' and 'Z' in equation (3), we get.

$$Y = \frac{1100\ II}{8000\ I + 550\ II} X\ 100 \pm A$$

Or,

$$Y = \frac{22\ II}{160\ I + 11\ II} X\ 100 \pm A$$

11.10.5 The enumeration of Ranjagarh, Anatapur & Kandhra Felling Series included in Selection WC have been completed. The values of class I and Class II for all the three Felling Series and consequent yield are as per Table 11.4, 11.5 & 11.6. The final yield will be regulated as per table 11.7 and sequence of coupe wise felling seriese as per Table-2.8. The average percentage of removal of Sal will be 22 %, which is equal to 2 trees per ha and that of others will be 25%, which is equal to 2 trees per ha. An additional 25% trees would be retained as a safeguard measure against biotic pressure and for conservation purpose. After retaining 25% the total number of trees available for marking will be limited to 4 trees per ha.

Table: 11.4 YIELD CALCULATION OF VARIOUS FELLING SERIES									
RANJAGARH FELLING SERIES									
Coupe No.	**Compt. No.**	**Number of trees**				**Calculation as per S S Formula**		**After Reduction by 25%**	
		Sal		**Others**		**Sal**	**Others**	**Sal**	**Others**
		I	**II**	**I**	**II**				
I	27	44.71	24.91	35.85	21.77	Y=9% Limit of tree per ha =2	Y= 10% Limit of tree per ha =2	Limit of tree per ha =1	Limit of tree per ha =1
	28	35.61	28.62	27.74	24.82				
	Total	80.32	53.53	63.59	46.59				
	Avg.	40.16	26.77	31.80	23.30				
II	26	28.21	15.52	27.24	18.95	Y=7% Limit of tree per ha =2	Y= 9% Limit of tree per ha =2	Limit of tree per ha =1	Limit of tree per ha =1
III	25	46.01	32.14	48.97	35.14	Y=9% Limit of tree per ha =3	Y=7% Limit of tree per ha =3	Limit of tree per ha =2	Limit of tree per ha =2
IV	6	4.69	0.68	8.26	8.48	Y=8% Limit of tree per ha = 1	Y=11% Limit of tree per ha = 1	Limit of tree per ha =0	Limit of tree per ha =1
	18	1.95	3.15	17.23	12.27				
	Total	6.64	3.83	25.49	20.75				
	Avg.	3.32	1.92	12.75	10.38				
V	1	1.74	4.65	7.78	17.43	Y=6% Limit of tree per ha = 1	Y=12% Limit of tree per ha = 2	Limit of tree per ha =1	Limit of tree per ha =2
	2	12.26	13.26	28.07	23.62				
	3	53.95	11.89	25.94	17.15				
	Total	67.95	29.80	61.79	58.20				
	Avg.	22.65	9.93	20.60	19.40				
VI	11	7.20	6.63	4.64	10.07	Y=14% Limit of tree per ha = 2.0	Y=22% Limit of tree per ha = 2.8	Limit of tree per ha =1	Limit of tree per ha =1
	12	11.07	13.0	9.04	14.16				
	Total	18.27	19.63	13.68	24.73				
	Avg.	9.14	9.82	6.84	12.37				
VII	23	8.99	8.69	8.34	16.19	Y=8% Limit of tree per ha = 1	Y=16% Limit of tree per ha = 2	Limit of tree per ha = 1	Limit of tree per ha =2
	31	22.10	10.21	19.70	19.28				
	Total	31.09	18.90	28.04	35.47				
	Avg	15.55	9.45	14.02	17.74				
VIII	30	13.26	8.48	27.99	19.12	Y=8% Limit of tree per ha = 1.4	Y=9% Limit of tree per ha = 3.3	Limit of tree per ha =1.1 or 1	Limit of tree per ha =2.5 or 3
IX	29	25.25	36.24	6.21	10.49	Y=18% Limit of tree per ha = 3	Y=21% Limit of tree per ha = 2	Limit of tree per ha =3	Limit of tree per ha =1
X	32	32.68	13.42	23.94	24.46	Y=6% Limit of tree per ha = 2.0	Y=16% Limit of tree per ha = 4.1	Limit of tree per ha =1.5 or 2	Limit of tree per ha =3.1 or 3
	33	22.81	12.80	9.26	13.70				
	Total	55.49	26.22	33.02	40.16				
	Avg.	27.75	13.11	16.06	20.08				
Average						**Y=9.3%, Tree=3.1**	**Y=13.3%, Tree=3.4**	**Tree limit=2.4 or 2**	**Tree limit=2.8 or 2**

Table:11.5 YIELD CALCULATION OF VARIOUS FELLING SERIES									
ANANTAPUR FELLING SERIES									
Coupe No.	**Compt. No.**	**Number of trees**				**Calculation as per SSformula**		**After Reduction by 25%**	
		Sal		**Others**				**Sal**	**Others**
		I	II	I	II	**Sal**	**Others**		
I	19	8.54	7.61	2.26	3.48	Y=12% Limit of tree per ha = 1.4	Y=11% Limit of tree per ha = 1.9	Limit of tree per ha =1.1 or 1	Limit of tree per ha =1.4 or 1
	20	8.13	6.79	22.73	16.94				
	Total	16.67	14.4	24.99	20.42				
	Avg.	8.34	7.2	12.50	10.21				
II	21	8.73	16.62	3.60	7.93	Y=23% Limit of tree per ha = 3.9	Y=26% Limit of tree per ha = 2.0	Limit of tree per ha =2.9 or 3	Limit of tree per ha =1.5 or 2
III	16	5.63	31.17	12.44	21.51	Y=55% Limit of tree per ha = 11.7	Y=21% Limit of tree per ha = 4.9	Limit of tree per ha =8.8 or 9	Limit of tree per ha =3.7 or 4
IV	17	37.92	27.29	14.26	16.06	Y=10% Limit of tree per ha = 3.4	Y=11% Limit of tree per ha =2. 4	Limit of tree per ha =2.6 or 3	Limit of tree per ha =1.8 or 2
	18	10.89	10.47	15.65	10.52				
	Total	48.81	37.76	29.91	26.58				
	Avg.	24.41	18.88	15.00	13.29				
V	14	12.55	9.40	30.43	15.56	Y=11% Limit of tree per ha = 1.1	Y=9% Limit of tree per ha=2. 0	Limit of tree per ha =0.8 or 1	Limit of tree per ha =1.5 or 2
	29	1.08	2.70	3.14	6.99				
	Total	13.62	12.10	33.57	22.54				
	Avg.	6.82	6.05	16.79	11.27				
VI	13	8.58	12.88	11.66	10.98	Y=19% Limit of tree per ha = 2.9	Y=12% Limit of tree per ha = 2.1	Limit of tree per ha =2.2 or 2	Limit of tree per ha =1.6 or 2
VII	11	2.96	5.33	4.25	7.74	Y=22% Limit of tree per ha = 1.2	Y=22% Limit of tree per ha = 1.8	Limit of tree per ha =0.9 or 1	Limit of tree per ha =1.4 or 1
VIII	24	9.28	8.50	22.60	20.70	Y=12% Limit of tree per ha = 1.6	Y=12% Limit of tree per ha = 4.0	Limit of tree per ha =1.2 or 1	Limit of tree per ha =3.0
IX	22	13.69	7.52	21.75	17.14	Y=7% Limit of tree per ha = 1.2	Y=10% Limit of tree per ha = 3.0	Limit of tree per ha =0.9 or 1	Limit of tree per ha =2.3 or 2
X	23	3.47	12.54	5.38	16.59	Y=40% Limit of tree per ha = 3.9	Y=35% Limit of tree per ha = 4.8	Limit of tree per ha =2.9 or 3	Limit of tree per ha =3.6 or 4
Average						**Y=21.1%,Tree=3.2**	**Y=16.9%,Tree=2.9**	**Tree limit=2.5 or 2**	**Tree limit=2.3 or 2**

Table:11.6 YIELD CALCULATION OF VARIOUS FELLING SERIES									
KANDHARA FELLING SERIES									
Coupe No.	Compt.No.	Number of trees				Calculation as per SS Formula		After Reduction by 25%	
		Sal		Others					
		I	II	I	II	Sal	Others	Sal	Others
I	2(P)	0.04	0.32	3.98	10.15	Y=71% Limit of tree per ha = 0.0	Y=30% Limit of tree per ha = 1	Limit of tree per ha =0	Limit of tree per ha =2.02 or 2
II	2(B)	0.04	0.32	3.98	10.5	Y=71% Limit of tree per ha = 0	Y=30% Limit of tree per ha = 2.7	Limit of tree per ha =0	Limit of tree per ha =2.02 or 2
III	6(P)	1.95	2.93	21.33	29.53	Y=19% Limit of tree per ha = 0.65	Y=17% Limit of tree per ha = 3	Limit of tree per ha =0.49	Limit of tree per ha =2
IV	6(B)	1.95	2.93	21.33	29.53	Y=19% Limit of tree per ha = 0.65	Y=17% Limit of tree per ha = 2	Limit of tree per ha =0.49	Limit of tree per ha =2
V	5	0.18	0.60	8.70	19.53	Y=37% Limit of tree per ha = 0.18	Y=27% Limit of tree per ha =5.0	Limit of tree per ha =0.14	Limit of tree per ha =3.8 or 4
VI	9(P)	0.04	0.18	4.99	12.12	Y=47% Limit of tree per ha = 0.06	Y=29% Limit of tree per ha = 3.2	Limit of tree per ha =0	Limit of tree per ha =2.4 or 2
VII	9(B)	0.04	0.18	4.99	12.12	Y=47% Limit of tree per ha = 0.06	Y=29% Limit of tree per ha = 3.2	Limit of tree per ha =0	Limit of tree per ha =2.4 or 2
VIII	15	0.02	1.49	25.70	27.40	Y=68% Limit of tree per ha = 0.54	Y=14% Limit of tree per ha = 5.5	Limit of tree per ha =0.40	Limit of tree per ha =4.1 or 4
IX	20(P)	0.35	0.83	23.54	29.06	Y=28% Limit of tree per ha = 0.20	Y=16% Limit of tree per ha = 6.1	Limit of tree per ha =0.15	Limit of tree per ha =4.6 or 5
X	20(B)	0.35	0.83	23.54	29.06	Y=28% Limit of tree per ha = 0.20	Y=16% Limit of tree per ha = 6.1	Limit of tree per ha =0.15	Limit of tree per ha =4.6 or 5
Average						**Y=NA, Tree=0.0**	**Y =22.5%,Tree=4.1**	**Tree limit = 0.0**	**Tree limit= 3.6 or 2**

Note: In Kandhara felling series it is observed that the tree limit per ha in respect of Sal is less than one (0.51). So it recommended that there should be no felling of Sal in Kandhara felling series and the felling should be restricted to non-Sal species. For Sal only silvicultural improvement is recommended. Hence in the abstract of yield regulation the tree limit for Sal in Kandhara felling series is taken as zero.

Table: 11.7 ABSTRACT OF YIELD REGULATION								
S.No.	Felling Series	No. of Coupes	Area of FS	Allowed % Removal		After reduction by 25% to compensate biotit pressure & conservation Measure Tree Limit Per ha		Total Tree Limit per ha
				Sal	Others	Sal	Others	
1	Ranjagarh	10	5309.83	4.7	5.3	1.0	1.0	2.0
2	Anantapur	10	5796.401	5.2	5.0	1.0	1.0	2.0
3	Kandhara	10	2333.973	NA	7.0	0	1.0	1.0
	Total	**30**	**13440.204**	**9.9**	**17.3**	**2.0**	**3.0**	**5.0**
	Trees available for marking per ha					**2**	**2**	**Ranjagarh/ Anantapur = 4 Kandhara = 2**

11.11. TABLE OF FELLING AND ANNUAL COUPES

11.11.1 The annual coupe shall be worked as per the sequence prescribed in the plan. The Table showing the annual coupes Selection Felling series with its number and the year of felling along with the name of the forest block, its compartment number and area included in the coupe will be prepared and the annual coupes of all felling series will be depicted in the Management Map (scale 1:25,000)

Table-11.8 SEQUENCE OF COUPE WISE FELLING SERIES					
Ranjagarh Felling Series					
Year	**Coupe No.**	**Block**	**Comptt No.**	**Comptt. Area in Ha**	**Coupe Area in Ha**
2026-27	I	Ranjagarh	4	500.61	853.51
			6	352.90	
2027-28	II	Ranjagarh	25	486.86	486.86
2028-29	III	Ranjagarh	28	363.42	363.42
2029-30	IV	Ranjagarh	6	352.90	786.33
			12	433.43	
2030-31	V	Ranjagarh	2	220.15	220.15
2031-32	VI	Ranjagarh	9	245.24	670.57
			10	425.33	
2032-33	VII	Ranjagarh	27	394.99	394.99
2033-34	VIII	Ranjagarh	1	384.86	384.86
2034-35	IX	Ranjagarh	3	433.02	433.02
2035-36	X	Ranjagarh	26	716.12	716.12
TOTAL					**5309.83**
Anantapur Felling Series					
Year	**Coupe No.**	**Block**	**Comptt No.**	**Comptt. Area in Ha**	**Coupe Area in Ha**
2026-27	I	Anantapur	29	407.128	868.081
			24	460.953	
2027-28	II	Anantapur	23	449.217	449.217
2028-29	III	Anantapur	21	573.055	573.055
2029-30	IV	Anantapur	11	480.378	966.892

			13	486.514	
2030-31	V	Anantapur	19	344.393	742.448
			20	398.055	
2031-32	VI	Anantapur	18	382.036	382.036
2032-33	VII	Anantapur	16	540.274	540.274
2033-34	VIII	Anantapur	17	356.135	356.135
2034-35	IX	Anantapur	14	431.814	431.814
2035-36	X	Anantapur	22	486.449	486.449
TOTAL					**5796.401**

Kandhara Felling Series

Year	Coupe No.	Block	Comptt No.	Comptt. Area in Ha	Coupe Area in Ha
2026-27	I	Kandhara	20(P)	229.739	229.739
2027-28	II	Kandhara	20 (B)	230.00	230.00
2028-29	III	Kandhara	15	280.534	280.534
2029-30	IV	Kandhara	9(B)	228.812	228.812
2030-31	V	Kandhara	9(P)	220.00	220.00
2031-32	VI	Kandhara	12	231.88	231.88
2032-33	VII	Kandhara	6(B)	230.666	230.666
2033-34	VIII	Kandhara	6(P)	240.00	240.00
2034-35	IX	Kandhara	2(P)	222.342	222.342
2035-36	X	Kandhara	2(B)	220.00	220.00
TOTAL					**2333.973**
G.Total					**13,440.204**

11.12 METHODS OF EXECUTION OF FELLING:

11.12.1 Demarcation of Annual Coupes

- The annual coupes shall be demarcated in the preceding season of working on the ground by a 3 meters wide clear line with small stone cairns at visible distances.
- The coupe line clearance shall be restricted for the purpose of identification and visibility only. No felling of any kind shall be done along the strip. Double coal tar rings shall be put at the breast height of the standing trees on the strips.
- If any portion of the coupe line coincides with compartment line, the said compartment line shall be maintained by putting double white paint rings on the trees at the breast height of the standing trees on the boundary at visible distance.
- In case a coupe overlaps two or more compartments/forest blocks, each compartment/block shall be treated as a separate lot & such lots should be demarcated with single coal tar ring on the trees standing along the compartment line/block boundary. This will even ensure proper maintenance of compartment histories.
- Coupes shall be indicated by small signboards at corners or at points of intersection with roads, inspection paths or boundary lines of forest blocks. The signboard should contain the name of the felling series, the number of the coupe, its area, year of working and number of the compartment.

11.12.2 Marking Rules

11.12.2.1 General Considerations: The following aspects will be kept in mind while going in for markings in Selection felling series.

- After demarcation of coupes, marking of trees shall be done in accordance with the marking rules prescribed in the following paragraphs. The demarcation and marking should be entrusted to the officers not below the rank of a Forest Ranger. It shall be checked by a forest officer not below the rank of Assistant Conservator of Forests; even the DFO shall also ensure test check at his level as well (except as provided specifically in the marking rules)
- All climbers shall be cut prior to marking. All trees to be marked for felling shall be blazed at two places (blaze size being about 15 cm X 15 cm) one at breast height and the other at a place as close to the ground as possible. The blazes should be marked with the departmental marking hammer and numbered serially. If a tree is forked below the breast height, it shall be taken as two trees; if it is forked above the breast height it shall be taken as one tree. The trees may be classified as sound or unsound from external appearance
- Marking should not be done in areas where the slope of terrain is more than 30^0, except for dead and uprooted trees. It shall also not be done within 50 meters of roadside and either side of nalla banks. Similarly marking shall not be done within 50-meter radius of the key habitat of wild animals such as salt lick, wallows, game tank and water holes. Only those trees shall be marked whose removal will not create a permanent gap in the canopy and will not affect regeneration of the flora.

11.12.2.2 Exploitation Marking:

- The Marking Officer shall assess the illicit fellings inside the annual coupes prior to the marking. The quantum of marking shall be reduced by the extent of number of trees illicitly felled. Thus the net trees to be marked should be difference between the maximum permissible number of trees due for marking and number of trees illicitly felled between previous felling and current felling to be taken up. If the difference is negative then no marking should be done in that coupe.

- The total number of trees marked for felling shall be limited to 4 per ha except Kandhara felling series. The number of trees to be marked is given coupe wise and this should be followed.
- Trees standing on the bank of nallas, streams, rivers and 10 metre from their banks shall not be marked for felling.
- There should be no marking of Sal trees in Kandhara as the trees available for felling are less than one in all the coupes.
- For plantation raised inside the coupes the marking rules are not applicable
- The trees retained (reserved trees) should be well grown and vigorous. They shall be painted with single white paint ring at breast height and at the base, and shall be serially numbered in each coupe. The list of such trees shall be maintained in the compartment history and coupe register.
- If a tree is marked for felling, no other tree shall be marked within 15-meter radius of that tree subject to further restriction on removal of trees.
- Marking of all dead; diseased and hollow trees irrespective of girth class and inclusive of even fallen trees as well. However, some such standing trees shall be retained if required for wildlife purpose.
- The fruit bearing trees such as Mahula, Mango, Tamarind, Amla, Chara, Kendu,Harida, Bahada, Bela etc. shall not be marked for felling.

11.12.2.3 Thinning: If after marking under the above rules, the crop is found to be congested; thinning operations shall be carried out so as to afford better opportunity of growth to the crop so retained after felling. However, the thinning in general would include the following conditional operations:-

- It should be restricted to the congested pole crop only that is younger age classes and limited to the species with girth at breast height less than 90 cms
- Marking shall be done on the lines of "C" grade thinning which is restricted to removal of only 'dominated' & 'suppressed' stems besides removal of some 'co-dominant' stems as well [Dominated stems have height about $3/4^{th}$ where as Suppressed stems are about half to $5/8^{th}$ of the height of the predominant stems. The Dominant stems comprise of all trees which form the upper most canopy and are divided into (i) Predominant trees comprising of the tallest trees which determine the general top level of canopy and (ii) Codominant trees which are about $5/6^{th}$ the height of the predominants]
- No thinning shall be carried out in open areas nor any fruit bearing species such as Mahula, Mango, Tamarind, Amla, Chara, Harida, Bahada, Bela, etc. shall be thinned out whatever be the extent of congestion
- Limit on removal of stems vis-à-vis retention per hectare shall be governed by the formula $D=0.5[(G/10)+1]$ where 'D' is the distance between two stems in meters after thinning and 'G' is the average girth of stems in cms
- As thinning markings are to be done very sparingly with meticulous reflection of mind and extreme silvicultural restraints, this will therefore need prior approval of the DFO

11.12.3 Execution of Marking and Felling: The following additional stipulations shall be ensured while executing the marking & fellings

✓ The marking shall be done by an officer as prescribed in the above marking rules and would be duly checked by the authorities as prescribed in the Orissa Forest Department Code 1979, as modified by the Government from time to time.

- ✓ The method of disposal of trees marked for felling shall be as per Chapter XIV of the O.F.D. Code 1979, as modified by the Government from time to time.
- ✓ Felling and extraction in annual coupes shall be allowed from October 1 to June 30 only. No felling, logging, passing, dragging and extraction shall be allowed between July 1 and September 30. The competent authority, if so required, shall consider any proposal for extension, only after physical verification of the coupes by the Divisional Forest Officer, and his report.
- ✓ If possible, the trees marked for felling shall be lopped before felling to avoid damage to regeneration and standing crops. The trees shall be felled towards upper slope in hilly coupes.
- ✓ Trees shall be felled as close to the ground as possible by saw to minimize the wastage
- ✓ The stumps of felled trees shall be given a smooth and slanting cut without damaging the cambium layer
- ✓ Felling in the coupe shall proceed in a systematic manner from one end to another
- ✓ Works undertaken, number of lots formed, if any, passing list and deviation, if any, shall be mentioned in the Compartment history.

11.13 SUBSIDIARY SILVICULTURAL OPERATIONS

11.13.1 Subsidiary silvicultural operation shall be done in the year following the main felling. This departmental operation shall be done over the entire coupe area and comprises of the following operations.

11.13.2 Cleaning and supplementary operations: This includes the operations to improve the crop condition after main felling and consists of the followings:-

- ❖ Marked trees left standing by the lessee shall be felled. Trees damaged during working of the coupe, which do not have any chance of survival, shall also be felled.
- ❖ All the high stumps shall be cut.
- ❖ Climbers left per chance during marking of the coupes, shall be cut back.
- ❖ Lops and tops, small wood pieces and barks left after main felling shall be removed to avoid fire hazards and harbouring of insect and disease causing organisms.
- ❖ Soil and moisture conservation measures, wherever necessary inside the annual coupes, shall be taken up comprising of activities such as gully plugging, contour bunding, dry stone packing, check dams etc.
- ❖ Thinning of advanced growth shall be carried out, if the crop is found to be still too congested after the main felling. However, it shall be only light to moderate thinning on the lines "A" grade or "B" grade thinning. (The 'A' grade thinning is restricted to removal of only 'suppressed' stems where as 'B' grade thinning even permits removal of 'dominated' stems as well besides occasional removal of 'dominant' stems with defective crown/stems).
- ❖ However, these cleaning & supplementary operations shall not be carried out in the highly degraded; open or steep precipitous slopes except for soil and moisture conservation measures

11.13.3 Sowing and planting: The blank areas created due to shifting cultivation or any other reasons (more than half hectare of any blank patch can be considered as blank area) shall be planted with the local indigenous species. The standard techniques of plantation and it's after care are to be adopted here as well

11.13.4 All the subsidiary silvicultural operations carried out shall also be entered in the respective Compartment history file

11.14 CONTROL

11.14.1 Compartment history files and Control forms besides other records shall be maintained for each Coupe/Compartment and Felling Series in accordance with the Management Plan Procedure,1991

11.15 MISCELLANEOUS REGULATIONS

11.15.1 Grazing: The coupes shall be closed for grazing for five years including the year of working. The remaining areas shall be open to grazing subject to the Orissa Forest (Grazing of Cattle) Rules 1980. However, lopping is strictly prohibited.

11.15.2 Fire Protection: The coupes shall be protected against fire particularly with more emphasis during the five years after the completion of main felling. The Orissa Forest (Fire Protection) Rules 1979 should be strictly followed. The coupe and plantations area should be rigidly protected from fire. Awareness regarding fire hazard and fire safety should be created in the villages adjacent to the forest area. Appointment of suitable temporary firewatchers from the village adjoining to the forest blocks should form a part of the subsidiary operations.

11.15.3 Rights and concessions: Rights and concessions shall be regulated as per the provisions of the Orissa Forest Act and Rules made there under and relevant Government policies in force.

11.16. INTERMEDIATE REVISION

11.16.1 Though the prescriptions of this working circle are not likely in need of any drastic changes during the plan period and hence, no such revision is anticipated, yet an intermediate review of the prescriptions may be made after 5 years, jointly by the Conservator of Forests (Territorial) and Conservator of Forests (Working Plans), taking into account the crop condition and necessity of revision. Any deviation suggested, however, shall be subject to the approval of competent authority.

11.17. ECONOMIC ANALYSIS AND EFFECTS OF PRESCRIPTIONS

11.17.1The cost norm for implementation of prescription and the total estimated cost of working under this Working Circle is discussed in Chapter XIX (Financial Forecast and Cost of the Plan).

11.17.2 Owing to ban on felling during the out going plan period and even in the intervening period, neither timber working nor any subsidiary silvicultural operations have been done since 1990. As a result, the crop has become congested at many places besides existence of matured and over matured trees. The over matured trees are getting deteriorated by natural agents like insects and fungi and also illicitly felled. Thus, the coupe working will not only help regenerate the forests but also generate some revenue to the Govt. However, sufficient precautions and conditions have been imposed for betterment of the crop as a whole without any consideration for revenue generation

11.17.3 The Marking Officer will take adequate precaution so that natural regeneration is not hampered. Moreover, artificial regeneration with indigenous species is also prescribed mainly to augment the regeneration quickly. Thus no adverse impact on the Environment and the Ecosystem is foreseen by the above prescriptions. Rather, there will be enhancement in the site quality of the treated forests.

CHAPTER – XII
ECO-RESTORATION WORKING CIRCLE

12.1 GENERAL CONSTITUTION

The forest blocks that are in various stages of degradation and the notified VF area are allotted to this working circle. Degradation of these forests is due to unrelenting biotic interference such as illicit felling, repeated fires, uncontrolled grazing, and encroachments. These adverse factors in tandem with other locality factors have affected the natural regeneration very badly in these forests. On the other hand, these forests contain sufficient rootstock, which if tended and protected has the potentiality to convert to high forests. These blocks need immediate attention with respect to rehabilitation/Eco-restoration to arrest the process of degradation. Area included here are those Forests, which can be improved by Cultural operations supplemented by artificial regeneration. Forest Block of the out going Working Plan which has not been rehabilitated and degraded area of SelectionWorking Circle has been included in this Working Circle. The area allotted to this Working Circle is 35,448.66 Ha.

12.2 GENERAL CHARACTER OF VEGETATION

Crops in the forest blocks allotted to this working circle are badly degraded and the soil is prone to different types of soil erosion due to heavy biotic interference. Mature trees are available in a scattered manner in most of the forest blocks. Recruits are adequate but the established saplings and poles have poor representation. The description of the vegetation has been given in Chapter 2. The forest blocks of this working circle are widely scattered and spread over all the ranges. The forests are mainly of three types.

(i) Moist Peninsular Sal Forests,
(ii) Mixed Deciduous forests, and
(iii) Tropical Semi Evergreen Forests.

These forests are open, scrubby and miscellaneous in composition. There is no distinct storey in most of these forest areas. Main species include *Shorea robusta*, *Terminalia tomentosa*, *Madhuca indica*, *Pterocarpus marsupium*, *Anogeissus latifolia*, *Boswellia serrata, Buchnania lanzan*, *Diospyros melanoxylon*, *Terminalia chebula*, *Emblica officinalis*, *Ougenia oojeinensis*, *Bauhinia retusa*, *Woodfordia fruticosa*, *Indigofera pulchella*, *Nyctanthes arbotritis*, *Ixora arborea*, *Grewia nudiflora*, *Phoenix acaulis, Bauhinia vahilii*, *Butea superba, Holarrhena antidysentrica*, and *Smilax macrophylla.*

12.3 SPECIAL OBJECTIVES OF MANAGEMENT

The following special objectives of management have been prescribed, which are within the ambit of the general objectives of management.

(i) To improve the condition of existing forests through protection against grazing, fires and illicit felling.
(ii) To enhance soil productivity through soil and moisture conservation measures.
(iii) To stabilize the ratio between water runoff during rainy season and that of during dry season.

(iv) To restock barren areas through artificial regeneration of most desirable indigenous species.
(v) To involve the local VSS & community in protection and management of the forests.
(vi) To restore and improve the microclimate and micro edaphic condition.
(vii) To increase the biodiversity and heterogeneity in the forest crop by encouraging natural regeneration.
(viii) To meet the local demand in terms of major & minor forest products from the restock areas and ensuring active participation of these people in the process of management through JFM concept.
(ix) To improve the economic condition of the local people by creating employment opportunities in the process of management of Forests.
(x) To maintain and tend the existing old plantation taken up in the last Plan through suitable silvicultural measures.

12.4 AREA ALLOTTMENT.

The areas allotted to this circle are approximately 35,448.66 Ha. Ten Treatment Series have been constituted. All the series have been constituted taking into account of silvicultural requirements and ease in the treatment of the coupes. The names of the blocks vis-a-vis their corresponding compartment areas included here are reflected in the following **Table-12.1**

Table: -12.1 AREA OF ECO-RESTORATION WORKING CIRCLE

Sl.No.	Treatment Series	Forest Block/VF	Compt. No	Area of Block/VF in ha	Area of Treatment Series in ha
01	Saptasajya	Belbania	1	563.80	
		Charkhola	2	80.76	
		Jaripal	1	151.80	
		Ghantabaja	1,2 & 3	405.66	
		Korean	1	387.70	
		Godabolua	1	7.60	
		Kotoberena	1	479.70	
		Motharagadi	1	55.31	
		Matiamundia	1	725.90	
		Kankadahad	1	40.40	
		Mayuri	1 & 2	477.335	
		Nimidha	1	37.70	
		Megha	1	192.90	
		Patpuri	1	204.90	
		Saptasajya	2 & 3	504.37	
		R.F. - 15 nos		**4315.835**	
		V.F. - 22 nos		**108.79**	**4424.625**
02	Ramei	Tamanda	1	265.17	
		Sulia	1	259.00	
		Ramei	2 , 3 & 4	1237.01	
		Bega	1	377.80	
		Khankira	1	374.30	
		Lahada (A)	1	489.60	

		Gondia	1	696.80	
		Raitola	1	175.00	
		Raigoda	1	243.40	
		R.F.- 9 nos		**4118.08**	
		V.F. - 14 nos		**102.50**	**4220.58**
03	Aswakhola	Aswakhola	3,4 5, & 6	1469.20	
		Sadangi (A)	1	20.70	
		Sadangio (B)	1	78.00	
		Lahada (B)	1	1958.00	
		Rupabalia	1	797.20	
		R.F. - 05 nos		**4323.105**	
		V.F. - 03nos		**13.00**	**4336.105**
04	Birasal	Birasal	1	1292.90	
		Jirindamali	1	565.06	
		Maulabhanja	1	701.50	
		Ranjagarh	13,14. & 19	535.38	
		Balibo	1	230.70	
		Dholpada	1	192.30	
		Tiploi	1	277.00	
		R.F. - 07 nos		**3794.84**	
		V.F. - 46 nos		**376.40**	**4171.24**
05	Sunajhari	Sunajhari	1,3,4,5 & 6	2576.562	
		Anlaberini	1	342.20	
		Madhi	1	217.70	
		Kadalipal	1	61.00	
		Machhia	1	60.00	
		Siarmalia	1	1119.10	
		R.F. - 06 nos		**3676.562**	
		V.F. - 34 nos		**234.68**	**3911.242**
06	Sundarakhol	Sundarakhol	1,2,5 & 6	1493.744	
		Barabank (N)	1	118.80	
		Barabank (S)	1	429.50	
		Khalpal	1	417.90	
		Dalia	1	1352.23	
		Talcher Border	1	159.30	
		R.F. - 06 nos		**3971.474**	
		V.F. - 26 nos		**142.20**	**4113.674**
07	Bompa	Bompa	1,2,3,4 & 5	1353.60	
		Kansara	1	40.42	
		Ambithi	1	323.60	
		Kai	1	1203.09	
		R.F. - 04 nos		**2920.718**	
		V.F. – 39 nos		**260.19**	**3180.908**
08	Kandhra	Kandhra	2,5,10, 14, & 23	884.106	
		Hitinda	1 & 2	470.790	
		Nandania	1	207.70	
		Patalo	1 & 2	505.469	
		R.F. - 04 nos		**2068.08**	

		V.F. - 25 nos		**158.26**	**2226.326**
09	Anantapur	Anantapur	1,2,32,& 33	1915.303	
		R.F. - 01 nos		**1915.303**	
		V.F. - 08 nos		**82.16**	**1997.463**
10	Kankili	Kankili	1	1546.30	
		Suniamaru	1	1320.20	
		R.F. - 02 nos		**2866.50**	**2866.50**
		TOTAL R.F. -59 nos		**33970.497**	
		TOTAL V.F. - 217 nos		**1478.18**	**35448.67**

People of many villages of Dhenkanal Division have protected forest since long. As per JFM Resolution of Govt. of Odisha, 1993 and subsequent made there under most of the degraded forests have been assigned to V.S.S. for protection and management. So far 326 V.S.S. have been registered in the Division and area assigned to them for protection is 38,193.80 Ha. Forest fire is required to be checked in all the forest blocks. Specific suggestion may be given in the working plan to mitigate annual fire hazards.

12.5 CONSTITUTION OF ECO-RESTORATION/REHABILITATION SERIES AND CYCLE:

Depending on the detailed field verification/crop composition, different rehabilitation series would be constituted and in each such series divided into annual rehabilitation coupes. Since the areas allotted to this circle are proposed to be treated with in the plan period, the rehabilitation cycle of 10 years is suggested to coincide with plan period.

12.6 ANALYSIS AND VALUATION OF CROP:

The forests in these blocks are badly degraded, due to various biotic interferences. Though regeneration is generally poor, few patches of coppice growth and even scattered matured (mal formed) tress are also seen in the allotted area and also some plantation patches raised in the last plan period.

12.7 SILVICULTURAL SYSTEM:

As the forests included in this Working Circle are in different stages of degradation, objective is to re-stocking such areas by tending operations supplemented by gap-planting & protection measures (including JFM), no formal silvicultural system is suggested. However, to achieve the major objectives the broad operation suggested are regeneration clearing, soil and moisture conservation measures, gap plantation of desired species and protection from biotic interference. Old plantation taken up during out going plan has to be tended and managed as per prescription.

12.8 ROTATION, YIELD AND YIELD REGULATION:

As the production of timber is not the objective of this Working Circle no rotation will be prescribed. However, removal of dead, fallen trees including collection of NTFP items is proposed for the benefit of JFM committees.

12.9 EXPLOITABLE DIAMETERS:

As it has been discussed in above para 12.8, no exploitable diameter is required

12.10 REHABILITATION CYCLE:

For smooth and systematic implementation of the prescriptions, the entire area of this Working Circle divided into ten Rehabilitation Series and the Rehabilitation Cycle will be kept at 10 years.

12.11 TABLE OF TREATMENT SERIES:

In order to execute the rehabilitation measures systematically, each rehabilitation series will be divided in to ten Rehabilitation Coupes. The annual treatment coupes will be formed in such a manner that continuity of the rehabilitation measures is ensured. While executing the works, the annual treatment coupes will be attended to as per sequence, where coupe no, rehabilitation series, year of treatment, Forest Block/ V.F., compartment and area included will be reflected as under.

TABLE -12.2 ECO-RESTRORATION SEQUENCE TABLE OF TREATMENT SERIES

SAPTASAJYA TREATMENT SERIES

Year	Coupe No.	Block	Comptt No.	Comptt. Area in Ha	Coupe Area inHa
2026-27	I	Belabania	(p)	300.00	380.76
		Charkhola	2	80.76	
2027-28	II	Belabania	(b)	263.80	415.60
		Jaripal		151.80	
2028-29	III	Ghantabaja	1	153.81	405.66
			2	144.90	
			3	106.95	
2029-30	IV	Korean		387.70	395.30
		Godabolua		7.60	
2030-31	V	Kotaberna		479.70	479.70
2031-32	VI	Matharagadi		55.31	458.81
		Matiamundia	(P)	350.00	
		V.F -12 nos of Gadasila & Ghatipiri GP		53.50	
2032-33	VII	Matiamundia	(B)	375.90	418.90
		Kankadahada		40.40	
		VF- 01 nos of Kalunga GP		2.6	
2033-34	VIII	Mayuri	1	284.77	491.025
		Mayuri	2	192.56	
		VF-05 nos of Sasana GP		13.69	
2034-35	IX	Nimidha		37.70	435.50
		Megha		192.90	
		Patapuri		204.90	
2035-36	X	Saptasajya	2	160.14	543.37
		Saptasajya	3	344.23	
		VF- 04 nos of Balarampur GP		39.00	
TOTAL					**4424.625**

RAMEI TREATMENT SERIES					
Year	**Coupe No.**	**Block**	**Comptt No.**	**Comptt. Area in Ha**	**Coupe Area in Ha**
2026-27	I	Tamanda		265.17	524.17
		Sulia		259.00	
2027-28	II	Ramei	3	361.57	361.57
2028-29	III	Ramei	2	290.94	470.94
		Ramei	4(P)	180.00	
2029-30	IV	Ramei	4(B)	404.50	404.50
2030-31	V	Bega		377.80	391.30
		VF-03 nos of Kaimati & Beltikri GP		13.50	
2031-32	VI	Khankira		374.30	384.30
		VF- 02 nos of Kaluria & Pingua GP		10.00	
2032-33	VII	Lahada-A		489.60	489.60
2033-34	VIII	Gondia	(P)	400.00	400.00
2034-35	IX	Gondia	(B)	296.80	296.80
2035-36	X	Raitala		175.00	497.40
		Raigoda		243.40	
		VF-09 nos of Bidyadharpur, Kasipu & Mandar GP		79.00	
TOTAL					**4220.58**
ASWAKHOLA TREATMENT SERIES					
2026-27	I	Aswakhola	3	384.07	384.07
2027-28	II	Aswakhola	4	258.12	458.12
		Aswakhola	5(P)	200.00	
2028-29	III	Aswakhola	5(B)	342.465	342.465
2029-30	IV	Aswakhola	6	284.55	383.25
		Sadangia-A		20.70	
		Sadangi (B)		78.00	
2030-31	V	Lahada-B	(P)	500.00	500.00
2031-32	VI	Lahada-B	(P)	500.00	500.00
2032-33	VII	Lahada-B	(P)	500.00	500.00
2033-34	VIII	Lahada-B	(P)	458.00	458.00
2034-35	IX	Rupabalia	(P)	400.00	400.00
2035-36	X	Rupabalia	(B)	397.20	410.20
		VF- 03 nos of Joronda GP		13.00	
TOTAL					**4336.105**
BIRASALTREATMENT SERIES					
2026-27	I	Birasal	(P)	380.00	380.00
2027-28	II	Birasal	(P)	380.00	380.00
2028-29	III	Birasal	(P)	380.00	506.08
		VF- 14 nos of Birasal GP		126.8	
2029-30	IV	Birasal	(B)	152.90	352.90
		Jiridamali	(P)	200.00	

2030-31	V	Jiridamali	(B)	365.06	365.06
2031-32	VI	Maulabhanja	(P)	350.00	402.00
		VF – 06 nos of Makuakateni GP		52.00	
2032-33	VII	Maulabhanja	(B)	351.50	385.26
		VF- 6 nos of Badasuanlo GP		33.76	
2033-34	VIII	Ranjagarh	13	231.43	535.38
		Ranjagarh	14	71.06	
		Ranjagarh	19	232.89	
2034-35	IX	Balibo		230.70	420.35
		Dholpada	(P)	100.00	
		VF- 09 nos of Nuapani, Balibo & Kumindha		89.65	
2035-36	X	Dholpada	(B)	92.30	443.49
		Tipiloi		277.00	
		VF- 11 nos of Dholpada, Bhusal,Bhuban, GN Prasad & Ekatali GP		74.19	
TOTAL					**4171.24**
SUNAJHARI TREATMENT SERIES					
2026-27	I	Sunajhari	1(P)	380.00	391.15
		VF-03 nos of Baruan GP		11.15	
2027-28	II	Sunajhari	1(B)	159.869	369.979
		Sunajhari	3(P)	200.00	
		VF- 02 nos of Jaganathpur GP		10.11	
2028-29	III	Sunajhari	3(B)	354.843	384.843
		VF-05 nos of Mahulpal GP		30.00	
2029-30	IV	Sunajhari	4	291.51	391.51
		Sunajhari	5(P)	100.00	
2030-31	V	Sunajhari	5(B)	233.71	390.34
		Sunajhari	6	156.63	
2031-32	VI	Anlabereni		342.20	342.20
2032-33	VII	Madhi		217.70	405.40
		Kadalipal		61.00	
		Machhia		60.00	
		VF-11 nos of Kantiokateni, Kantioputasahi, Kusumjodi, Kotagara, RNpur & Sogar GP		66.70	
2033-34	VIII	Siarimalia	(P)	380.00	380.00
2034-35	IX	Siarimalia	(P)	380.00	380.00
2035-36	X	Siarimalia	(B)	359.10	475.82
		VF- 13 nos of Basoe & Muktapasi GP		116.72	
TOTAL					**3911.242**

SUNDARAKHOL TREATMENT SERIES					
2026-27	I	Sundarakhol	1	418.864	418.864
2027-28	II	Sundarakhol	2	436.265	436.265
2028-29	III	Sundarakhol	5	338.733	338.733
2029-30	IV	Sundarakhol	6	299.882	475.862
		Barabank (N)		118.80	
		VF- 11 nos of Kumusi & Loddhani GP		57.18	
2030-31	V	Barabank (S)		429.50	447.50
		VF- 03 nos of Barihapur & Kandarasingha GP		18.00	
2031-32	VI	Khalpal		417.90	484.92
		VF- 12 nos of Saranga & Patrapada GP		67.02	
2032-33	VII	Dolia	(P)	380.00	380.00
2033-34	VIII	Dolia	(P)	380.00	380.00
2034-35	IX	Dolia	(P)	380.00	380.00
2035-36	X	Dolia	(B)	212.23	371.53
		Talcher Border		159.30	
TOTAL					**4113.674**
BOMPA TREATMENT SERIES					
2026-27	I	Bompa	1	274.40	274.40
2027-28	II	Bompa	2	146.971	351.932
		Bompa	3	204.961	
2028-29	III	Bompa	4(P)	250.00	315.10
		VF-08 nos of Bompa & Babandha GP		65.10	
2029-30	IV	Bompa	4(B)	187.376	263.796
		Kansara		40.42	
		VF- 6 nos of Kansara GP		36.00	
2030-31	V	Bompa	5	289.90	289.90
2031-32	VI	Ambithi		323.60	328.60
		VF- 01 nos of Hatura GP		5.00	
2032-33	VII	Kai	(P)	300.00	363.31
		VF – 07 nos of Indupur GP		63.31	
2033-34	VIII	Kai	(P)	300.00	331.53
		VF- 06 nos of Nuabaga GP		31.53	
2034-35	IX	Kai	(P)	300.00	322.11
		VF- 02 nos of Chitalpur GP		22.11	
2035-36	X	Kai	(B)	303.09	340.23
		VF- 09 nos Patala & Dudurkot GP		37.14	
TOTAL					**3180.908**

KANDHARA TREATMENT SERIES					
2026-27	I	Kandhara	3	163.72	248.72
		VF- 11 nos of Nizigarh GP		85.00	
2027-28	II	Kandhara	5(P)	200.00	200.00
2028-29	III	Kandhara	5(P)	200.00	200.00
2029-30	IV	Kandhara	5(B)	70.626	170.626
		Kandhara	14	50.00	
		Kandhara	10	50.00	
2030-31	V	Kandhara	23	149.76	192.57
		VF- 09 nos of Giridhariprasad GP		42.81	
2031-32	VI	Hitinda	1	62.527	262.527
		Hitinda	2 (P)	200.00	
2032-33	VII	Hitinda	2(B)	208.263	215.033
		VF- 02 nos of Jarada GP		6.77	
2033-34	VIII	Nandania		207.70	217.70
		VF- 01 nos of Baunsapokhori GP		10.00	
2034-35	IX	Potalo	1	180.835	244.515
		Potalo	2 (P)	50.00	
		VF- 02 nos of Rasol & Karanda GP		13.68	
2035-36	X	Potalo	2(B)	274.635	274.635
TOTAL					**2226.326**
ANANTAPUR TREATMENT SERIES					
2026-27	I	Anantapur	32 (P)	185.00	185.00
2027-28	II	Anantapur	32(P)	185.00	185.00
2028-29	III	Anantapur	32(P)	185.00	185.00
2029-30	IV	Anantapur	32(B)	177.977	177.977
2030-31	V	Anantapur	33(P)	180.00	180.00
2031-32	VI	Anantapur	33(P)	180.00	180.00
2032-33	VII	Anantapur	33(B)	177.509	203.039
		VF- 04 nos of Badajhara GP		25.53	
2033-34	VIII	Anantapur	2	253.407	253.407
2034-35	IX	Anantapur	1(P)	250.00	250.00
2035-36	X	Anantapur	1(B)	141.41	198.04
		VF- 04 nos of Mahulpal GP		56.63	
TOTAL					**1997.463**

KANKILI TREATMENT SERIES					
2026-27	I	Kankili	(P)	260.00	260.00
2027-28	II	Kankili	(P)	260.00	260.00
2028-29	III	Kankili	(P)	260.00	260.00
2029-30	IV	Kankili	(P)	260.00	260.00
2030-31	V	Kankili	(P)	260.00	260.00
2031-32	VI	Kankili	(B)	246.3	246.3
2032-33	VII	Suniamaru	(P)	330.00	330.00
2033-34	VIII	Suniamaru	(P)	330.00	330.00
2034-35	IX	Suniamaru	(P)	330.00	330.00
2035-36	X	Suniamaru	(P)	330.20	330.20
				TOTAL	**2866.50**
				G. TOTAL	**35448.663**

N.B.: Please refer Annexure No. III for details of the G.P. wise Village Forest area.

12.12 TREATMENTS PRESCRIBED:

The forest areas to be included in this Working Circle are in various stages of degradation. DFO, Dhenkanal shall prepare site-specific annual plan of action for different areas, for treatments, depending upon the crop composition, intensity of degradation etc. the following rehabilitation operations shall be carried out in addition to appropriate soil and moisture conservation.

High stumps arising out of illicit felling and others shall be cut back to the ground for encouraging coppice shoots.

(i) The stumps with multiple coppice shoots shall be dressed and most promising ones shall be retained as future crop.

(ii) In congestion crop area, cleaning operations shall be carried out in order to encourage the growth of the economically important species and regeneration too.

(iii) The tending operations shall also be attended in restocked area (old plantation) plantations taken up in the last plan and intervening period.

(iv) The forests shall be strictly protected against unauthorized removal, forest fire and uncontrolled grazing. Only dead, fallen and uprooted trees shall be allowed to remove.

(v) Wherever large gaps / barren areas or suitable vacant places beyond 0.40 Acres are available, gap planting of indigenous species along with fodder, fruit bearing trees, bamboo and some medicinal trees of local importance should be raised and restoration measures are to be taken up.

(vi) All activities to be made on micro-watershed basis.

12.13 METHODS OF EXECUTION OF ECO-RESTORATION/REHABILITATION:

As main objectives of the circle, is restoration of the forest cover, improvement on the composition of the vegetation, site-specific treatment plan on watershed basis is important with involvement of local communities.

i. The annual coupes shall be demarcated on the ground in the preceding year, and shall be indicated by putting small signboards displaying Forest Blocks, Comptt. Nos., Rehabilitation Series, Area, Year of Treatment etc. then treatment map will be prepared considering drainage, gullies, slopes, blanks, soil and its depth, vegetation and extent of regeneration etc.

ii. The cultural operations like cleaning of sites by cutting back of high stumps, climber cutting and singling out of coppice shoots keeping the most promising ones, light thinning, removal of all the dead, dry and fallen trees removed from the annual coupe area if such trees are not required for wild life purpose.

iii The gap plantation shall be done of desired species giving due weight age to the Orissa Plantation Manual, 1977 and appropriate soil and moisture conservation measures like Gully Plugging, Contour Trenches, Contour Bonding, Vegetative Fencing, Stone Fencing, Trench Fencing shall be undertaken in the 0^{th} year.

iv. People of many villages of Dhenkanal Division have protected forest since long. As per State Govt. Resolution of 1993 all degraded forests have been assigned to V.S.S. for protection and management.Improvement of forests through silvicultural operation and protection of forest from smuggling and fire will be checked in all the forest blocks through people's participation which also indirectly generate employment opportunity for the people.

12.14. MISCELLANEOUS REGULATIONS:

It will regulate with respect to the agencies to carry out the prescription, maintenance of record, creation of JFM Committee, sharing mechanism with respect to Govt. policy, Rules and regulation etc.

12.14.1 Protection Measures: The annual treatment areas shall be rigidly protected form grazing and fire incident for 5 years. The provisions of Rule 283 of the Orissa Forest Department Code and the Orissa Forest Fire (Protection) Rules 1979 will be followed strictly.

12.14.2 Joint Forest Management:

In Dhenkanal Forest Division there are 326 rgistered V.S.S. assigned for protection of degraded forest. More VSS under JFM shall be formed and protection and management of these annual coupes shall be vested with these local people will help in regeneration, in implementing the Govt. policy vis-à-vis improvement of the economic condition of the local tribes.

12.14.3 Maintenance of Records: The outturn from all other operations be maintained in the Compartment History file in accordance with Management Plan Procedure, 1990.

12.14.4 **Rights & Concessions:** As predetermined at the time of notification of the forest blocks will be strictly followed in the interest of local public, vis-à-vis JFM Policy of the Government in consultation with general Working Plan prescriptions.

CHAPTER – XIII
THE PLANTATION WORKING CIRCLE

13.1 GENERAL CONSTITUTION

This working circle includes those forest blocks having permanent blank patches and encroached lands that are subjected to heavy biotic pressure. These forests are unable to restore it self mainly due to lack of natural rootstock. There is perceptible soil erosion. Due to absence of natural regeneration and crown cover, the areas will further deteriorate if suitable artificial regeneration is not taken up in these areas. These areas are completely devoid of any root stock with minimum area of 0.4 Ha and there does not seem to be any possibility of establishing it self with natural regeneration within a reasonable time frame.

13.2 CHARACTER OF VEGETATION

The areas included in this working circle are blank patches, barren land, encroached forestland left by the encroachers besides the existing plantations. Natural regeneration is very poor in these areas due to different biotic factors like illicit felling, repeated forest fires and grazing.

The area allotted to this Working Circle is devoid of forest growth barring scattered grass patches and bushy growths distributed through out the division. The present condition of the area allotted to this working circle is mostly due to excessive biotic pressure. Plantations are prescribed in the planting series of out going plan and some eco-restoration plantations were raised during last plan period. In all the blocks there is good cover of soil and choice of species will depend upon the type of soil in each Block areas where the plantations have been raised in the past are also in poor stage. Most of the plantations have not been subjected to regular weeding, cleaning and thinning operations. The planted species are mainly Teak, Sisoo, Gambhar, Cassia, Accasia, Cashew, Asan, Bamboo, Eucalyptus, Siris, Karanja and Neem etc.

The regeneration of Sal and other species are less because of continuous cutting of trees, encroachment, grazing and forest fire etc. Total area allotted to this working circle is 21,791.63 ha.

13.3 SPECIAL OBJECTIVE OF MANAGEMENT

The special objectives of management set for this Working Circle are within the ambit of the general objectives of management of the Working Plan. These are as follows:

1. To restock all permanent blank & barren areas through artificial regeneration.
2. To maintain and tend the existing plantations through suitable silvicultural measures.
3. To improve land productivity through soil and moisture conservation measures.
4. To raise block plantations preferably with indigenous species of economic importance in large gaps having area of more than 0.4 ha.
5. To increase the biodiversity of species in Division.
6. Treatment, harvesting of old plantations and replanting.

13.4 AREA ALLOTTMENT

The area allotted to this W.C. is 21,916.09 Ha which includes existing old plantations raised upto out going plan of 19,131.09 ha (Existing Block plantation-19,006.63 ha, CA- 124.46 ha) and newly proposed area of 2785.00 ha. This working circle includes forest blocks having blank patches and encroached lands that are subjected to heavy biotic pressure. These forests are unable to restore it self mainly due to lack of natural rootstock. While drafting the plan a tabular statement showing block and compartments with respective areas would be reflected here for plantable areas. For the newly proposed area of 2785.00ha eight plantation series have been constituted. The range wise plantation series is shown in the **Table no13.1**

Table- 13.1 AREA OF PLANTATION WORKING CIRCLE

Sl.No.	Range	Planting Series	Area in Ha	RF Blocks covered
1	Dhenkanal	Belabnia	390.00	Belabania,Godabolua, Kankadahada,Matiamunda, Mayuri,Megha, Nimidha & Patapuri
2	Sadangi, K Nagar (E) & Bhuban	Bega	320.00	Bega,Lahada-A&B, Birasal,Jirindamali, Moulabhanja, Ranjagarah,Bhairpur & Sunajhari.
3	K.Nagar (W) & Mohabirod	Anlaberini	400.00	Anlaberini,Kankili,Siarimalia, Sunimaru, Talcher Border & Barabanka N &S.
4	K.Nagar (W) & Mohabirod	Anantapur	300.00	Anantapur
5	Mohabirod	Dolia	400.00	Dolia & Khalpal
6	Hindol	Ambithi	380.00	Ambithi,Bompa, Hitinda & Kai, Kandhara,Nadania & Potalo.
		Kandhara	310.00	
		Nandania	285.00	
		Total	975.00	
Grand Total			**2785.00**	

13.5 CONSTITUTION OF PLANTATION SERIES:

The W.C. would be divided into different planting series with annual areas of treatment after detailed field verification. However, separate planting series will be created for existing pure Eucalyptus plantations and for plantation of short rotation and commercial species. Each plantation series will be sub-divided in to eight planting sections and care will be taken to restrict the area of different planting series in to one range.

TABLE -13.2 **SEQUENCE OF PLANTATION SERIES**

BELABANIA PLANTING SERIES					
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area In Ha**	**Total Area**
2026-27	I	Belabania Kankadahada	- -	20.00 20.00	40.00
2027-28	II	Godaboula	-	30.00	30.00
2028-29	III	Matiamundia	(P)	40.00	40.00
2029-30	IV	Matiamundia	(B)	40.00	40.00
2030-31	V	Matiamundia Nimidha	(B) -	20.00 20.00	40.00
2031-32	VI	Mayuri	1(P)	30.00	30.00
2032-33	VII	Mayuri Megha	1(B) (P)	20.00 20.00	40.00
2033-34	VIII	Megha	(P)	40.00	40.00
2034-35	IX	Megha	(B)	40.00	40.00
2035-36	X	Patpuri	-	50.00	50.00
		Total			**390.00**
BEGA PLANTING SERIES					
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area In Ha**	**Total Area**
2026-27	I	Bega Lahada-(A)	(P)	20.00 15.00	35.00
2027-28	II	Lahada-(A)	(B)	35.00	35.00
2028-29	III	Ranjagarh	13	30.00	30.00
2029-30	IV	Lahada –(B)	(P)	35.00	35.00
2030-31	V	Lahada-(B) Birasal	(B)	15.00 20.00	35.00
2031-32	VI	Jirndamali Bhapur		20.00 20.00	40.00
2032-33	VII	Maulabhanj Sunajhari	6	20.00 20.00	40.00
2033-34	VIII	Ranjagarh	14	30.00	30.00
2034-35	IX	Ranjagarh	19 (P)	20.00	20.00
2035-36	X	Ranjagarh	19 (B)	20.00	20.00
		Total			**320.00**
ANLABERNI PLANTING SERIES					
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area In Ha**	**Total Area**
2026-27	I	Anlabereni Talcher Border	(P)	20.00 10.00	30.00
2027-28	II	Siarimalia Talcher Border	(P)	20.00 10.00	30.00
2028-29	III	Suniamaru Talcher Border	(P)	10.00 20.00	30.00
2029-30	IV	Suniamaru Talcher Border	(B) (P)	10.00 20.00	30.00

2030-31	V	Kankili Talcher Border	(P) (P)	10.00 20.00	30.00
2031-32	VI	Kankili Barabank (N)	(B)	10.00 20.00	30.00
2032-33	VII	Talcher Border Barabank (S)	(P)	20.00 10.00	30.00
2033-34	VIII	Barabank (S)		30.00	30.00
2034-35	IX	Barabank (S)		30.00	30.00
2035-36	X	Barabank (S)		30.00	30.00
		Total			**300.00**
ANATAPUR PLANTING SERIES					
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area In Ha**	**Total Area**
2026-27	I	Anatapur Anatpur	1 (P) 31(P)	20.00 30.00	50.00
2027-28	II	Anatpur Anatpur	1 (B) 31.(B)	20.00 20.00	40.00
2028-29	III	Anatpur Anatpur	2 (P) 32 (P)	20.00 20.00	40.00
2029-30	IV	Anatpur Anatpur	2 (B) 32 (B)	20.00 20.00	40.00
2030-31	V	Anatpur Anatpur	6 33 (P)	20.00 20.00	40.00
2031-32	VI	Anatpur	35	40.00	40.00
2032-33	VII	Anatpur	33 (P)	40.00	40.00
2033-34	VIII	Anatpur	33.(P)	40.00	40.00
2034-35	IX	Anatpur Anatpur	33(B) 34 (P)	20.00 20.00	40.00
2035-36	X	Anatpur	34 (B)	30.00	30.00
		Total			**400.00**
DOLIA PLANTING SERIES					
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area in Ha**	**Total Area in Ha**
2026-27	I	Dolia Khalpal	(P) (P)	20.00 20.0	40.00
2027-28	II	Dolia Khalpal	(P) (P)	20.00 20.00	40.00
2028-29	III	Dolia Khalpal	(P) (P)	20.00 20.00	40.00
2029-30	IV	Dolia Khalpal	(P) (P)	20.00 20.00	40.00
2030-31	V	Dolia Khalpal	(P) (P)	20.00 20.00	40.00
2031-32	VI	Dolia Khalpal	(P) (P)	20.00 20.00	40.00
2032-33	VII	Dolia	(P)	20.00	40.00

		Khalpal	(P)	20.00	
2033-34	VIII	Dolia Khalpal	(P) (P)	20.00 20.00	40.00
2034-35	IX	Dolia Khalpal	(P) (P)	20.00 20.00	40.00
2035-36	X	Dolia Khalpal	(B) (B)	20.00 20.00	40.00
		Total			**400.00**
NANDANIA PLANTING SERIES					
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area In Ha**	**Total Area**
2026-27	I	Nandania		30.00	30.00
2027-28	II	Kandhara	21.(P)	30.00	30.00
2028-29	III	Potalo	(P)	30.00	30.00
2029-30	IV	Kandhara Potalo	21 (B) (P)	20.00 20.00	40.00
2030-31	V	Kandhara	22 (P)	25.00	25.00
2031-32	VI	Kandhara	22 (P)	25.00	25.00
2032-33	VII	Kandhara	22 (B)	25.00	25.00
2033-34	VIII	Kandhara	17 (P)	30.00	30.00
2034-35	IX	Kandhara	17 (P)	25.00	25.00
2035-36	X	Kandhara	17 (B)	25.00	25.00
		Total			**285.00**
KANDHARA PLANTING SERIES					
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area In Ha**	**Total Area**
2026-27	I	Kandhara	5(P)	30.00	30.00
2027-28	II	Kandhara	10 (P)	30.00	30.00
2028-29	III	Kandhara	5 (P)	30.00	30.00
2029-30	IV	Kandhara	10 (P)	30.00	30.00
2030-31	V	Kandhara	5 (B)	40.00	40.00
2031-32	VI	Kandhara	10 (P)	30.00	30.00
2032-33	VII	Kandhara Kandhara	10 (B) 8	10.00 20.00	30.00
2033-34	VIII	Kandhara	16 (P)	30.00	30.00
2034-35	IX	Kandhara	16 (P)	30.00	30.00
2035-36	X	Kandhara	16 (B)	30.00	30.00
		Total			**310.00**

	AMBITHI PLANTING SERIES				
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area in Ha**	**Total Area**
2026-27	I	Ambithi		30.00	30.00
2027-28	II	Bompa Hitinada	1(P) 1(P)	20.00 25.00	45.00
2028-29	III	Bompa Hitinda	1(P) 1(B)	20.00 25.00	45.00
2029-30	IV	Bompa Koi	1 (B) (P)	10.00 20.00	30.00
2030-31	V	Bompa Koi	4(P) (P)	20.00 20.00	40.00
2031-32	VI	Bompa Koi	4(P) (P)	20.00 20.00	40.00
2032-33	VII	Bompa Koi	4(B) (P)	20.00 20.00	40.00
2033-34	VIII	Bompa	3(P)	30.00	30.00
2034-35	IX	Bompa Koi	3(B) (B)	20.00 20.00	40.00
2035-36	X	Bompa	2	40.00	40.00
		Total			**380.00**
		G. Total			**2785.00**

13.6 ANALYSIS AND VALUATION OF CROP:

The areas included in this circle are mostly blank patches with practically no growth, no necessity of analysis and valuation of crop over these areas. More over, old plantations included here have inadequate stocking needing only protection and tending operations. However, for old plantations of Eucalyptus, this information is required to be incorporated basing on the data to be calculated at the time of enumeration.

13.7 SILVICULTURAL SYSTEM:

Two types of operations are proposed in this W.C. i.e. plantations in the barren areas and treatment, harvesting of old plantation and re-planting in old plantations. The system adopted for harvest of matured Eucalyptus is followed by artificial regeneration including tending operation and simple coppice system.No naturally grown trees will be removed for thepurpose of plantation except eradication of weeds.

13.8 CHOICE OF SPECIES:

While making the choice of species, the factors like their demand and acceptance, economic value, availability of genetically superior seeds, soil conditions and topography etc are to be taken into account. Emphasis will be given for planting of the indigenous species suitable the area.

13.9 PLANTATION CYCLE AND ROTATION:

Planting cycle will be of 10 years for all the planting series. However, rotation is of theoretical importance except for Eucalyptus plantations for which it is fixed for 20 years with first harvest at 8th year, 2nd at 14th year and 3rd at 20th year.

13.10 CALCULATION OF YIELD:

Yield is expected from only Eucalyptus plantations and hence the same would be regulated by area.

13.11 PLANTATION TECHNIQUE AND OPERATIONS:

The guidelines laid down in the Orissa Forest Plantation Manual 1977 with regard to raising and maintenance of plantations would be followed in Toto.

13.11.1 Demarcation of Annual Plantation coupes

(i) The annual plantation coupes shall be demarcated in the winter season (October to December) of the year preceeding to the year of plantation. Coupe lines usually coincide with natural features. In the other cases, small stone cairns of half meter height will be erected at visible distance or the coal tar ring should be painted at breast height of trees standing on the coupe lines.

(ii) The plantation coupe 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 series, coupe number, its area, year of working and compartment number.

13.12 PREPARATION OF SITE, TREATMENT MAP AND PLAN.

13.12.1 A site map in the scale of 1: 25,000 showing the details of area, direction of slope, nature of erosion, biotic interference, site specific species, aspiration of the public and other factors shall be prepared. A treatment map shall be prepared where financial requirement shall be projected. 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 December of the year proceeding to the year of plantation.

13.12.2 Each plantation coupe shall be taken care for four years including the main year of operation. The plantation plan along with the treatment map in 1: 25,000 Scale shall be prepared by the Range Officer, checked by the Divisional Forest Officer and approved by the Conservator of Forests.

13.13 STACKING, PITING AND PLANTING

13.13.1 After the completion of site preparation by the end of January, the operations like alignment, stacking and pitting shall be done. The pitting shall be completed by the end of February.

This helps in curing of pits and also it is easy for the staff to start plantation immediately after the onset of monsoon.

13.13.2 Planting shall be taken up immediately after onset of monsoon and completed by second week of July. The number of plants per hectare should be decided by the DFO depending on the site and the species to be planted. Required dosage of insecticides and fertilizers shall be applied during planting process.

13.14 POST PLANTING OPERATIONS

13.14.1 Casualty replacement, weeding, mulching, soil working, fertilizer application (top dressing) and other operations shall be carried out as per the calendar of operations as given in **Table-13.3**

TABLE -13.3 Schedule of Planting Operations

Operations	Period Of Completion
Advance preparation of site	End of October
Digging of pits	End of February
Stacking	End of February
Plantation And Post Plantation Operation in 1st Year	
Pre-sprouted poly potted stump planting	1st week of July
Casualty replacement	End of July
1st soil working, weeding & manuring	End of August
2nd soil working and weeding	During October
3rd soil working	During December
Post Plantation Operation in 2nd Year	
Casualtyreplacement,1stweeding,soilworking& manuring	End of July
2nd weeding and soil working	During October
Post Plantation Operation in 3rd and subsequent Years	
Soil working and casualty replacement	End of July
Pruning and singling	September

13.15 NURSERY

Nursery shall be started one year in advance. Permanent nurseries shall be used for raising seedlings. The permanent nurseries existing in the division needs improvement and atleast one nursery per section is required. The temporary nurseries may be raised in case of necessity.

13.16 CONTROL

The nursery Journal, the plantation Journal and other records will be maintained for each plantation coupe / series separately in accordance with the provisions of 'The Orissa Forest Plantation Manual, 1977' indicating the physical and financial achievements. Necessary entries with regards to plantation activities undertaken must be entered in the compartment histories.

13.17 TREATMENT OF EXISTING PLANTATIONS

13.17.1 There are many existing plantations in the division. But their growth is not uniform. In some cases the part or whole of plantation has been felled down, in other cases the plantations are protected by the VSS members. Hence uniform treatment for all the plantations is not possible. Wherever gaps exist in the existing plantations, they should be restocked by gap plantation. The plantations that are bushy and branchy need the tending operations like pruning, thinning and climber cutting. The Range Officer shall prepare the site-specific treatment of the individual plantation sites, supervised by ACF and shall be duly approved by the DFO. Pruning should be done between 3rd and 7th year of formation. In addition, mechanical thinning shall be carried out in pure Teak and other economic plantations in 10th – 15th year. For example, the thinning regime for Teak is 7th, 13th, 20th, 30th, 40th and 55th year of formation with a rotation of 70 years.

13.17.2 Matured Plantations shall be harvested and replanted with suitable species. In order to harvest matured plantations, the DFO shall prepare a scheme indicating all the details of the plantations, financial requirement for harvesting of the plantations and replanting the said area. The scheme shall be operative after the concerned Regional Chief Conservator of Forests, who will provide the required fund for harvesting and replanting the area, approves it.

13.18 MISCELLANEOUS REGULATIONS:

13.18.1 **Control / Maintenance of Records:** As per Orissa plantation Manual, 1977 Plantation Journals and other records like Compartment History files, Control Forms etc. shall be maintained.

13.18.2. **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.

13.18.3. **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.

13.18.4. **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.

13.18.5 **Climber Cutting**: Climbers are a menace not only in the young regeneration area but also in the forest crops as they seriously affect the growth of young plants and trees. Climber cutting shall be done at the time of marking 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.

13.18.6. **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

13.19 Soil and Water Conservation Measure:

13.19.1 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.

. 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.

13.19.2. **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.

13.19.3. **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 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.

13.19.4 **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.

13.19.5. **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.

13.19.6. **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.

Table No.- 13.4 list of grasses suitable for planting.

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 jwarancusa	Level to hilly topography, sandy and rocky soil, p^H 6.5 to 7.5	Non-fodder
11	Vetiveria zizaniodes	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.

Table No.-13.5 Site wise measures to be taken 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.

CHAPTER – XIV
THE PROTECTION WORKING CIRCLE

14.1 GENERAL CONSTITUTION

The Forest Blocks having ecologically fragile, high gradient and steep precipitous hill slopes, catchment area of major rivers/ water reservoirs, encroachment evicted areas, grazing and browsing prone areas needing special protection measures from biotic interferences are included in protection working circle. The areas which show good natural regeneration of indigenous species and crop composition also are included in this Circle. In this circle adequate protection shall be provided against forest fire, illicit felling, grazing, encroachnment etc. with fencing and watch and ward.The areas requiring very specific silvicultural treatment and administrative measures have been covered under this working circle.

As suggested by the Regional Chief Conservator of Forests-Cum-Field Director, Satkosia Tiger Reserve, Angul during the discussion of 2nd PWPR meeting of the Division in the Working Plan Committee Meeting, the part of compartments of Ranjagarh, Anantapur and Kandhara R.Fs coming under Tiger landscape area (frequent movement area of tiger) to be kept under Protection WC. As per the demarcation of the tiger landscape area and ground truthing report of the DFO, Dhenkanal Division submitted vide his letter No. 5817 dated 18.08.2015 **(Annexure-XXVIII),** 41 no compartments over an area of 19087.00 ha (Anantapur RF- 19 no comptts. – 9153.00 ha, Ranjagarh RF – 11 no comptts -4815.51 ha and Kandhara RF – 11 no comptts. – 5119.00 ha) is included in the Protection WC.

14.2 GENERAL CHARACTER OF VEGETATION:

The crop composition in general is good; the major forest areas of this circle fall under Tropical Moist Deciduous, Dry Deciduous and Dry deciduous Scrub Forests.

These forests are subjected to immense biotic interference i.e. illicit felling, grazing and fire. These factors have adverse impact on the regeneration in the forests. The density of the forest vegetation varies from 0.1 to 0.3. The absence of vegetation cover in many areas has led to soil erosion. Thus, the blocks included in this circle warrants complete protection against ever increasing biotic interference and the areas requiring very specific silvicultural treatment and administrative measures.

14.3 BLOCKS AND COMPARTMENTS:

The area allotted to this Working Circle is approximately 27,119.587 Ha. The Rangewise distribution of forest blocks and area of this working circle is given in the following **Table -14.1**

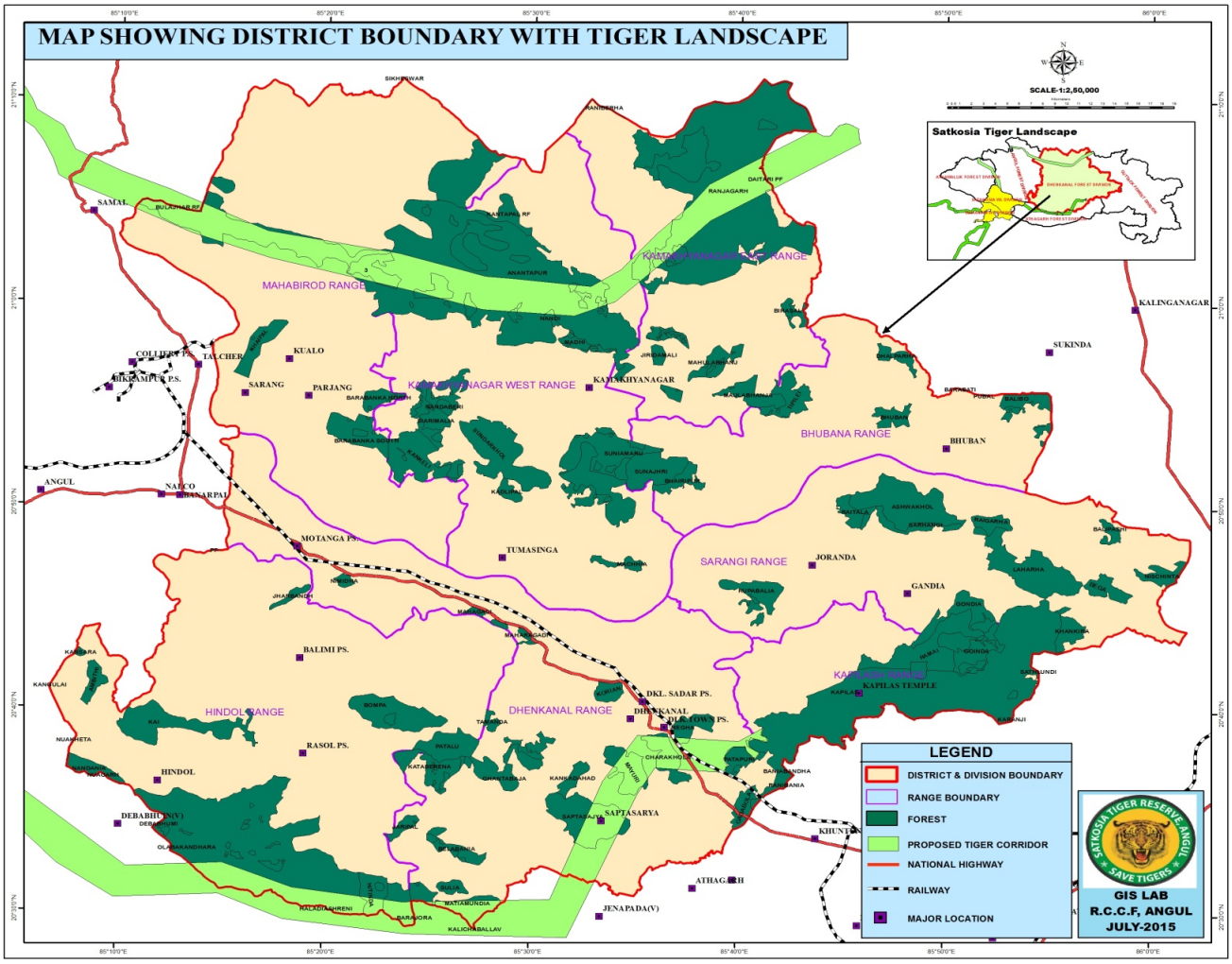
TABLE No.-14.1 BLOCKS AND COMPARTMENTS

Range wise forest blocks and compartments allotted to Protection Working Circle

Range	Block	Status	Compartments No.	Area in ha
Dhenkanal	Charkhola	R.F.	1	88.40
	Ghantabaja	-do-	3 & 4	353.74

	Matharagadi	-do-	1	200.00
	Saptasajya	-do-	1 & 3	753.78
	Kapilas	-do-	8,10 & 22	51.67
Sadangi	Aswakhola	-do-	1 & 2	794.42
	Baliposi	-do-	1	227.10
	Lahada-A	-do-	1	250.00
	Nischinta	-do-	1	696.90
K.Nagar (E)	Ranjagarh	-do-	4,5,7,8,9,10,15,16,17,20,21,22 & 24	5718.8
Bhuban	Balibo	-do-	1	200.00
	Bhairpur	-do-	1	125.50
	Bhuban	-do-	1	127.30
	Dhalapada	-do-	1	50.00
	Tipiloi	-do-	1	200.00
	Sunajhari	-do-	6	200.00
K.Nagar (W)	Sunajhari	-do-	2	391.436
	Kadalipal	-do-	1	150.00
	Madhi	-do-	1	200.00
	Nandabir	-do-	1	145.70
	Sundarkhol	-do-	3 & 4	712.676
	Anantapur	-do-	3,4,5,6,7,8,9,10,12,15,25, 26 & 28	5682.689
Mahabirod	Anantapur	-do-	30,31,34,35,36,37,38,39 & 40	4058.427
	Barabanka (N)	-do-	1	150.00
	Talcher-boarder	-do-	1	350.00
Hindol	Kai	-do-	1	200.00
	Kandhara	-do-	1,3,4,7,11,16,17,18,19,21,22,24 & 25	4841.049
	Nandania	-do-	1	200.00
			Total-	**27,119.587**

MAP SHOWING DISTRICT BOUNDARY WITH TIGER LANDSCAPE



14.4 SPECIAL OBJECTS OF MANAGEMENT:

The objectives of management set for this Working Circle are as follow:

(i) To prevent further degradation of delicate and eco-sensitive areas and stabilize these areas as ecologically stable.
(ii) To rehabilitate the forest area subjected to biotic interference, encroachment or shifting cultivation by adequate social, administrative and silvicultural measures.
(iii) The catchment areas of reservoirs, area having high gradient, slopes to be rehabilitated through adequate SMC measures and gap planting.
(iv) Grazing shall be stopped with the help of local adjoining villagers/VSS members.
(v) Illicit felling of trees shall be controlled and stopped with the help of villagers and members of adjoining VSS areas and deployment of anti-smuggling squad.
(vi) Fire will be prevented in all forest blocks with the help of local adjoining villagers and members of VSS of area.
(vii) To keep the tiger landscape area free from human disturbance and maintenance of habitat.

14.5 ANALYSIS AND VALUATION OF CROP:

Basing on the data collected and incorporated in Chapter- I, the desired information would be arrived at and reflected here for the blocks coming within this Circles.

14.6 SILVICULTURAL SYSTEM:

As the forests included in this Circle are to be mainly protected without any other consideration, no silvicultural system has been prescribed. However, for achieving the special objected of this Circle, the following operations are prescribed:-

(i) The area shall be rigidly protected from all sorts of biotic interference so as to keep is under nature's own care and nursing.
(ii) Areas of forest blocks of steep precipitous slopes to eco- fragile areas would be specially protected through effective soil moisture conservation measures to ensure there is no loss of vegetation and soil cover.
(iii) Existing growing stock shall be improved by adopting appropriable tending operations.
(iv) Boundary of the Compartment Blocks shall be maintained to prevent encroachment.
(v) Forest road network shall be maintained with provision of Cement concrete Causeway, culvert etc to make it all weather road for mobility of Protection/Anti smulggling squad.
(vi) Communication network – VHF and HF sets shall be used effectively for control of illcit felling and encroachment.
(vii) Watch and ward of forest block and fencing.
(viii) Adequate SMC measures, suitablegap planting in more than 0.4 hectare will be planted with indigenous species.
(ix) No felling is recommended, only uprooted, wind fallen trees will be removed.

14.7 ROTATION AND CONVERSION PERIOD:

No felling is recommended, only uprooted and wind fallen trees are to be removed.

14.8 TREATMENT SERIES AND CYCLE:

As protection is necessary operations like maintenance of boundary to prevent encroachments, road repairs to ensure regular patrolling in vulnerable forest areas, stationing of anti smuggling squads at vulnerable points is recommended. The principal aim of this Working Circle is protection against the biotic interference; constitution of protection series is not only desirable but also other operations like soil and moisture conservation measures and tending operations are also suggested

Since the entire Working Circle area is to be treated within the currency of plan the protection cycle of ten years is prescribed, so that area shall be treated twice during the plan period.

TABLE -14.2 **SEQUENCE OF PROTECTION SERIES**

ASWAKHOLA PROTECTION SERIES					
Year	**Coupe No**	**Name of the RF**	**Comptt.No**	**Area In Ha**	**Total Area**
2026-27	I	Charkhola	1	88.40	315.50
		Baliposi	1	227.10	
2027-28	II	Aswakhola	1(P)	200.00	350.00
		Saptasajya	1(P)	150.00	
2028-29	III	Aswakhola	1(B)	175.56.	349.37
		Saptasajya	1(P)	173.78	
2029-30	IV	Saptasajya	1(B)	180.00	340.00
		Nischinta	1(P)	160.00	
2030-31	V	Nischnta	1(P)	180.00	331.67
		Ghantabaja	3	100.00	
		Kapilas	8 (P)	7.00	
		-do-	10 (P)	16.00	
		-do-	22 (P)	28.67	
2031-32	VI	Saptasajya	3	250.00	400.00
		Aswalhola	2(P)	150.00	
2032-33	VII	Aswakhola	2(B)	268.86	368.86
		Ghantabaja	4(P)	100.00	
2033-34	VIII	Ghantabaja	4(B)	153.74	353.74
		Nischinta	1(P)	200.00	
2034-35	IX	Nischinta	1(B)	156.90	356.90
		Matharagadi	1	200.00	
2035-36	X	Lahada	1	250.00	250.00
		Total			**3416.01**

RANJAGARH- (I) PROTECTION SERIES					
2026-27	I	Ranjagarh	4(P)	300.00	300.00
2027-28	II	Ranjagarh	4(B)	200.61	300.61
		Ranjagarh	5(P)	100.00	
2028-29	III	Ranjagarh	5(P)	290.00	290.00
2029-30	IV	Ranjagarh	5(B)	149.47	289.47
		Ranjagarh	7(P)	140.00	
2030-31	V	Ranjagarh	7(B)	285.74	285.74
2031-32	VI	Ranjagarh	8	320.92	320.92
2032-33	VII	Ranjagarh	9	245.24	245.24
2033-34	VIII	Ranjagarh	10(P)	275.00	275.00
2034-35	IX	Ranjagarh	10(B)	150.33	250.00
		Ranjagarh	15 (P)	100.00	
2035-36	X	Ranjagarh	15(B)	290.13	290.13
		Total			**2847.44**
RANJAGARH – (II) PROTECTION SERIES					
2026-27	I	Ranjagarh	16(P)	275.00	275.00
2027-28	II	Ranjagarh	16(B)	238.16	288.16
		Ranjagarh	17(P)	50.00	
2028-29	III	Ranjagarh	17(P)	280.00	280.00
2029-30	IV	Ranjagarh	17(B)	108.30	278.30
		Ranjagarh	20 (P)	170.00	
2030-31	V	Ranjagarh	20(B)	281.24	281.24
2031-32	VI	Ranjagarh	21(P)	285.00	285.00
2032-33	VII	Ranjagarh	21(B)	169.08	289.08
		Ranjagarh	22(P)	120.00	
2033-34	VIII	Ranjagarh	22(P))	290.00	290.00
2034-35	IX	Ranjagarh	22(B)	75.64	295.64
		Ranjagarh	24(P)	220.00	
2035-36	X	Ranjagarh	24(B)	308.94	308.94
		Total			**2871.36**
SUNDARAKHOL PROTECTION SERIES					
2026-27	I	Balibo	1 (P)	200.00	291.436
		Sunajhari	2 (P)	91.436	
2027-28	II	Sunajhari	2 (P)	100.00	225.50
		Bhairpur	1	125.05	

2028-29	III	Sunajhari	2 (P)	100.00	227.30
		Bhuban	1	127.30	
2029-30	IV	Sunajhari	2 (B)	100.00	300.00
		Tipiloi	1	200.00	
2030-31	V	Dhalapada	1	50.00	250.00
		Madhi	1	200.00	
2031-32	VI	Sunajhari	6(P)	100.00	250.00
		Kadalipa	1	150.00	
2032-33	VII	Sunajhari	6 (B)	100.00	245.70
		Nadabiri	1	145.70	
2033-34	VIII	Sundarakhol	3(P)	240.00	240.00
2034-35	IX	Sundarakhol	3(B)	150.94	250.94
		Sundarakhol	4(P)	100.00	
2035-36	X	Sundarakhol	4(B)	221.736	221.736
		Total			**2502.612**
ANANTAPUR – (I) PROTECTION SERIES					
2026-27	I	Anantapur	3(P)	275.00	275.00
2027-28	II	Anantapur	3(B)	250.705	300.705
		Anantapur	4(P)	50.00	
2028-29	III	Anantapur	4(P)	300.00	300.00
2029-30	IV	Anantapur	4(P)	76.56	276.56
		Anantapur	5(P)	200.00	
2030-31	V	Anantapur	5(B)	176.775	296.775
		Anantapur	7(P)	120.00	
2031-32	VI	Anantapur	7(P)	280.00	280.00
2032-33	VII	Anantapur	8(P)	240.00	291.241
		Anantapur	7(B)	51.241	
2033-34	VIII	Anantapur	8(B)	208.002	308.002
		Anantapur	6	100.00	
2034-35	IX	Anantapur	9(P)	280.00	280.00
2035-36	X	Anantapur	9(B)	282.937	282.937
		Total			**2891.216**
ANANNTAPUR – (II) PROTECTION SERIES					
2026-27	I	Anantapur	10 (P)	280.00	280.00
2027-28	II	Anantapur	10(B)	62.78	302.78
		Anantapur	12(P)	240.00	
2028-29	III	Anantapur	12(B)	292.585	292.585

2029-30	IV	Anantapur	15(P)	300.00	300.00
2030-31	V	Anantapur	15(B)	210.731	310.731
		Anantapur	25(P)	100.00	
2031-32	VI	Anantapur	25(P)	250.00	250.00
2032-33	VII	Anantapur	25 (B)	100.025	300.025
		Anantapur	26(P)	200.00	
2033-34	VIII	Anantapur	26(P)	250.00	250.00
2034-35	IX	Anantapur	26(B)	144.595	244.595
		Anantapur	28(P)	100.00	
2035-36	X	Anantapur	27	45.00	260.757
		Anantapur	28(B)	215.757	
		Total			**2791.473**
ANANNTAPUR – (III) PROTECTION SERIES					
2026-27	I	Anantapur	30(p)	200.00	200.00
2027-28	II	Anantapur	30(P)	200.00	200.00
2028-29	III	Anantapur	30(B)	113.564	213.564
		Anantapur	31(P)	100.00	
2029-30	IV	Anantapur	31(P)	200.00	200.00
2030-31	V	Anantapur	31(B)	225.43	225.43
2031-32	VI	Anantapur	34(P)	200.00	200.00
2032-33	VII	Anantapur	34(B)	217.023	217.023
2033-34	VIII	Anantapur	35(P)	200.00	200.00
2034-35	IX	Anantapur	35(P)	200.00	200.00
2035-36	X	Anantapur	35(B)	184.856	184.856
		Total			**2040.873**
ANANNTAPUR – (IV) PROTECTION SERIES					
2026-27	I	Anantapur	36(P)	235.00	235.00
2027-28	II	Anantapur	36(B)	236.475	236.475
2028-29	III	Anantapur	37(P)	250.00	250.00
2029-30	IV	Anantapur	37(B)	266.536	266.536
2030-31	V	Anantapur	38(P)	230.00	230.00
2031-32	VI	Anantapur	38(B)	226.906	226.906
2032-33	VII	Anantapur	39(P)	280.861	280.861
2033-34	VIII	Anantapur	40	291.776	291.776
2034-35	IX	Barabanka(N)	1	150.00	250.00
		Talcher border	1(P)	100.00	
2035-36	X	Talcher border	1(B)	250.00	250.00

		Total			**2517.554**
KANDHARA – (I) PROTECTION SERIES					
2026-27	I	Nandania	1	200.00	300.00
		Kandhara	1(P)	100.00	
2027-28	II	Kandhara	1(B)	309.556	309.556
2028-29	III	Kandhara	4(P)	250.00	250.00
2029-30	IV	Kandhara	4(B)	257.898	257.898
2030-31	V	Koi	1	200.00	300.00
		Kandhara	7(P)	100.00	
2031-32	VI	Kandhara	7(B)	300.00	300.00
2032-33	VII	Kandhara	7(B)	114.373	219.373
		Kandhara	3	105.00	
2033-34	VIII	Kandhara	11	356.54	356.54
2034-35	IX	Kandhara	16	269.91	269.91
2035-36	X	Kandhara	17	328.524	328.524
		Total			**2891.801**
KANDHARA – (II) PROTECTION SERIES					
2026-27	I	Kandhara	18(P)	240.00	240.00
2027-28	II	Kandhara	18(P)	240.00	240.00
2028-29	III	Kandhara	18(B)	92.216	242.216
		Kandhara	19(P)	150.000	
2029-30	IV	Kandhara	19(P)	220.00	220.00
2030-31	V	Kandhara	19(B)	213.981	213.981
2031-32	VI	Kandhara	21	239.763	239.763
2032-33	VII	Kandhara	22	182.74	182.74
2033-34	VIII	Kandhara	24(P)	250.00	250.00
2035-36	IX	Kandhara	24(B)	128.799	278.799
		Kandhara	25(P)	150.000	
2036-37	X	Kandhara	25(B)	241.749	241.749
		Total			**2349.248**
		Grand Total			**27,119.587**

14.9 METHODS OF EXECUTION OF TREATMENT:

14.9.1 Division into annual protection Areas: For smooth management of these areas, each Protection Series has been divided into 10 Annual treatment areas. The Annual coupes shall be attended to as per sequence.

14.9.2 Demarcation of Annual Coupes and Preparation of Annual Plan of Action: The Annual Coupes shall be demarcated in the field in the preceding season of treatment, signboards showing the name of the Forest Block, Protection Series, Coupe Number, Area and Year of Treatment shall be displayed at prominent points such as inter-sections of road crossing, boundary line of blocks, inspection path etc and treatment plan to be prepared and approved before execution.

14.10 FOREST PROTECTION MEASURES:

14.10.1 All the forest blocks included in this Working Circle shall be strictly protected from illicit felling, forest fires, grazing, encroachments, shifting cultivation and other biotic interferences. No felling alloweded except removal of uprooted and wind fallen trees, collection of NTFP prohibited to allow regeneration.

14.10.2 Illicit Felling: Strict surveillance over illicit felling, charcoal burning by posting anti smuggling / mobile squad, strengthening check gate and enforcing Orissa Forest Offence Rule, 1980.

14.10.3 Encroachment and Forest Protection: Re survey, demarcation, construction, repair of boundary pillar as per Rule, 168 & 169 of OFD Code and submission of prosecution case to court timely.

14.10.4 Fire Protection: The Orissa Forest (Fire Protection) Rules, 1979 shall be strictly followed, VSS and field staff provide with communication facilities and conveyance, preparation of fire map, awareness through meeting seminar leaflets etc and incentive to VSS to be followed.

14.10.5 Control Grazing: Orissa Forest (Grazing of Cattle) Rules 1980 be followed, lopping of trees be prohibited grazing be regulated awareness to be created.

14.11 Silvicultural Operation:

14.11.1. **Cleaning** – The area is subjected to illicit felling and other biotic interference. It is therefore prescribed to take up cleaning of the affected area to help recruitment and establishment of regeneration of principal and secondary species and also to prevent fire hazard during summer. The cleaning work are (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.

14.11.2 **Thinning** - Selection thinning is prescribed in congested patches 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. 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.

14.12 Artificial Regeneration:

All the gaps in the illicit area and other area of the working circle more 0.4 ha are to be surveyed and reflected in the map. Suitable gap planting is prescribed with indigenous species to supplement the existing crop. Also, the seeds of the natural species existing in the area may be in the onset of monsoon where the regeneration is poor.

14.13. Other Regulation:

14.13.1. **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.

14.13.2. **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.

14.13.3 **Fire protection** – The Division is very much prone to fire. 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. It is prescribed to engage fire fighting squad with provision of mobility during summer season. The Range level and Division level control room for fire to be made operational during the period. Adequate publicity for awarenesss of the people to be made to prevent fire hazard in the forest. VSS need to be strengthened. There must be provision of incentives for the forest fringe villagers. Also there must be fire line tracing and control burning in the fire prone area. Provision of watcher and other has been prescribed and the annual allotment required for fire protection is given Financial Forecast Chapter.

14.13.4. **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 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.

14.13.5. **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. Collection of stones in this Working Circle is to be 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.

14.13.6. **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 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.

14.13.7. 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. There must be annual maintenance of forest road with provision of site drain and cross drain Therefore these roads require to be properly maintained.Where ever necessary cause way and culverts are to be constructed to make the road all weather.

14.13.8. **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. 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.

14.13.9. **People Participation – Now the concept of** JFM has become vital for proper management of forest. 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 more and more VSS for forest protection in vulnerable pockets.

TABLE-14.3 FOREST OFFENCE CASES BOOKED FOR THE YEAR 1994-95 TO 2013-14

Year	OR Cases	UD Cases	Timber Seized	Person arrested	Total
(1)	(2)	(3)	(4)	(5)	(6)
1994-95	2633	634	-	NA	3267
1995-96	2408	654	401.4959	NA	3062
1996-97	1908	644	366.1457	NA	2552
1997-98	2006	854	676.2579	NA	2860
1998-99	1925	610	288.0313	NA	2535
1999-2000	1519	894	257.5535	NA	2413
2000-01	1850	8481	367.9600	NA	2331
2001-02	1866	462	144.7450	NA	2328
2002-03	1919	701	457.6590	NA	2620
2003-04	1374	489	304.1597	468	1863
2004-05	1356	488	189.8600	68-PR	1794
2005-06	1241	394	176.9365	47	1635
2006-07	1502	423	304.3170	43	1925
2007-08	1411	324	179.0698	38	1735
2008-09	1532	342	271.3488	70	1874
2009-10	1376	383	282.8168	69	17598
2010-11	1386	390	217.3232	46	1776
2011-12	1225	347	328.2062	48	1572
2012-13	1207	325	177.2167	41	1532
2013-14	1110	272	145.1362	27	1382

TABLE-14.4 CASES BOOKED & DISPOSED U/S 56 OF O.F. ACT 1972			
Year	**No of Cases booked**	**No of Cases disposed off**	**Balance for disposal**
(1)	**(2)**	**(3)**	**(4)**
1994-95	43	43	-
1995-96	53	53	-
1996-97	31	31	-
1997-98	33	33	-
1998-99	04	04	-
1999-2000	19	19	-
2000-01	78	78	-
2001-02	70	70	-
2002-03	117	116	01
2003-04	44	40	04
2004-05	45	40	05
2005-06	22	20	02
2006-07	28	23	05
2007-08	33	23	10
2008-09	27	17	10
2009-10	47	25	22
2010-11	48	33	35
2011-12	106	31	75
2012-13	165	16	149
2013-14	19	05	14

14.14 GUIDELINE FOR MANAGEMENT PRACTICES IN FOREST AREAS OUTSIDE SANCTUARY AND CORE AREA OF SATKOSIA TIGER RESERVE:

The DFO, Dhenkanal Division vide his memo No.5817 dated 18.08.2015 has reported that the comptt.no-5,6,7,8,9,12,15,25,26,27,28,30,31,34,35,36,37,38 & 40 of Anantapur RF,comptt.no.4,5,7,8,9,10,17,20,21,22 & 24 of Ranjagarh RF and compartment no - 4,7,11,16,17,18,19,21,22,24,25 of Kandhara RF are coming under tiger landscape area.

As per guidelines issued by Regional Chief Conservator of Forests-cum- Field Director, Satkosia Tiger Reserve, Angul for management practices in forest areas outside Sanctuary and core area in satkosia tiger Reserve vide his memo No.1681 dated 27.04.2015 the following management practices to be followed in the tiger landscape area.

1. Bamboo working not to be taken up in the areas of tiger landscape, frequently visited by tigers/leopards.
2. New bamboo culms attract wild herbivores as food. Hence patches of un-worked culms should be staggered with worked areas to avoid gregarious use of wild life.
3. Gregariously flowered bamboo clumps will be harvested in scattered blocks to avoid creation of large opening.
4. In the timber coupe, no felling in the riparian zones along stream, river, lake to be allowed.
5. Some old trees of dominant species are to be retained as seed bearers within coupe area.
6. Clear felling is not permitted, uneven-aged stand condition with heterogeneous composition will be maintained.
7. Status of regenerations will be used as an over-arching condition for allowing for tree felling, if regeneration status is below 20% under the tree, felling will not be undertaken.
8. Operation like climber cutting will not be taken up.
9. Snags/dead trees @ 2 trees per acre will be retained.
10. In Wildlife context, the cover values are important for food and shelter. To ensure a vertical stratification, mix of levels as mentioned below are to be maintained.
    (i) Wood land .. over 5 mtr. Height
    (ii) Scrub level .. over 2 mtr to 5 mtr height
    (iii) Field level .. over 0.5 mtr to 2 mtr height
    (iv) Ground level .. less than 0.5 mtr in height.
11. It is essential to maintain considerable age difference between stands as different plant and animal species have association with different successional stages.
12. Ecological availability of tree should be ascertained before marking for removal.
13. Tree will be considered ecologically available in the tiger landscape if,
    (a) Its removal does not create a crown gap beyond 43 to 45% particularly in winter.
    (b) Regeneration species within a radial distance of twice the ground distance radius will be selected for felling should have an established status".
14. The planting of only native species existing in the forest will be allowed. No exotic species, nor species with economic consideration alone will be planted.

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CHAPTER – XV
BAMBOO (OL) WORKING CIRCLE

15.1 GENERAL CONSTITUTION

This Working Circle is constituted with an aim to address the problems with regard to scientific management of bamboos and the problems involving means of livelihood of the rural poor and tribals of the locality. The area covered in the last Plan and all the plantations taken up under OBDA (NBM), OBDP (SP Bamboo) & other bamboo schemes included in this Working Circle.The total area allotted to this Working Circle is 7,966.613 ha which includes Bamboo planted area of 325 ha taken up during last plan period. The exact area of this circle will be finalized after field verification. It was observed that many bamboo production areas have become un-productive and un-economic for salvaging.

The collectors of bamboo have limited access to the market, and their primary concern is getting a fair price for the materials gathered by them and being able to dispose them off. The prevailing system does not adequately provide these facilities to the primary gatherers. 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/conservation of the natural resources, thereby increasing the productivity and making the bamboo forests sustainable. This working circle attempts to address the above difficulties.

15.2 GENERAL OBSERVATION AND VEGETATION:

Dendrocalamus strictus (Salia Bamboo) is the main species and grows in extensive areas. *Bambusa arundinacea* (Daba Bamboo) grows over small patches along the permanent nallahs and rivers. Salia bamboo generally grows on the hilltop, as an under storey or at some place as bamboo brakes. Mostly the bamboo present is of Quality III, except in few compartments where Quality II bamboo is present. Daba bamboo grows in moist valleys of Kandhara block and in a scattered manner in the eastern portion of Kapilas blocks and is less preferred by local people. Salia bamboo meets the demand of the local people.

15.3 SPECIAL OBJECTIVES OF MANAGEMENT:

The special objectives of the management of the Bamboo (Overlapping) Working Circle are within the scope of general objectives of management of the entire division. These are as follows:

(i) Systematic management of the bamboo forests to obtain sustained yield.
(ii) Meeting the demand of the local people and artisans from the depots of the Odisha Forest Development Corporation.
(iii) Meeting the demand for raw materials for the paper mills
(iv) Employment to forest dwellers and local people.
(v) Plantation of D. strictus, B. arundinacea in “C” type bamboo clump area.

15.4 AREA ALLOTMENT

Two cutting series namely Talaganda and Gurujanga are constituted taking into account of availability of bamboo crop and past yield. Both Salia and Daba bamboo will be worked out simultaneously. This is an overlapping working circle and the blocks included in the current working plan will continue as such in all the bamboo area. Bamboo silvicultural operation will be taken up to improve the growth of Bamboo. The areas under this working circle are Kandhara (16 nos Comptt.) and Hitinda (02 nosComptt.) forest blocks. The exact area under bamboo working in new plan will be decided after enumeration. The total area in this working circle is 7966.613 Ha.

Table-15.1 AREA OF ALLOTMENT OF BAMBOO WORKING CIRCLE				
HINDOL RANGE				
SL.NO	**Name of the cutting Series**	**Name of the Block**	**Comptt.No**	**Area In Ha**
1	Talaganda	Kandhara	2	502.342
			3	268.72
			4	507.898
			5	570.626
Total				**1849.586**
2	Gurjang	Kandhara	11	356.54
			16	553.224
			19	583.981
			21	443.146
			22	318.498
			23	346.018
			24	378.799
			25	391.749
		Hitinda	1	286.527
			2	419.263
Total				**4077.745**
G.Total				**5927.331**

15.5 ANALYSIS AND VALUATION OF THE CROP

This is an overlapping working circle and bamboo producing areas of the Division has been kept in this working circle. The bamboo crop mainly comprises of daba bamboo mainly along the nalla & perennial streams and very limited Salia bamboo is occurring in the forest fringe villages. The bamboo crop has been exposed to fire hazards and over-felling over the years. As a result, the condition of the bamboo forests has deteriorated due to unsystematic & indiscriminate feelingscoupled with grazing and want of sufficient m timely sylvicultural operations. Presently bamboo can be harvested only in parts of Kandhara and Hitinda RFs. There are many forest blocks like Ghantabaja, Matiamundia, Belabania, Sulia, Saptasajya, Mayuri, Charkhola Sunajhari, Ranjagarh, Anantapur, Sundarkhol, Nandabir, Aswakhola, Raigoda, Ramai, Nandania and Lahada where Bamboo is present but in a degraded condition. These bamboo areas need to be rehabilitated.

The bamboo clumps in the Bamboo (OL) Working Circle have been enumerated. The enumeration of bamboo clumps have been taken up along with tree species enumeration. The intensity of enumeration is 1%.The bamboo clumps occurring within 20 metres width on either side of the gridline i.e. 40 metre strip, have been enumerated and number of bamboo culms have been recorded in each clump.The enumeration has been done in two stages. At first stage, numbers of clumps species wise occurring in different gridlines have been enumerated. Based on these data the number of bamboo clumps has been determined with average number of culms per clump. Majority of the clumps are of Quality-II. The detail enumeration result in the Bamboo WC area and an abstract of enumeration result vis-a-vis its analysis is ngiven in **Table No. 15.2 & Table No. 15.3**

Table No- 15.2 Detail Enumeration Result in the Bamboo WC area.

Bamboo Block details				**Enumeration Data**		
Range	**Block**	**Comptt. No.**	**Area (in ha.)**	**Area enumerated (in ha)**	**No. of Clumps**	**No of Culms**
Hindol	Kandhra	2	502.342	5.02	42	936
Hindol	Kandhra	3	268.72	2.68	36	303
Hindol	Kandhra	4	507.898	5.078	44	1174
Hindol	Kandhra	5	570.626	5.706	71	1499
Hindol	Kandhra	6	470.666	4.706	52	1189
Hindol	Kandhra	7	514.373	5.14	67	2100
Hindol	Kandhra	8	605.43	6.05	30	193
Hindol	Kandhra	9	448.812	4.48	54	927
Hindol	Kandhra	11	356.54	3.56	26	159
Hindol	Kandhra	16	553.224	5.53	26	734
Hindol	Kandhra	19	583.981	5.839	33	803
Hindol	Kandhra	21	443.146	4.431	4	49
Hindol	Kandhra	22	318.498	3.18	1	30
Hindol	Kandhra	23	346.018	3.46	3	19
Hindol	Kandhra	24	378.799	3.78	10	160
Hindol	Kandhra	25	391.749	3.91	8	200
Hindol	Hitinda	1	286.527	2.86	4	170
Hindol	Hitinda	2	419.263	4.19	1	30
			7966.613	**79.6**	**512**	**10675**

Table No- 15.3 Abstact of Enumeration Result vis-à-vis its analysis.						
Bamboo Block details				**Analysed Data**		
Range	**Block**	**Compartment**	**Area (in ha.)**	**A**	**B**	**Q**
Hindol	Kandhra	2	502.342	8	22	II
Hindol	Kandhra	3	268.72	13	8	II
Hindol	Kandhra	4	507.898	9	27	II
Hindol	Kandhra	5	570.626	12	21	II
Hindol	Kandhra	6	470.666	11	23	II
Hindol	Kandhra	7	514.373	13	31	II
Hindol	Kandhra	8	605.43	5	6	II
Hindol	Kandhra	9	448.812	12	17	II
Hindol	Kandhra	11	356.54	7	6	II
Hindol	Kandhra	16	553.224	5	28	II
Hindol	Kandhra	19	583.981	6	24	II
Hindol	Kandhra	21	443.146	1	12	II
Hindol	Kandhra	22	318.498	1	30	II
Hindol	Kandhra	23	346.018	1	6	II
Hindol	Kandhra	24	378.799	3	16	II
Hindol	Kandhra	25	391.749	2	25	II
Hindol	Hitinda	1	286.527	2	43	II
Hindol	Hitinda	2	419.263	1	30	II
			7966.613			
Total Area – 7966.61 ha, Area Enumerated – 79.6 ha Average Clumps per ha – 6 Nos and Culms per Clump – 21 Nos A = Nos of Clumps per ha, B = Nos of Culms per Clump. Q-I = Culm height equal to or more than 9 metres, Q-II = Culm height in between 6 to 9 metres & Q-III is less than 6 metres						

15.6 SILVICULTURAL SYSTEM:

The silvicultural system to be adopted for Salia and Daba bamboo is "culm selection-cum-clump improvement" coupled with cultural operation to obtain substainable yield. In this system 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.

15.7 CUTTING CYCLE & CUTTING SERIES

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 Working Circle.Each cutting series is divided into four coupes namely A, B, C, and D.

15.8 TABLE OF BAMBOO CUTTING OPERATION

Coupe will be opened for working from October to June. The sequence of cutting series is shown in management maps. If the cutting operation could not be taken up in a particular year because of some factors, those forest blocks will be taken for cutting in subsequent years in addition to the area earmarked for the current year.

Table-15.4	**SEQUENCE OF CUTTING SERIES**			
Talaganda cutting series				
Year	**Coupe No**	**Block**	**Comptt. No**	**Coupe Area in Ha**
2026-27	A	Kandhara	2	502.342
2030-31				
2034-35				
2027-28	B	Kandhara	4	507.898
2031-32				
2035-36				
2028-29	C	Kandhara	5	570.626
2032-33				
2036-37				
2029-30	D	Kandhara	3	268.720
2033-34				
2037-38				
		Total	**4**	**1849.586**
Gurjanga cutting series				
Year	**Coupe No**	**Block**	**Comptt. No**	**Coupe Area in Ha**
2026-27	A	Kandhara	19, 21	1027.127
2030-31				
2034-35				
2027-28	B	Hitinda	11, 16	909.764
2031-32				
2035-36				
2028-29	C	Kandhara	1, 2	705.790
2032-33				
2036-37				
2029-30	D	Kandhara	22,23,24,25	1435.064
2033-34				
2037-38				
		Total	**10**	**4077.745**
G.Total			**14 Nos**	**5927.331**

15.9 CALCULATION OF THE YIELD

Yield will be regulated by area. However, for the calculation of the yield, the bamboo felling/cutting rule that has been prescribed by the Chief Conservator of Forests (Central), Eastern Regional Office, MOEF, Government of India, Bhubaneshwar vide his letter No. 13/FCWP/OS-Gen dtd 24th December,1990 is referred to. As per the said rules culms upto one year of age (Karadi) & the bamboo culms over one year but less than two years of age will not be cut under any circumstances. Such more than one year old culms and the culms which

are older than two years but less than three years of age are also two be retained in the clump and their number shall not be less than number of Karadis. In addition the minimum culms per clump to be retained after cutting shall be not be less than 15 culms for clump quality- II, 10 culms for clump quality- III & 20 culms for clump quality- I.

Keeping the aforesaid conditions, the yield estimation has been done for each bamboo Cutting Series vis-à-vis annual bamboo coupe. The bamboo enumeration data has been taken into account for Clump & Culm analysis to arrive at number of Culms available for harvest per Clump. Further as revealed from the Tabular statement No. 6.3, the enumerated clumps are of Quality- II. Since one Sale Unit (SU) is equal to 2400 RMT or one MT, the formula used for yield calculation is as follows.

Yield of the Cutting Series (or Annual Coupe) = Area of Cutting Series (or Annual Coupe)
X No. of Clumps per hectare
X No. of harvestable Culmms/Clumps
X (Average Culm height/2400)

The yield of bamboo is estimated as per following **Table - 15.5**

Table No – 15.5 Bamboo Cutting Series & Bamboo Coupe Wise Yield Estimation in Sale Units (SU)

Cutting Series	'A' Coupe		'B' Coupe		'C' Coupe		'D' Coupe		TOTAL	
	Area	Yield	Area	Yield	Area	Yield	Area	Yield	Area	Yield
Talaganda	978.564	305.8	1176.057	0.0	963.185	338.6	771.062	0.0	3888.868	644.4
Gurjanga	1435.064	33.4	705.790	71.1	909.764	34.1	1027.127	33.7	4077.745	172.3
Total	**2413.628**	**339.2**	**1881.847**	**71.1**	**1872.949**	**372.7**	**1798.189**	**33.7**	**7966.613**	**816.7**

15.10 METHOD OF EXECUTION OF OPERATION

15.10.1 DEMARCATION OF ANNUAL COUPES

(i) Attempt will be made for formation of coupes in such way that coupe boundaries generally coincide with compartment or sub-compartment boundaries. Natural features like nallahs, extraction paths or ridges have also been taken as coupe lines. Coupe lines shall be demarcated by double coal tar ring at breast height on trees along the boundary at visible distance.

(ii) The bamboo coupe shall be indicated by signboards at corners or at points of intersection with roads, inspection paths and boundary lines of Reserved Forests. The signboard should contain the name of the cutting series, the sequence of the coupe, its area, year of working and compartment number.

15.10.2 CUTTING OPERATION

(i) The State Government decided that the Orissa Forest Development Corporation Ltd would be doing bamboo working since 1988 and it used to work through RMP and the working was totally stopped since 1999.

(ii) Paper industries have reduced their requirement of bamboo. The cost price of bamboos harvested from interior forests is uneconomic as compared to the market price of wood. In the mean while, they have found out the alternative sources (wood) of raw material for their industries.

(iii) The bamboo cutting shall be done between 1st October and 30th June. Felling should be done by any agency as per the decision of the Government. It should be done strictly as per the cutting rules. The coupe shall be divided into four sections running along the contours. The section from top shall be worked first. The first section shall be completed in all respects before commencement of work in second section and so on.

(iv) The agency working out the bamboo coupes shall be responsible to supply bamboo to the local tenants.

15.11 WORKING OF BAMBOO

Bamboo shall be worked by a definite rule that has been prescribed by the Chief Conservator of Forests (Central), Eastern Regional Office, MOEF, Government of India, Bhubaneshwar vide his letter No. 13/FCWP/OS-Gen dtd 24th December, 1990 communicated vide Principal Chief Conservator of Forests, Orissa's Memo No. 26951 (40) dated, 28th December 1990 which envisages preparation of treatment map and cutting rules. The rules shall be followed in toto without any deviation for working of Salia bamboo, Daba bamboo and necessary treatment to be taken up for different clump quality, gregarious and sporadic flowered areas as envisaged.

15.11.1 CLASSIFICATION OF BAMBOO & TREATMENT TYPE.

(i) Having completed the demarcation of bamboo coupes and before taking it up for working, a Treatment map will be prepared by the Agency for working on a copy of available management map in 1: 25,000 scale indicating Salia and Daba bamboo areas respectively.

(ii) Treatment types to be distinguished shall be based on the assessment of the standard Salia bamboo quality classes and actual clump condition. In both these cases areas less than 4 ha in extent will not be separated out as distinct Treatment types.

(iii) For Salia Bamboo areas the following Treatment types have been identified:

Treatment type 'A': - Area with healthy and well stocked bamboo clumps consisting of

Clump quality - I	Culm height of bamboos 9 mt and up
Clump quality - II	Culm height of bamboo between 6 to 9 mt
Clump quality - III	Culm height of bamboos below 6 mt

Treatment type 'B': - Areas with well stocked but degraded, damaged, congested and / or fire burnt clumps.

Treatment Type 'C': - These are the areas where in bamboo clumps are sparse and scattered.

If necessary the Treatment Types B & C may be further classified into the above three clump quality classes.

15.11.2 BAMBOO CUTTING RULES:

(A) CUTTING RULES UNIFORMLY APPLICABLE TO ALL THE TREATMENT TYPES:

(i) 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.

(ii) 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.

(iii) 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 within 01 meter distance will be regarded as one clump.

(iv) 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.

(v) 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.

(vi) The cut shall be made with a sharp instrument to ensure that the stump remains intact with out splitting.

(vii) 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.

(viii) Rhizomes shall not be dug. Climber shall be cut from all the bamboo clumps during working of the coupe.

(ix) Bamboo cutting shall not be done from 1st July to 30th September. Bamboo strips will not be used in tying the bamboo bundles.

(x) 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.

(xi) 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.

(xii) Lopping of bamboo either for feeding of livestock or otherwise is strictly prohibited if sporadic flowering is observed in the locality.

(xiii) 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.

(B) CUTTING RULES FOR SALIA BAMBOOS (*Dendrocalamus strictus*)

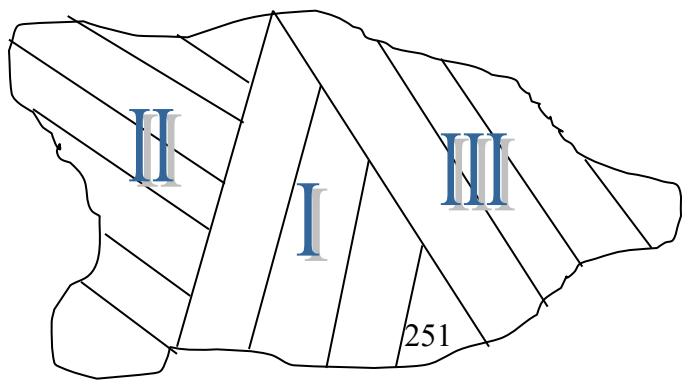
Salia bamboo (*Dendrocalamus strictus*) will be worked out as per the prescriptions furnished above as in 15.11.2(A)

(C) CUTTING RULES FOR DABA BAMBOOS (*Bambusa arundinacea*)

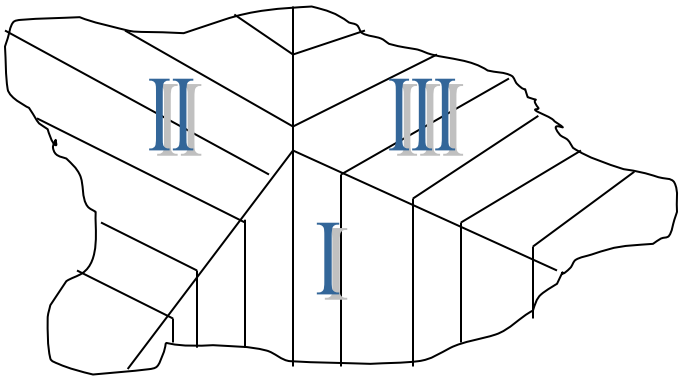
(a) All bamboo culms in a clump, which are more than 3 years old, shall be harvested on culm selection basis provided the number of culms left uniformly distributed in a clump shall not be less than 10.

(b) In case of congested clumps where culm selection is not possible, the clump should be carefully felled by forming segments as per any of the two diagrams given below and depending on the interlacing of the bamboo with a view to provide support to the remaining segments against wind damage. The maximum number of segments under which a congested clump should be worked out will be three and at each working not more than one segment will be cut. Stumps higher than 50 cm or more than two internodes should not be left. Where three segments are formed, the middle segments (I) will be in the shape of triangle. Only the middle segment (I) should be felled at the first working. Two diagrams showing divisions of the clump in three segments are given below: -

First preference



Second preference



(D) CUTTING RULES APPLICABLE TO SPECIFIC TREATMENT TYPES:

(a) **Treatment type - A**

1. Commercial felling will be done in those clumps, which have more than the prescribed minimum number of culms in each.

2. Cultural operations will be carried out in clumps having less than the prescribed minimum number of culms in each. In such clumps commercial fellings will not be done.

(b) **Treatment type - B**

1. There will be no commercial felling in any clump.

2. Only cultural operations will be carried out which will include:

(i) Felling of all dead, dried, over matured, burnt, broken and grossly damaged bamboos.

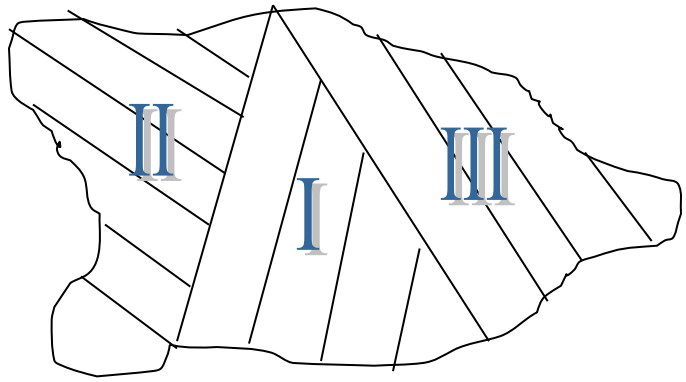
(ii) Broken or cut bamboos or high stumps in green condition having length of 2.5 meters or more may be retained, if necessary, to maintain size of the clumps.

(iii) The minimum number of culms to be retained per clump as prescribed in foregoing paras for various quality classes may not be strictly followed if necessity so arises.

(iv) The congested bamboo clumps should be clear felled by forming segments. The maximum number of segment, under which a congested clump should be worked out, will be three and at each working not more than one segment will be worked out. Where three segments are formed, the middle segment will be in the shape of a triangle having apex at the

periphery. Only this middle segment should be felled at the first working. In subsequent cycles, sides segments should be felled.

Diagram showing divisions of the clump in these segments is given below: -



(c) **Treatment type - C**

1. Only cultural operations will be carried out in the existing bamboos clumps.

2. The bamboo potentiality of such forests will be augmented by raising bamboo plantation. The minimum area to be planted annually will be 40 hectares or one third of the area under this type.

3. Tending and cultural operations in the areas planted with bamboo will be done as per the standard practice.

(E) GUIDELINE FOR MANAGEMENT PRACTICES IN FOREST AREAS OUTSIDE SANCTUARY AND CORE AREA OF SATKOSIA TIGER RESERVE:

The DFO, Dhenkanal Division vide his memo No.5817 dated 18.08.2015 (**Annexure-XXVIII**) has reported that the comptt.no-5,6,7,8,9,12,15,25,26,27,28,30,31,34,35,36,37,38 & 40 of Anantapur RF,comptt.no.4,5,7,8,9,10,17,20,21,22 & 24 of Ranjagarh RF and compartment no - 4,7,11,16,17,18,19,21,22,24,25 of Kandhara RF are coming under tiger landscape area.

As per guidelines issued by Regional Chief Conservator of Forests-cum- Field Director, Satkosia Tiger Reserve, Angul for management practices in forest areas outside Sanctuary and core area in satkosia tiger landscape vide his memo No.1681 dated 27.04.2015 **(Annexure- XXVII)** the following management practices to be followed in the tiger landscape area.

i. Bamboo working not to be taken up in the areas of tiger landscape, frequently visited by tigers/leopards.
ii. New bamboo culms attract wild herbivores as food. Hence patches of un-worked culms should be staggered with worked areas to avoid gregarious use of wild life.
iii. Gregariously flowered bamboo clumps will be harvested in scattered blocks to avoid creation of large opening.
iv. In the timber coupe, no felling in the riparian zones along stream, river, lake to be allowed.
v. Some old trees of dominant species are to be retained as seed bearers within coupe area.

vi. Clear felling is not permitted, uneven-aged stand condition with heterogeneous composition will be maintained.

vii. Status of regenerations will be used as an over-arching condition for allowing for tree felling, if regeneration status is below 20% under the tree, felling will not be undertaken.

viii. Operation like climber cutting will not be taken up.

ix. Snags/dead trees @ 2 trees per acre will be retained.

x. In Wildlife context, the cover values are important for food and shelter. To ensure a vertical stratification, mix of levels as mentioned below are to be maintained.

(v)	Wood land	..	over 5 mtr. Height
(vi)	Scrub level	..	over 2 mtr to 5 mtr height
(vii)	Field level	..	over 0.5 mtr to 2 mtr height
(viii)	Ground level	..	less than 0.5 mtr in height.

xi. It is essential to maintain considerable age difference between stands as different plant and animal species have association with different successional stages.

xii. Ecological availability of tree should be ascertained before marking for removal.

xiii. Tree will be considered ecologically available in the tiger landscape if,

xiv. Its removal does not create a crown gap beyond 43 to 45% particularly in winter.

xv. Regeneration species within a radial distance of twice the ground distance radius will be selected for felling should have an established status".

xvi. The planting of only native species existing in the forest will be allowed. No exotic species, nor species with economic consideration alone will be planted.

15.12 SUBSIDIARY SILVICULTURAL OPERATION:

(i) All cutting debris shall be removed from the clump and the clump shall be left cleaned, wherever possible. The exposed rhizomes shall be covered with soil scrapped from the surrounding plain areas and preferably from uphill side of a hilly or undulated terrain. Both these operations shall have to be done along with the main cutting operation or in the following year.

(ii) No damage shall be caused to rhizomes and rootstock.

15.13. TREATMENT OF GREGARIOUSLY FLOWERED AREAS

(i) Bamboo seedlings at a spacement of about 4m x 4m are to be adopted and regained and the rest are to be thinned out.

(ii) Clearing, soil working and weeding are to be done around the adopted bamboo seedlings up to a radius of 50 cm.

(iii) To maintain the continuity, planting up of bamboo rhizomes is also to be resorted to especially in big gaps.

(iv) All the flowered clumps are to be worked out as per the prescriptions of the Working Plan.

(i) The area should be closed for grazing.

(ii) Elaborate fire protection measures are also to be taken.

15.13.1 In selection forest, the age of clump varies and accordingly varies the intensity of gregarious / sporadic flowering. The delay in flowering in poor sites is due to the effect of site quality, which is related to the growth and storage of starch, sugar and other substances in the clump, which help flowering. In a well-managed forest, intensity of flowering is less in comparison to an unworked forest consisting congested clumps. Intensity of flowering is more in area having more biotic interference in form of grazing and fire in comparison to protected area. It is important to identify the characters of flowering in Salia bamboo to decide appropriate management technique.

Table-15.6 Characteristic of Bamboo flowering

SLNO	**Sporadic flowering**	**Gregarious Flowering**
1.	Scattered nature of flowering. Only few clumps are involved in flowering.	Flowering occurs almost in the entire area.
2.	Only a few culms flower in a clump.	It involves almost all or some proportion of clumps. Flowering takes place in all the culms in clump.
3.	The culm may or may not die after flowering.	All the culms of a clump die after flowering.
4.	The clump does not die.	Flowering is followed by the death of the clump.
5.	It takes place usually irregularly almost every alternate year.	It follows a cycle of long interval of 20 to 65 years.
6.		It progresses in a definite direction like an epidemic wave.
7.		It takes 2 to 4 years to complete the flowering in the area.

15.13.2. The bamboo has different nomenclature and morphological character based on its age which is easily indentified as detailed in the following

TABLE-15.7 DISTINGUISHING MORPHOLOGICAL CHARACTERS OF THE CULMS OF DIFFERENT AGE

Culm Age	Morphological character
Kardi(1st year culm)	Culm sheath present on lower half of culm. Branches present through-out the length of culm. Culm green uniformly, bloom is abundantly present and comes off easily on finger. A fresh cut just under the node shows the same fresh colouration even after one or two minutes.
Kasi(2nd year culm)	Culm sheath mostly absent except some reminisces. Culm dark in colour. Branches present particularly at all nodes. Bloom is patchy, greyish white in colour and comes off less easily on finger. A fresh cut just under the node shows the same fresh colouration even after one or two minutes.
Pakala(3rd & 4th year culm)	Culm sheath absent. White bloom absent. Blackish grey or dark blotches appear which come off on finger slightly on rubbing. A reddish brown colouration after one or two minutes.

15.14 Artificial Regeneration: There are gaps noticed in bamboo treatment type B & C coupe of is cutting series**.** The renewal of a bamboo clumps by planting in B and C treatment type area has been prescribed.After annual cutting the area should be surveyed and reflected in the map at the time of demarcation. The plantation should be taken with indigenous species to restore the stock **.**

15.15 MISCELLANEOUS REGULATIONS

15.15.1 **Area treatment: -** All clumps in worked out coupes shall be mounded with soil to induce regeneration growth of culms. Stone packing and making of half moon trenches shall be done in the downhill of the clump to conserve water. This shall be done in the year following the coupe work.

15.15.2. **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.

15.15.3. **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.

15.15.4. **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.

15.15.5. **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.

15.15.6 **Rights and Concessions: -** Rights and concessions shall be regulated as laid down in Chapter I and JFM policy of Government of Orissa.

CHAPTER – XVI

THE WILD LIFE (O.L.) WORKING CIRCLE

16.1 GENERAL CONSTITUTION:

The Wild Life is an integral part of the Forests and play major role in the forest eco-system. The National Forest Policy, 1988 has emphasized the need of conservation of wild life and their habitat. The forests of Dhenkanal possess rich heritage of wild life. During the *Durbar* regime wild life was found in abundance all over the Division due to rigid preservation/protection policy adopted by the then rulers. Although holistic prescriptions had been made in the outgoing plan for management of wild life, these could not be implemented due to constraint of funds. Therefore, for protection of the existing wild life, to improve their habitat and to conserve bio diversity, this O.L. Working Circle extended to the entire working plan area as well as geographical area of the Division.

The division has an important place in the wildlife wealth of Orissa. The division has also rich biodiversity in flora that means rich in fauna also. Keeping in view of the richness of the fauna, Kapilas R.F. has been declared as Sanctuary in the year 2011.

16.2 GENERAL CHARACTER OF VEGETATION:

The working circle extended to the entire tract of the Division as well as geographical area of the Division. The Division has rich biodiversity both flora and fauna.The detail description of the composition and diversity of the forests allotted to this working circle have been discussed in Chapter -1 of Part-I of this Plan.

16.3 ANALYSIS AND VALUATION OF THE WILD LIFE AND ITS HABITAT:

In the outgoing Working Plan the management of wild life was also an Over Lapping W.C. The prescription would hardly be carried out. The wild life census report of recent past shows there is decrease in no of wild life animal in the tract, formal analysis and valuation of the data not maintained at Division level except of statistical purpose. Moreover, the wild life habitat continued to be degraded mainly due to the increase illicit felling, poaching leading to frequent main animal conflict.

16.4 AREA AND ALLOTMENT:

All the forest blocks included in the plan have been allotted to this overlapping working circle. Moreover, this circle covers the entire geographical area of the Division as far as protection of wildlife is concerned. As this working circle overlaps the entire plan area i.e. 99,755.50 Ha.

16.5 SPECIAL OBJECTIVES OF MANAGEMENT:

The special objectives for this Working Circle include:

1. To conserve, protect and improve wild life habitat with special emphasis on the sanctuary area and corridor for elephants.
2. To promote wildlife in general and endangered species in particular.
3. To create awareness among the local people regarding necessity to conserve and protect the wildlife and their habitat.
4. To conserve and develop important wildlife habitat for the purpose of eco-tourism.
5. To increase biodiversity and wildlife population.
6. To help prevention of wildlife related crimes.
7. Strengthening of elephant corrodors and reduction of man-animal conflict.

16.6 METHOD OF TREATMENT:

The Wild Life (Overlapping) Working Circle includes total geographical of area of Division i.e. 99,755.50 hectares. The number of wild animals has deteriorated during the plan period. The carnivores have reduced in number and sighting is very less. The man-elephant conflict is increasing day by day because elephants are coming out to village areas due to non-availability of food, water and cover inside forest. This working circle shall include forest areas having importance of wildlife and recreation. Like wild flora, wild fauna also has genetic pool, which can be utilized for the future welfare of humanity. Wild animals and their products have great commercial value and due to excessive and illegal exploitation of this resource in the past, depletion of wild life has taken place. Some of the methods proposed are

(i) Identification and mapping of wild life rich pockets with their migratory paths.
(ii) Protection measures against poaching with such incidents being properly investigated and pursued till culmination of the prosecution proceedings. The pictorial directory of all identified poachers to be prepared and circulated in the locality.
(iii) Improvement of wild life habitat through appropriate silvicultural operations.
(iv) Tree cover around the stream, water holes to be maintained and improved.
(v) Creation of sufficient water bodies and maintenance of more salt licks and game tanks as per the assessed requirements.
(vi) Infrastructure like watch tower, arms and ammunition and wireless sets etc. to be improved along with anti-poaching squad.
(vii) Identified pockets of wild life to be developed as eco-tourism centres.
(viii) Massive plantation of fodder and fruit bearing trees to be taken up.
(ix) Creation of awareness among the visitors and nature lovers towards wild animals and its habitat.
(x) Engagement of anti-poaching squad, elephant tracker and rehabilitation of elephant corridor to be strengthened.
(xi) Special emphasis on reduction of man-animal conflict, timely payment of compassionate grant to the victims.
(xii) Sign survey of predator, co-predators and herbivores to be taken up on half yearly basis in Tiger Landscape areas following the NTCA guide lines to monitor the predator and prey species.
(xiii) Elephant census to be taken up on every alternative year to know its population and to study behavior.

16.6.1 Treatment of Kapilas and adjoining Blocks:

The areas which are religious spots or places of tourist attraction will be protected and recommendation will be made under this working circle. These areas include Kapilash, Saptasajaya, Dandadhar etc. There will be absolutely no felling in these blocks. However, in some blank patches of Kapilash, foot hills of Saptasajya plantation may be taken up to augment the existing forest area. In pursuance to Wildlife Protection Act 1972 (53 of 1972) the State Govt. has declared Kapilash R.F.

area as sanctuary named Kapilash Wild life Sanctuary vide Notification No.8F(WL)-25/11 5937/ F & E in the year 2011. The water level is depleting in the underground streams of Kapilas and adjoining blocks. This will have adverse impact on the survival of wild life. Immediate steps are required to increase the water level by adopting suitable measures like reducing biotic interference, soil stabilization and safe disposal of runoff water through low height contour bunds, staggered trenches, planting of species like Agave, Ipomea to provide soil cover etc.

16.6.2 Kapilas Zoo

To promote the wild life conservation and to create awareness among the public, a mini zoo has been established in the foothills of Kapilas over an area of 26.640 ha. This zoo came up initially as a deer park in 1979 over an area of 5 ha inside a teak plantation in Kapilas RF to propagate a sense of love for nature and wildlife conservation among the tourists, who visit the famous tourist center and temple of Lord Chandrasekhar. Subsequently, the adjoining areas of Kapilas RF and Debottar land were included and the zoo enlarged to the present area of 26.64 ha, out of this Kapilas area is 15.340 ha and Debottar land is 11.300 ha.

16.6.2.1. There are Deer, Sambar, Barking Deer, Bear, and variety of birds in the zoo. The details of the animals present in the zoo are given the table –16.1

TABLE-16.1 POPULATION OF WILD ANIMALS IN KAPILASH ZOO

Name of animals / birds/reptiles	Stock position			
	M	F	US	Total
(1)	(2)	(3)	(4)	(5)
ANIMALS				
1.Spotted Deer	49	76	-	125
2.Sambar	06	05	-	11
3.Solth Bear	01	01	-	02
4.Mithun	03	-	-	03
5.Wild Pig	01	01	-	02
6.Baby Elephant	02	01	-	03
7.Barking Deer	02	-	-	02
BIRDS				
8.Peafowl	02	04	-	06
9.Brahminy Kite	-	-	02	02
10Budgerigar			36	36
11. Gunia Fowl	-	-	01	01
12.Owl	-	-	03	03
REPTILES				
13.Crocodiles	01	01	-	02
14.python	-	-	02	02
TOTAL	**67**	**89**	**44**	**200**

16.6.2.2 The zoo is visited by thousands of visitors every year. On an average 80000-100000 tourists visit this zoo per annum. There is lot of scope to increase the influx of visitors' number. This zoo is the major source of entertainment for the people of Dhenkanal and surrounding industrial areas of Angul, Chowdwar, Sukinda, and Nalco Nagar, Talcher. But there are several administrative problems in the zoo. It is becoming difficult to feed the animals due to funds constraint. The staff number is also

limited and presently only one forest guard, two animal keepers and eight watchers being supervised by a Range Officer manages the zoo.

16.6.3 WILD LIFE CENSUS: To know the present status of wild life in the Division, census work is carried out in regular interval. The census data of wild life elephant, predators, co-predators and hervivores of the Division carried out during 2013 is furnished in the following **Table.16.2**

TABLE-16.2 WILD LIFE CENSUS

Sl No.	Name of wild animal	Year of census	Total
(1)	(2)	(3)	(4)
1	Elephant	2005	102
		2007	132
		2010	157
		2013	162
2	Wolves	2004	150
3	Wild Dog	2004	20
4	Bear	2004	409
5	Wild Bear	2004	304
6	Sambar	2004	40
7	Spotted Deer	2004	130
8	Mouse Deer	2004	150
9	Barking Deer	2004	298
10	H. Langur	2004	605
11	Rh. Macaque	2004	690
12	Porcupine	2004	260
13	Pangolin	2004	98
14	Mongoose	2004	708
15	G. Squirrel	2004	445
16	F. Squirrel	2004	208
17	G. Hornbill	2004	25
18	Peafowl	2004	1000
19	Rabbit	2004	230
20	Peacock	2004	50
21	Jackal	2004	1102
22	Monkey	2004	1002
23	Tiger	2006	Nil
		2010	
		2013	

16.6.4 MAN- ELEPHANT CONFLICT

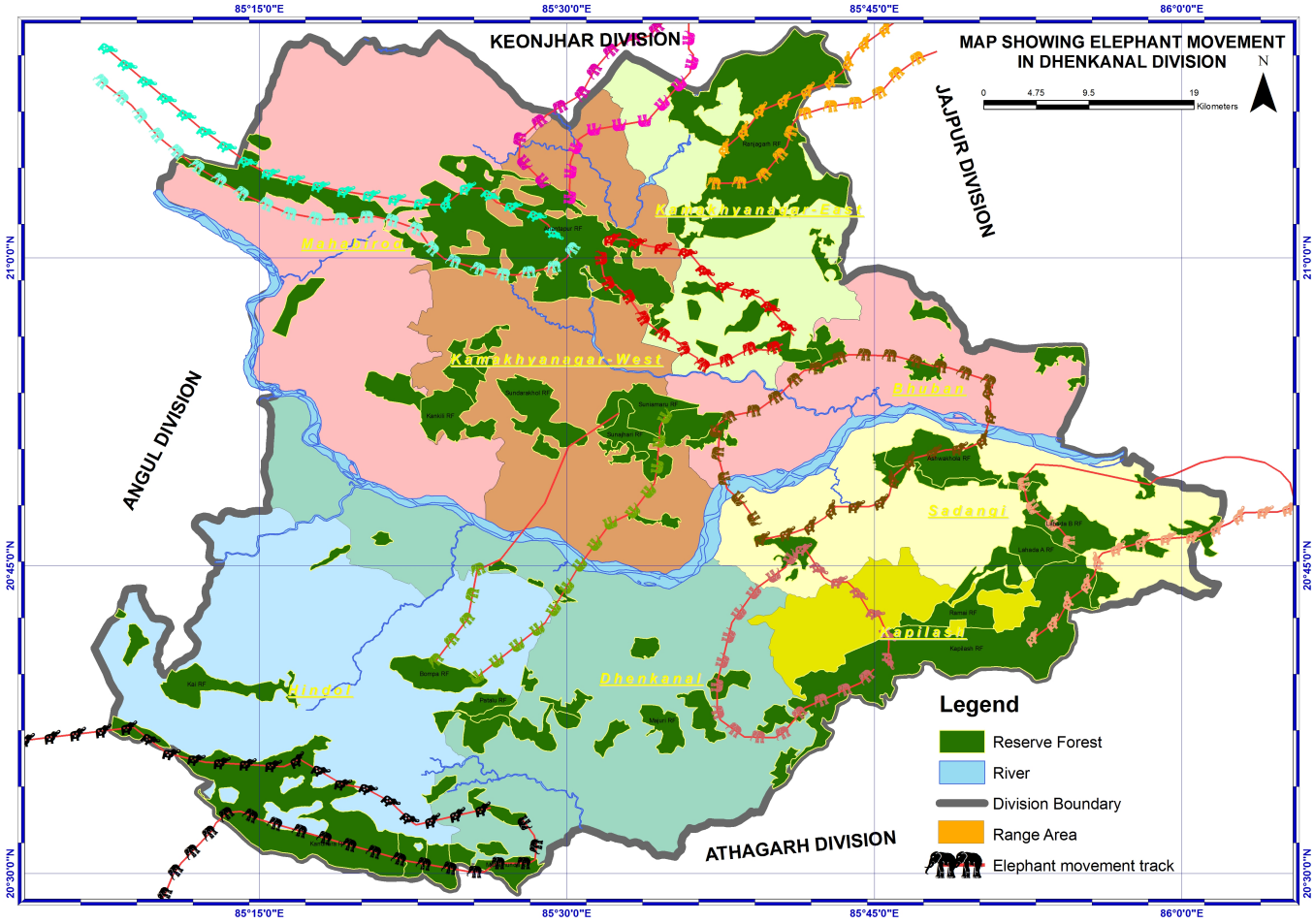
The elephant population in the division is high and there is increased day by day. Every year there are several incidences of heavy crop damage; human killings and injury to human beings are often seen. The house, crop damage and number of human killings by elephant has become regular phenomeno.. The details of the crop damage by elephant and killings and injury of human beings by wild animals are given in the following **Tables-16.3**

TABLE-16.3 CROP DAMAGE BY WILD ELEPHANT AND PAYMENT OF COMPENSATION				
Year	Crop damage		House Damaged	
	Area (in Acr.)	Compensation Paid	No. of House	Compensation Paid
2004-05	414.670	6,42,870/-	-	-
2005-06	16.300	3,00,000/-	-	-
2006-07	124.870	5,24,610/-	-	-
2007-08	752.010	9,26,100/-	-	-
2008-09	779.300	7,79,300/-	-	-
2009-10	1147.720	8,39,300/-	-	-
2010-11	1241.570	12,41,570/-	42	85,500/-
2011-12	2104.770	35,37,210/-	72	1,44,000/-
2012-13	1107.062	72,10,616/-	143	3,02,000/-
2013-14	1604.881	1,33,25,501/-	64	1,36,000/-
Source: Divisional Forest Officer, Dhenkanal				

TABLE-16.4 KILLING AND INJURY BY WILD ANIMALS (ELEPHANT)		
Year	Human kill/Injury	Compensation paid
2004-05	09	6,00,000/-
2005-06	03	3,00,000/-
2006-07	02	1,00,000/-
2007-08	04	4,00,000/-
2008-09	05	5,00,000/-
2009-10	06	6,00,000/-
2010-11	19	19,00,000/-
2011-12	10	18,00,000/-
2012-13	07	8,00,000/-
2013-14	10	14,00,000/-
Source: Divisional Forest Officer, Dhenkanal		

TABLE-16.5 POACHING OF WILD ANIMALS FOR THE YEAR 2004-05 TO 2009-10		
Year	**Species**	**No. of species killed**
(1)	**(2)**	**(3)**
2004-05	Elephant	06
	Wild Boar	02
	Barking Deer	01
	Python	01
2005-06	Elephant	04
	Wild Boar	01
	Barking Deer	03
	Python	01
	Spotted Deer	03
	Hyena	01
	Indian Civet (Sariapatini)	01
	Peacock	02
	Eagle	02
2006-07	Elephant	01
	Wild Bore	03
	Barking Deer	04
	Deer	02
	Hyena	01
2007-08	Wild bore	04
	Elephant	04
	Barking Deer	03
	Deer (Chital)	03
	Bear	02
	Kutura	01
	Peacock	04
	Parrot	03
	Owl	01
2008-09	Elephant	04
	Leopard (Skin)	01
2009-10	Elephant (Calf)	06
	Spotted Dear	01
	Barking Deer	02
	Hyena	01
	Rattle	01
	Owl	02
	Mouse Deer	01
2010-11		NA
2011-12		NA
2012-13		NA
2013-14		NA

MAP SHOWING ELEPHANT MOVEMENT IN DHENKANAL DIVISION



16.6.5 COMMON INJURIES TO WILDLIFE

There are also incidents of poaching of wild animals in this division. Poaching of fauna for meat, ivory, horn, fur, feather, hides, claws, bones etc. have directly exacerbated the decline in population of the wildlife. With the advent of modern arms and ammunitions and instruments and better roads and mobility, the poaching has become easier. The incidence of poaching is more in Sadangi and Hindol ranges. But the detection of wildlife crimes is limited and the offence cases are mainly limited to elephant poaching except for one incidence of leopard. On an average 2-3 poaching cases per annum are registered in this division.

16.6.6 ECO-TOURISM ZONES:

Eco-tourism is a device of natural history interpretation, which places people in direct contact with forest resources. Self Guided Tourism (SGT) is a means by which visitors' attention is drawn towards interesting features that might otherwise be overlooked or not fully appreciated. All forest areas under Saptasajya and Kapilash can be developed as S.G.T. Audio devices can be developed with jungle calls etc. There are two eco-tourism zones identified in the Division namely,

1. Saptasajya Eco-tourism zone.
2. Kapilash Eco-tourism zone.

(i) Constitution of Eco-tourism committees may be done to make above mentioned concepts self-sustaining. Nature guides and interpreters may be recruited in close consultation with committees and they may be educated and made conversant with the flora, fauna and other natural, historical and cultural heritage of the area. Visitors' book may be maintained in all eco-tourism sites for self education and future vision. Special staff may be deployed to deal with the tourists. Concept of Eco-hotel, eco-sporting and eco-adventures may be encouraged among local people and private sector enterprises. Construction of interpretation centre and visitors center at Saptasajya and Kapilash with different theme, halls, audiovisuals, digital screen and web site with attended and unattended services should be encouraged.

(ii) Eco-tourism committees will be provided with necessary equipments and utensils to cater to the needs of the visitors and to regulate them. Pilgrim accommodation facilities shall be developed and maintained wherever it existing. Welcome gates with guide map and natures' trail, trekking and S.G.T. along with wayside signages shall be developed along with trekking routes at wildlife sighting points. A Visitors complex is required to be constructed preferably near Kapilash and Saptsajya. For preparation of eco-tourism master plan a professional landscape architect may be consulted.

However, for promotion of Eco-tourism, no stake holder shall be allowed to interfere in the Reserve Forest area/Protected area and no infrastructure development activities for promotion of eco-tourism will be prescribed inside Protected Area or Resrve Forest areas.

16.7 Miscellaneous Regulations:

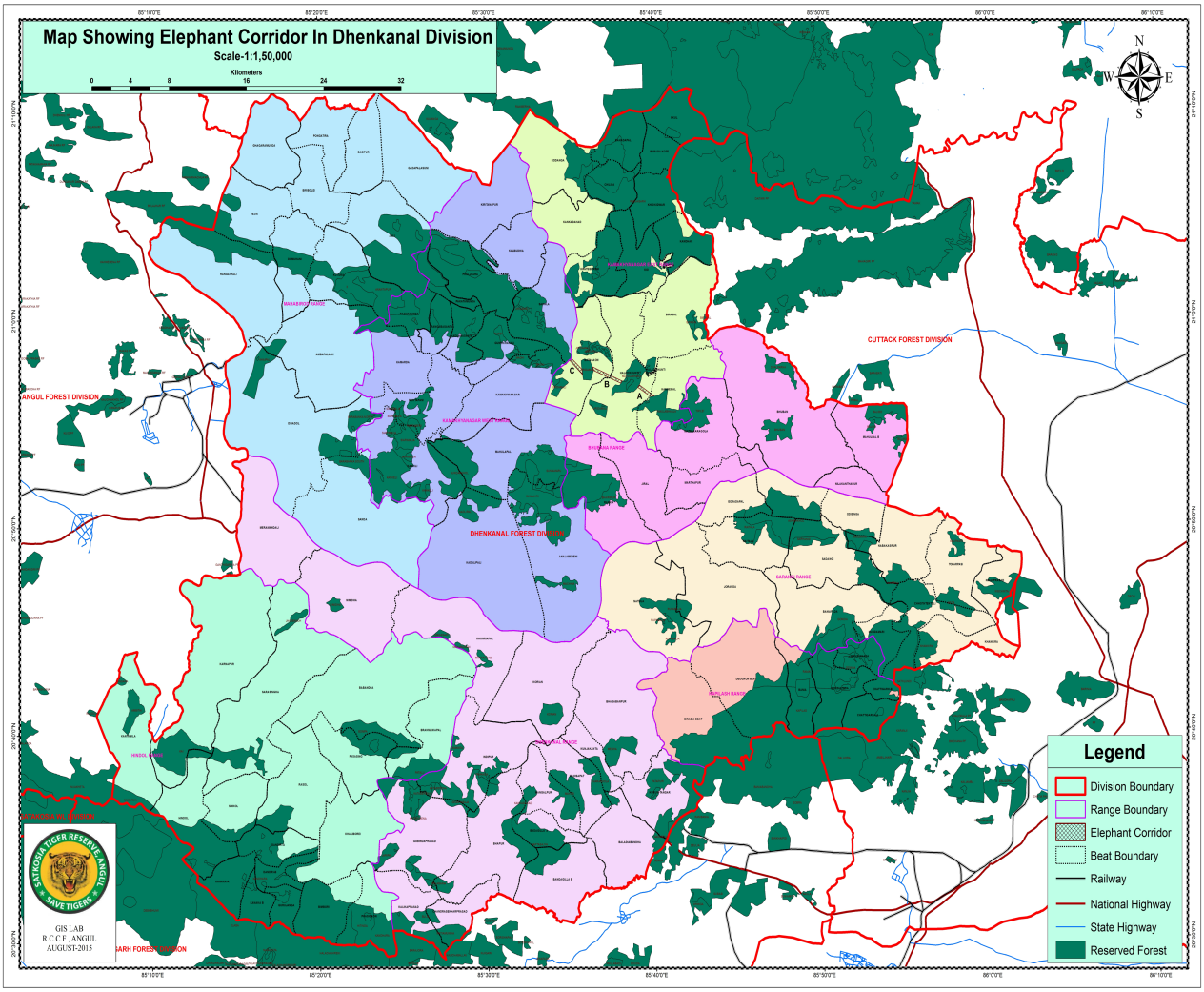
16.7.1. **Awareness & publicity: -** The awareness for Wild Life preservation may be created through celebration of Wild Life week, competitions and debate among the School and College students. Even, publicity material shall be distributed and the benefits of Wild Life conservation explained through 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.

16.7.2. **Capacity building & Infrastructure development: -** 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.

16.7.3. **Information Network -** 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.

16.7.4. **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.

16.7.5. **Corridor Management-**The Dhenkanal division harbours a good number of Elephants. The division has one notified elephant corridor stretching from **Anatapur R.F to Mulabhanja R.F via Jiridamali R.F.** To combat the elephant depredation and to reduce man elephant conflict, the management and development of the elephant corridor is essential. For the purpose the following provisions and activities are to be taken up such as (i) improvement of elephant fodder species along corridor in community land, (ii) watch towers and temporary machans to track elephant movement, (iii) fire-incident etc as per actual need, (iv) Development of Infatructure for corridor management eg.Field Camps, Vehicle, Teliphone link, Internet etc, Deep Tube well, IEC matrials, Hoardings, Awarness etc, (v) Compassionate grant in corridor Division etc.



16.7.6 **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.

16.7.7 **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.

16.7.8 **Rights and Concessions** - Rights and concessions shall be regulated in accordance with the provisions of the forests and wildlife laws and rules in force and Govt. policy in currency.

CHAPTER – XVII
THE N.T.F.P. (O.L.) WORKING CIRCLE

17.1 GENERAL CONSTITUTION:

This Working Circle is constituted with an aim to address the problems with regard to scientific management of NTFPs and the problems involving means of livelihood of the rural poor and tribals of the locality. This Working Circle overlaps the entire Working Plan area of the forests of Dhenkanal Division are rich in biodiversity. Species yielding non-timber forest produce (NTFP) like fruits, seeds, flowers, tubers, barks, leaves, roots and gums are abundant. The livelihood support of people in and around the forests largely depends on these products. NTFPs were haphazard in the past and their collection was largely unorganized. Moreover, the present practice of collection of NTFPs is not scientific and sustainable. The gatherers of NTFP, majority of them are women, have limited access to the market, and their primary concern is getting a fair price for the materials gathered by them and disposing them off. The prevailing system does not adequately provide these facilities to the primary gatherers. Keeping in view above consideration, the Government of Orissa formulated the Policy on procurement and trade of Non Timber Forest Produce during March 2000. There after collection and trading of 69 NTFPs are transferred to Grampanchayat and are regulated by the Panchayatraj Department. The policy on NTFP-2000 is given in the **Annexure-XII**.In the present scenario, special efforts are required to strike a balance between protection of interest of the primary gatherers; enhancing their subsistence along with protection/conservation of the natural resources and increasing the productivity and making the forests products sustainable.

Table No.-17.1 Availability of different NTFPS in the different blocks in the division

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

17.2 GENERAL CHARACTER OF VEGETATION:

The composition and diversity of the forests included to this W.C have already been described in Chapter – 2 of this plan. Further, vegetation of all forest blocks allotted to this W.C has been vividly described in the respective working circles as well.

17.3 AREA AND ALLOTMENT:

All the forest blocks and other areas included in the plan have been allotted to this overlapping W.C. The total area included in this working circle is 99,755.50 Ha. Since this Working Circle overlaps the entire plan area, the details of area allotment to this circle has not been furnished.

17.4 SPECIAL OBJECTIVES OF MANAGEMENT:

The special objectives of management of this Working Circle are:

i) To ensure sustainable production and utilization of the NTFPs in consistent with the National Forest Policy, 1988 and other State Government Policies.
ii) To protect NTFP trees and promote their regeneration.
iii) To promote value addition and trade thereby to create employment opportunities and income generation capability of the local people.
iv) To ensure peoples participation in all activities of NTFPs to achieve the larger goal of the forest regeneration and production.
v) To enhance the stakes of local people in NTFPs and to extend skills to local people for sustainable collection, extraction and utilization of various NTFPs.
vi) To encourage greater financial and managerial inputs in forests to promote regeneration of valuable and desirable NTFPs and to enhance productivity of forests.
vii) Strengthening of VSS/SHGfor managing NTFP.
viii) Potential study of NTFP and medicinal species.

17.5 ANALYSIS AND VALUATION OF THE CROP:

17.5.1 No systematic study was undertaken in the Division in past to assess the Volume/potentiality, flow and varied uses of NTFPs by the forest communities. There is need to ascertain the impact of collection / extraction / utilization practices on sustainability of these forests *vis-à-vis* the role of NTFPs in the village economy. The need for such studies has been long felt and NTFP inventorisation has been conducted in Eight Ranges of Division. This will only provide idea about availability of different items but not the sustainable extraction. Many collection practices very adversely affect forests and are often unsustainable. This is evident in many Sal forests, where Sal seed is very intensively collected. Similarly, no young Mohua trees are observed in many areas because there is no scope for regeneration due to massive seed and flower collection. The NTFP items are being worked through Gram Panchayats and details of extraction of different items is not available in Range or Division Office.

17.5.2 The term Non-Timber Forest Produce (NTFP) includes all forest produce except timber, small timbers and fuel wood. NTFP have great potential to support the people's economic development consistent with the principles of sustainable forest management. Dhenkanal Forest Division having extensive jurisdiction and vast vegetative cover has good potential of NTFP. The tribals, who constitute major part of population along with other rural people, are dependent on such forest produce for their sustenance. Some of the NTFP items supplement their food and other consumable requirements while the collection, transportation and marketing of other NTFP items provides regenerative work to them especially during lean period.

17.5.3 The National Forest Policy 1988 has spelt out one of its strategies of rural development by associating the tribals and other rural people living in and around forest areas for protection, regeneration and development of forests by ensuring optimum collection of NTFP through them. Institutional arrangement for marketing the same will also be done to safeguard their customary rights and interests and to provide them employment. About 40% of livelihood of rural people including tribals is covered through collection and sale of various NTFP items. These items also contribute some amount of revenue to the state exchequer. Many NTFP items have commercial importance. NTFP

were neglected in the past and their collection was largely disorganised. Moreover, the present practice of collection of NTFP is not scientific and sustainable. In the light of above facts and with a view to provide avenues of economic development to rural and tribal people by generating employment the constitution of this working circle has been felt essential.

17.5.4 Kendu leaf is another important NTFP item exploited at commercial level in this division. Kendu leaf bushes and shrubs are mostly available in Govt. waste land and private holdings and contribute about 80% of Kendu leaf production. The mohua trees which yield mohua flowers and seeds are largely available in the village forests and private holdings and contribute more than 60 percent of Mohua flowers and seeds collection. Mohua trees are also available in many RF and DPFs.

17.6 CALCULATION OF THE YIELD:

After decontrol of NTFP items, it is not possible to collect the production figure from 2002 onwards, but general observation is that the production is in a stage of decline due to over exploitation and degradation of the forest, as such regulation of the yield is not possible, but however, now steps are under process for inventorisation of NTFP products.

17.7 METHOD OF COLLECTION OF IMPORTANT NTFPs & SOME PRESCRIPTION FOR IMPROVEMENT:

The NTFP are not harvested in scientific and systematic manner. Many collection practices are very adversely affect forests and hence unsustainable. The primary collectors shall be properly guided and trained in collection of different NTFP items. They should also be provided with latest techniques of collection, drying and storage. Further, training on value addition to collected NTFPs and marketing facilities will definitely help in increase their production.

17.7.1 Kendu leaf: (*Diospyrus melanoxylon)* It widely occurs in the Division, particularly in dry areas. Leaves are collected during February-June. The collection activities provide considerable employment to rural poor. The leaves are valued for their use as wrappers for bidi. The species propagates by root suckers. If root suckers are induced, coppice shoots cultured and water conservation measures carried out, the productivity of leaves can be sustained. However, not much has been done to improve crop and crop conditions through appropriate silvicultural practices. There is an urgent need to undertake crop improvement measures, at least on some experimental sites, by the concerned KL Division.

Table No.-17.2 Different operation and 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 wing
2	Phadi repair	20th March to 10th April	K.L wing
3	Plucking	5th April to 20th May	Local People
4	Purchase	5th April to 20th May	K.L wing
5	Drying	5th April to 27th May	K.L wing
6	Storage	12th April to 27th May	K.L wing
7	Binding	1st May to 31st Oct'r	K.L wing
8	Delivery to O.F.D.C ltd.	15th May to 1st November	K.L wing
9	Disposal	20th May to 30th November	O.F.D.C ltd and K.L wing

17.7.2 Sal Seed: Sal seed became commercially viable about 20 years ago. It found many alternatives uses in soap making, manufacture of vanaspati, sweets and chocolates. Sal seeds are raked from forest floors along with litter and humus. During the process of raking, all previous years' seedlings are either killed or their root systems damaged. The removal of litter and humus exposes the soil and dries up soil moisture, which in turn kills the micro-flora. Sal growth, which is dependent on mycorrhiza, is adversely affected. Therefore, the prevailing practice of collection of sal seeds needs to be done away with by all means. Collection by picking the seeds from the forest floor shall only be allowed. Raking or burning of forest floor is strictly prohibited. Alternatively, the staff of the Division as well as those of the approved leaseholders shall work in close co-operation with the people who should be repeatedly explained as to why these restrictions were necessary in the interest of forests and in their own interests.

17.7.3 Siali Leaves and Siali Fiber: Siali leaves and fiber (leaves and fiber of *Bauhinia vahlii)* are largely used in making leaf plates, donas and food wrappers in hotels, parties, functions and ceremonies. Siali leaves have a high market potential throughout India. To ensure proper collection in different areas of the Division, the field staff should intensify their supervision during the collection season. Siali leaf is a major source of income for the forest dwellers. It is available in the month of February and March of the year. Most forest dwellers are engaged in collection of leaves. They dry the leaves in sun for about 2 to 3 days and then stitch 5-6 leaves into a plate with the help of thin bamboo splints and then sell them in bundles. Each bundle contains 80 leaf plates. The bundles are sold at a very low price of Rs.2.50 to Rs.5.00 per bundle. The retail price in local market ranges from Rs.15.00 to Rs.20.00 per bundle. There is a scope to raise the remuneration of the primary gatherers if they could be organized into co-operatives and be given some holding capacity against powerful purchasers. Now as per the new MFP Rules, 2002 the minimum price would be fixed by Panchayat Samithi that shall be applicable to all the Grama Panchayats within the block. Panchayats and local institutions may be encouraged to provide pressing machines to the registered co-operatives of leaves gatherers and thus to pass on some benefits of value-addition to the poor gatherers. The skill of these gatherers may also be up-graded through training, demonstrations and other extension methods. VSS and NGO, Self Help Groups, Women groups may also be involved in this venture.

17.7.4 Myrobalans: The fruits of *Terminalia chebula*, *Terminalia belerica* and *Emblica officinalis* (collectively known as myrobalans) are used for tanning and also for medicinal purposes. These items are now under the control of the Panchayats. The best time for collection is January. Myrobalan tan is usually blended with other quickly penetrating tans to produce good leather colour. The department may provide preliminary training to primary gatherers to adopt collection and processing methods, which are not injurious to fruit-producing trees as well as to the produce. These steps will not only sustain forests but will provide opportunities for local value-addition. These opportunities to primary gatherers, for adding value at local level, shall help them to get better remuneration and will also diversify and develop local economy. Steps should be taken by the DFO to raise the seedlings (seed origin/grafted) for distribution among the local people for planting in their backyard or any other land in their possession, so that they can sell away the produce to generate some income. Collection of Myrobalan by cutting the branches of the trees shall be strictly prohibited.

17.7.5 **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 is furnished in the following **Table-17.3.**

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Table No.-17.3 Tapping rule of the common gum	
Sl. No	**Tapping method**
1	The trees attending 105 cm girth at breast height shall be selected for tapping.
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.

17.7.6 Mohua Flowers and Mohua Seeds: Mohua flower is very popular among tribal for its liquor. It is mostly used to distill liquor. The villagers eat the dry corolla by frying and making into cakes. They also use it as cattle feed. Mohua flower is available during April and May. Men, women and children are engaged in collection of Mohua flower and seeds. Flowers fall down at night. People go early in the morning and collect them in Bamboo baskets (locally called kundi). Each kundi weighs about 12 to 15 Kg. Usual practice of collection is to set the ground surrounding the tree on fire for

easy collection. These fires, often spreads making it uncontrollable and damaging valuable forest. Such practice should be prevented. DFO should take steps for distribution of seedlings (seed origin/grafted) among the local people for planting in their backyard.

17.7.7 Tamarind: *Tamarindus indica* is a big tree and occurs as in natural forests. It is also cultivated on private lands. Tamarind fruits generally become available for collection during March-April. Tamarind is used mainly as preservative and an important ingredient in pickles, juices and tamarind concentrates. It is also used in powdered form, which is becoming increasingly popular. It is believed that tamarind water keeps body cool in summer days. Its seed is also used as cattle feed and poultry feed. Tamarind, thus, has many uses and is in great demand in different markets. It needs very simple processing. After collection, thin hard cover is decorticated manually. The seeded tamarind is sold at Rs.2.50 to Rs.4.00 per kilogram. In order to make the species more popular among the local people, the DFO should make endeavour for supply of grafted seedlings to them.

17.7.8 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 place 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

17.7.9 Lac: It is collected mainly in the Kamakhya Nagar (East) & (West) Ranges. Lac, a resinous substance, has become commercially important in recent years because of its usefulness in polish, varnish, wax and other uses. The Tribal people make fancy objects like chains, bangles and other artifacts out of it. Lac is secreted by an insect *Laccifer lacca* which is found as parasite on green twigs of Kusum (*Schleichera oleosa*) and Palas (*Butea monosperma*), Barkoli (Zyzyphus zujuba) and other hosts of tree origin. Two main strains of the lac insects, that is, "Rangeeni" and "Kusumi" are mainly used. Lac produced from Kusum is called Kusumi lac. Other lac is named as Rangeeni owing to its red colour. Due to reduction in the number of Kusum trees, the trade is almost gone in the Division. There is need to revive this trade by way of regenerating host trees and encouraging lac cultivation. The host plants like Kusum and Palas may be located and/or cultivated, and the people should be encouraged to take up lac cultivation in viable areas after forming co-operative societies. People's groups (e.g. VSS, co-operative societies) be motivated to take care of host trees on sustainable basis.

17.7.10 Sal Leaves: Sal leaves are mostly used for making cups and plates. In some localities they are also used for making bidi like country cigarettes. The leaves are also used as wrapper in betel

shops and by junk food sellers. Fresh leaves appear in March after defoliation. It will be easy for the pluckers to collect fresh leaves from coppice shoots, which will be at the convenient height. But these leaves are not good as they cannot withstand the pressure of processing and also collection of the leaves at the tender age has harmful effects on the plant. The harvesting of leaves should not be allowed in spring (January to March) and rainy seasons (June to September). Total sweeping of the plant for collection of leaves should be discouraged. The limit should be fixed, it may be up to a maximum of 1.5 to 2 quintals per ha depending on the forest block. In Kandhara RF the Sal crop is not predominant; in such areas the leaf collection should be discouraged. It is better if the collection is done through VSS and the Forest Department should impart knowledge of sustainable collection practices to the VSS members to meet the twin objectives of livelihood needs of villagers and scientific forest management.

17.7.11 Medicinal Plants & their prescription: In general the forests are the rich treasure of medicinal plants. As transpires from the elaborate discussion made in Chapter 3 (Utilization of forest produces), Dhenkanal Forest Division in particular has got tremendous potential of medicinal plants. The medicinal plants are site specific and adaptive to particular micro-climatic zone. Secondly, the medicinal properties of these plants and their uses in curing various ailments are known to the local traditional healers. Therefore, when we talk of preservation, conservation and propagation of medicinal plants, it is not possible to segregate the local traditional healers, who have the complete knowledge about occurrence, method of non-destructive collection, curing and uses of medicinal plant species in curing various ailments. Popularisation of medicinal plant species is gradually picking up in the state on the auspices of the State Medicinal Plants Board (SMPB). In the present scenario rigid protection measures to the medicinal plants should be provided against biotic interference, fire etc. Documentation of the knowledge of traditional healers must form an integral aspect of preservation and conservation of medicinal plants, so that importance of these plant species shall be realized in the traditional health care process. It is not known, by now some of the medicinal plant species might have vanished from forests. The practical answer to this problem is domestication of medicinal plant species in herbal garden and production of their seedlings in nurseries so as to preserve this rich heritage for the posterity.

The list of the medicinal plants and their uses are appended in **Annexure-XXII**

17.7.12 CALENDAR OF OPERATIONS OF MAJOR NTFP

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-17.4 CALENDAR FOR COLLECTION OF MAJOR NTFP

Sl. No.	NTFP	Collection Time	Sl. No.	NTFP	Collection Time
01	Kendu Leaves	February – June	23	Semal Cotton	March-May
02	Sal Seed	May-June	24	Honey	January
03	Siali leaf	October-May	25	Khajuri leaves	October-May
04	Siali fiber	October-May	26	Sabai grass	October-April
05	Harida	November-January	27	Sunari	September-April
06	Bahada	January-April	28	Tentuli	March-April
07	Cashew nut	April-May	29	Neem seed	June-July
08	Amla	May-June	30	Genduli gum	October-May
09	Char seed	April-May	31	Kurei fruit	December-February
10	Mango	May-June	32	Hill broom	March-June
11	Bel	May-June	33	Khair	October-May
12	Marking nut	December-March	34	Sal resin	January-April
13	Lac (Maghsiri)	January-February	35	Broom grass	October-May
	Lac (Jestha)	June-July	36	Siali fibre	October-May
14	Gum	October to March	37	Lemon grass	March-April
15	Mahua flower	April to May	37	Kamal gundi	February-March
16	Mahua seed	May to June	39	Bana tulsi seeds	November-March
17	Kusum seed	May to June	40	Lodha bark	October-May
18	Karanja seed	December-January	41	Dantari bark	October-May
19	Kochila seed	December-January	42	Phenphena bark	October-May
20	Kendu fruits	April to May	43	Mango kernel	June-July
21	Dhakti flower	January to April	44	Thatch grass	January
22	Arrow root	December-January	45	Honey-wax	January

17.8 Miscellaneous Regulation:

17.8.1. 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 Rehabilitation Working Circle areas, care should be taken during cleaning operations to retain the miscellaneous species, which yield important NTFPs.

17.8.2. 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 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.

17.8.3. 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.

178.4. 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.

17.8.5. 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.

17.8.6. 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 the Forests and the primary collectors shall also be studied and annual reports submitted suggesting any changes if required.

17.8.7. 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.

17.8.8. **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.

17.8.9. **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.

CHAPTER –XVIII
THE JOINT FOREST MANAGEMENT (O.L.) WORKING CIRLCE

18.1 General Constitution:

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18.1.1. The JFM Working Circle of the tract is an (overlapping) W.C. comprising of all the forest blocks within the plan area (overlap the entire management area), which have been assigned to the local villages for protection and management under JFM policy. Further, all the Village Forest notified under Orissa Village Forest Rules 1985 and the areas managed under VSS out side the plan area have also been included. Besides that, the forest area having less than 0.4 densities where there is scope for formation of VSS have also been taken into consideration for inclusion in this W.C.

In this Division till now 326 nos of VSS have been formed which have been actively participating in the Forest Protection work. The total forest area allotted/assigned to different VSS for Joint Forest Management over 38,193.80 ha has been kept under JFM (OL) Working Circle.The formation of VSS is regularly processed. It has been proposed to form another 200 VSS during the revised plan period. Hence the area allotted to this Working Circle remains dynamic and is likely to increase more and more degraded forests is allotted to the VSS. The VSS are taking key role in J.F.M. and creation of awareness among the people on environmental issues. The VSS are participating in protection of forest from fire, poachers, encroachers and other detrimental biotic factors as and when required.

18.1.2**.** The National Forest Policy, 1988 envisages that forest fringe villagers must be involveed in protection, conservation and management of the forests. In keeping with this policy, 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.

18.1.3. The Government of Odisha, further 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. To make the involvement of the villagers more effective in protection and conservation of the forests, the Government of Odisha, F & E Department further issue JFM Resolution vide No. 16524-IF-Affn.-17/2011 F & E. dated 9th September 2011.

18.1.4. The abstract of the Range wise distribution of JFM (OL) area allotted to this overlapping Working Circle will be given in the **Table No-18.1.**

TABLE-18.1 Abstract of the Range wise distribution of JFM (OL)			
Sl.No.	**Name of the Range**	**No. of VSS/EDC**	**Assigned Area in ha.**
1	Dhenkanal	56	5147.22
2	Sadangi	49	5637.04
3	Kapilas	32	3843.00
4	Hindol	48	5992.44
5	K. Nagar (W)	50	6749.94
6	K. Nagar (E)	52	5735.66
7	Bhuban	13	1908.50
8	Mahabirod	26	3180.00
	Total	**326**	**38,193.80**
Source- DFO, Dhenkanal			

The list of the VSS/EDC allotted to different Range is appended in **Annexure-XIII.**

18.2 GENERAL CHARACTER OF VEGETATION:

The major forest types found are Tropical Moist Deciduous Forest and Tropical Dry Deciduous Forest.

The forest area included in this W.C. spread over the entire Division and subjected severe/continued biotic interference. As per the JFM resolution 1993 revised during 1996, and during 2008, and 2011 the forest areas allotted to this circle are degraded forests and in need of protection, tending operations as well as enrichment through gap plantations will help in development of vegetation and improvement of soil moisture regime. The vegetation of these areas is open, regeneration is poor to deficient, species found are mostly miscellaneous and some area Sal associates with Piasal, Sissoo, Asan, Dhaura, Kurum, Kasi, Kangada, Char and Mahula etc. Moreover, in planted area under various scheme like ECONOMIC, FDA, CAMPA, NBM, TFC etc the condition is good due to better involvement of the local people in regeneration and protection of the forests.

18.3 SPECIAL OBJECTIVES OF MANAGEMENT:

The special objectives of management in respect of this W.C. are as follows:

i) To involve local people in regeneration and protection of the forests by formation of V.S.S in each village adjoining to the degraded Reserved and Proposed Reserved Forests.

ii) To improve the crop condition of these areas, through artificial regeneration and to increase the productivity of soil through suitable soil and moisture conservation activity thereby fulfill the demands of the local people in terms of small timber, firewood, NTFPs etc.

iii) To make the villagers financially sound for posterior maintenance and management of the assigned forest area.

iv)

18.4 ANALYSIS AND VALUATION OF THE CROP:

The areas in this W.C are mostly degraded due to various biotic factors but due to people participation in regeneration and protection some of the blocks have got great change in their crop condition. It is expected that with the formation of V.S.S and allotment of degraded forest to the villagers most of the biotic pressure will be reduced.

18.5 SILVICULTURAL SYSTEM:

The area allotted to this overlapping 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. 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 conditionThe 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.

18.6 MANAGEMENT PRESCRIPTIONS:

All the village forest is managed according to Village Forest Rules, 1985. The village forest committees will up-date and modify their old Micro Plans accordingly to present day requirements. According to site of plantation, survival percentage and requirement of local people new Micro Plan will be prepared in consultation with DFO, Ranger, Forester and Forest Guard. The prescription in the revised Micro Plan will incorporate the needs of the village committee for future planning.

18.7 ROTATION AND CONVERSION PERIOD:

Since this is an overlapping working circle and the area is distributed over the entire Division, the rotation period shall be followed to the rotation fixed in general working areas. Moreover, in case of plantations of short rotation / commercial crops like Eucalyptus, Acacia, Bamboo etc in Village Forests and outside the RFs and PRFs, the rotation period shall be clearly mentioned in site specific micro-plan prepared / to be prepared.

18.8 FELLING CYCLE:

Since this is an overlapping working circle, there is no need to deal with separately.

18.9 CALCULATION OF THE YIELD:

As mentioned above, the area allotted to this working circle are mostly degraded and bushy forests, there is no requirement of calculation of the yield. Moreover, the intermediate yield so obtained at the time of different silvicultural operations shall be distributed among the villagers on free of cost (as per JFM guide lines).

18.10 METHOD OF EXECUTION:

18.10.1 Constitution of VSS:

One VSS for single village, all adults of the village will be member of the VSS, the Palli Sabha shall send its Resolution to the Range Officer concerned regarding constitution of VSS / EDC for his record and communication to the DFO concerned for registration at the Division level. The VSS area will be clearly demarcated and map to be prepared. As far as possible one VSS to be formed to a village. During the formation of new VSS, not more than one VSS to be allotted to a village to avoid

conflict between the VSS. Also no existing plantation area shall be allotted at the formation of new VSS.

18.10.2 Preparation of Micro Plan: 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 allotted to the VSS and this is a over lapping Working Circle, the broad treatment for the crop and soil and moisture conservation will be similar to the main Working Circle. The VSS Micro Plans will be site specific treatment plan and will generally follow the prescription of the main Working Circle.

18.10.3 P.R.A Exercise - 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.

18.10.4 Maintenance of Old Plantation:- 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 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.

18.10.5 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.

18.10.6 Incentive to the V.S.S. - Well managed VSS in protection of forests and wild life from smuggling, grazing, fire, women participation, good record keeping and healthy understanding among them 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 for exposure visit to get inspiration and ideas. These promotional visits would help a great deal to promote the VSS movement in the division.

18.10.7 Capacity Building – Basically staff of forest Department are in habit of protection of forest through enforcement. The concept of Joint Forest Management mode is new one and staff is yet to accustomed to it. Hence the capacity of the front line field 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.

18.10.8 Duties and responsibility of Samiti:

As per the resolution published on 09.09.2011 all the members individually and collectively protect the forest, wild life & bio diversity, to ensure decision taken in the "Palli Sabha" to regulate access to community forest resources etc.

18.10.9 Duties of Executive Committee:

The EC shall carry out the day-to-day business of the VSS, shall be responsible for protection of the forests assigned, evolve methodology on all issues relating to membership, conflict resolution, prevention of encroachment, exercise of customary rights and use of the permissible forest resources such as NTFP including Bamboo, shall be responsible to account for manage the funds and other resources received from the Government.

18.10.10 Role of the forest department:

To register VSS, to support in identifying and apprehending the forest offenders to take action as per law, to assist in capacity building of VSS, to provide technical help to the VSS, to invite suggestion from the VSS, to sign Memorandum of Understanding with the VSS, to establish co-ordination with other department etc. The staff such as Forest Extension Officers, (FEO), and Village Forest Workers (VFW), should be utilized effectively for working closely with the VSSs. They can be very helpful to the DFO to organize village level coordination meetings, organizing village level exhibitions, conducting village level tours of the VSS members etc,

18.11 Silvicultural Operation:

The subsidiary silvicultural operation like cleaning, tending, SMC works etc in the VSS assigned area should be carried out as per the Micro Plan prepared in consonance with the main Working Circle as it is a over lapping Wirking Circle. In all the operation the VSS members must be involved. The usufructs sharing of forest produce found in shape of cleaning, tending or final harvesting to be done as per the guideline envisaged in the VSS resolution.

18.12. Artificial Regeneration:

The forest area allotted to this Working Circle is degraded one. The replenishment of the degraded area from natural regeration is not possible. Hence to supplement the natural regeneration, artificial regeneration is essential through planting under FDA, CAMPA, MBM, TFC and Economic etc. and dibbling of seeds in the permanent gaps to restore the stock as prescribed in the main Working Circle.

18.13 MISCELLANEOUS REGULATIONS:

All the activities in the areas included in this working circle will be carried out with the involvement of the local VSS/people The active and good VSS be identified regularly and rewarded, income generating schemes or activities to be encouraged, capacity building training and exposure visit to be carried out, besides other regulations to be carried out as under.

18.13.1. Grazing: All the plantation area shall be closed to grazing for a minimum period of 5 years. However, depending upon the result, the DFO can further extend the closure period. In case, it is

decided to open the area for grazing, it shall be regulated as per carrying capacity of the area concerned. The Orissa Forest (Grazing of Cattle) Rules, 1980 should be strictly followed.

18.13.2. Fire Protection: The entire area should be rigidly protected from fire hazard. The fire protection measures shall be regulated as per the Orissa Forest (Fire Protection) Rules, 1979 and Chapter-XVIII of Orissa Forest Department Code.

18.13.3 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.

18.13.4. **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 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).

18.13.5. 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 is 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.

18.13.6. 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. Also in plantation area as in case of Teak, the main shoot to be kept and site shoot to be removed to facilitate the growth of the The VSS member will take the materials obtained by this operation.

18.14 RIGHTS AND CONCESSIONS:

Rights and concessions shall be regulated as per the existing provisions of the relevant Gazette notifications of the respective village forest blocks and the Govt. of Orissa policy with regard to JFM.

CHAPTER – XIX

GENERAL FINANCIAL FORECAST AND FINANCIAL PLAN OF OPERATION

19.1 GENERAL CONSTITUTION:

As it has discussed in forgoing chapters, the forests of the Division have suffered from gradual depletion and degradation as because of increasing and biotic pressure and least Silvicultural inputs. Due to ban on felling of green trees the coupes were not worked as a result the subsidiary Silvicultural operations could not taken up during the period. This has posed serious threat to the existing ecosystem.

The prescriptions of this plan have aimed at maintaining the sustainability of the forest in perpetuity. Further, this plan has prescribed marking of trees on conservative manner in Selection Working Circle. Thus it is presumed that the prescription and the resources for its implementation will be within the reach as per the calendar of operations stipulated in this plan to achieve the set objectives.

The prescription of Selection Working Circle, salvage operations to wind fallen, uprooted trees, tending operation etc. though subordinated to forest conservation, yield of some timber and firewood expected.

19.2 COST OF PREPARING THE PLAN:

19.2.1 The preparation of the plan started during the year 2011-12 and is progress. The expenditure incurred during 2011-12 to 2014-15 under different Head/subead is furnished below.

TABLE-19.1 COST OF WORKING PLAN PREPARATION

Budget Head	**2011-12**	**2012-13**	**2013-14**	**2014-15**
Estt.	4677060	5062238	4987765	5722800
Building minor	100000	100000	-	47000
Building maintenance	290000	200000	500000	-
Building repair	130000	130000	130000	100000
Working Plan	120000	120000	216000	155000
Survey & Inv.	10000	-	-	15000
2059 Public Work	500000	-	-	200000
TOTAL NON PLAN	**5827060**	**5612238**	**5383765**	**6239800**
State Plan Estt.	-	-	-	-
Const. of Building	-	-	-	1332000
Working Plan IFM	-	-	1000000	1400000
13th FC Grant	364624	802004	-	-
TOTAL STATE PLAN	**364624**	**802004**	**1000000**	**2732000**
YEARLY TOTAL	**6191684**	**6414242**	**6383765**	**8971800**
G. TOTAL EXPENDITURE (2011-12 to 2014-15)				**27961491**

Thus, total expenditure including preparation of working plan upto completion of 2nd PWPR is Rs. 2,79,61,491/-. Out of the total expenditure, the cost of establishment is Rs.2,49,25,491/- which comes to 89.14% of the total expenditure and amount spent on actual working plan preparation is Rs.30,36,000/- which comes to 10.86% of the total expenditure. The Working Plan area of the Division is 99,755.50 ha. The cost of revision of working plan area upto completion of 2nd PWPR (excepting Final Revision of the Plan & Printing of the Plan) comes to Rs.281/- per hectare.

19.3 Financial implications for implementation of the plan:

The Revised Working Plan of Dhenkanal Forest Division will be prepared from the period of ten years i.e. 2016-17 to 2025-26. The financial implications for implementation of this working plan will be calculated based on cost norm prevalent now. This can be modified as per requirements of this plan as well as ground realities. Thus these norms are subject to change as per changed field condition and instruction from the higher authorities.

19.4 Estimation of expenditure on different Working Circle.

19.4.1 **Treatment of Selection Working Circle** – The total notified area under this Working Circle is 15271.29 ha. Thus the average annual area to be worked 1527.0 ha. The cost norm per ha to be followed in Selection Working Circle is as under.

Table No.-19.2 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**

i- The cost over the annual coupe area of 1527 Ha. = Rs. 31,15,080.00
ii- Boundary maintenance over 245.35 Km @ 20MD per Km = Rs. 7,36,050.00
iii- SCM over the annual coupe area of 1527 ha @ Rs.500 per ha.= Rs. 7,63,500.00
iv- Total annual requirement under this Working Circle = Rs. 46,14,630.00

Therefore the cost is Rs.46.00 Lakh with an annual escalcation of 5%.

19.4.3 Treatment of Eco-Restoration Working Circle

The total area under Eco-Restoration working circle is 35448.66 ha and the average annual area to be worked is 3545 ha. The total cost of treatment will be Rs 31,372.50 per ha spread over for four years. The cost norm that will be followed is given in **Table 19.3.** The total annual requirement under this working circle will be Rs 11,12,15,513/- or 1112 lakhs with subsequent raise of 5% every year.Block plantation has

not been prescribed in this Working Circle. Only gap plantation has been prescribed for rehabilitating the degraded forest.

The norm for gap plantation per ha is given in the **Table No-19.3.**

Table-19.3 Cost Norm for 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	300.00	0	300.00
2	Site preparation	2	300.00	0	300.00
3	Cutting of high stumps	3	450.00	0	450.00
4	Alignment and staking	1	150.00	0	150.00
5	Pitting (30 cm. cube)	8	1200.00	0	1200.00
6	Cost of raising 300 seedling (Part)	13.86	2079.00	850.00	2929.00
	Total	29.86	4479.00	850.00	5329.00
	1st year/Planting year				
7	Cost of raising 300 seedling (Balance)	5	750.00	350.00	1100.00
8	Carriage of seedling to site, planting including causality replacement	5	750.00	0	750.00
9	1st weeding	2	300.00	0	300.00
10	2nd weeding	2	300.00	0	300.00
11	Soil working	2	300.00	0	300.00
12	Manuring / insecticide application	1	150.00	0	150.00
13	Fire line tracing & Inspection path	2	300.00	0	300.00
14	Cost of insecticides for plantation	3	0	450.00	450.00
15	Cost of chemical fertilizer for plantation 12 kg. @ Rs.35/-	6	0	900.00	900.00
16	Silvicultural operation involving clearance of weeds & cutting of climbers, singling of shoots on each stool etc.	15	2250.00	0	2250.00
17	Soil conservation	12	1800.00	0	1800.00
18	Watch and ward	5	750.00	0	750.00
19	Contingencies	3	0	0	0
20	Entry point activity (15% of total cost)	14	0	0	0
	Total	77	11,550.00	1700.00	13,250.00
	2nd year Maintenance				
21	Casualty replacement	2	300.00	0	300.00

22	Weeding	2	300.00	0	300.00
23	Soil working & manuring	2	300.00	0	300.00
24	Fire line tracing	1	150.00	0	150.00
25	Cost of fertilizer	4	600.00	600.00	1200.00
26	Soil conservation	6	900.00	0	900.00
27	Watch and ward (whole year)	8	1200.00	0	1200.00
28	Contingencies	2	0	0	0
29	Entry point activity (15% of total cost)	4	0	0	0
	Total	31	4650.00	600.00	5250.00
	3rd year Maintenance				
30	Weeding and pruning	2	300.00	0	300.00
31	Soil working	2	300.00	0	300.00
32	Fire line tracing	1	150.00	0	150.00
33	Soil conservation	6	900.00	0	900.00
34	Watch and ward	6	900.00	0	900.00
35	Contingencies	2	0	0	0
36	Entry point activity (15% of total cost)	3.15	472.50	0	472.50
	Total	22.14	3321.00	0	3321.00
	Grand total	160	24,000.00	3150.00	27,150.00
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.					

Cost norm Abstract of ANR Pltn. per hactor				
Year	**Labour cost**	**Material cost**	**EPA + Contingency**	**Total (Rs.)**
0 th year	4479.00	850.00	0	5329.00
1st year	11,550.00	1700.00	2550.00	15,800.00
2nd year	4650.00	600.00	900.00	6150.00
3rd year	3321.00	0	772.50	4093.50
Total	24,000.00	3150.00	4222.50	31,372.50

19.4.6 Treatment of Plantation Working Circle

10.5.6.1 In this Working Circcle only the block plantation has been prescribed in the open patchs. The total area under plantation to be taken up is 2785.00 ha. Thus the average plantation area to be worked will be 279 ha. The cost norm that will be followed in plantation working circle is given in table 19.4. The total cost of treatment will be Rs 53250/- per ha spread over for four years .The total annual requirement under this working circle will be Rs 1,48,56,750/- or Rs. 149 lakhs with subsequent raise of 5% every year.

The norm for Block plantation (AR) per ha. is given in the **Table No19.4**

Table- 19.4 Cost Norm for Block Plantation @1600 plants /ha (wage rate Rs.150/Day)					
Sl No.	**Items of work**	**Person days**	**Labour cost @ Rs.150.00**	**Material Cost**	**Total cost in Rs.**
	0 year				
1	Survey demarcation and pillar posting	2	300	0	300
2	Site preparation	8	1200	0	1200
3	Alignment and stacking of pits	2	300	0	300
4	Digging of pits (30 cm cube)	40	6000	0	6000
5	Nursery cost (8 month old seedling) part	80	6000	6000	12000
	Total	132	13800	6000	19800
	1st Year/ Planting year				
6	Nursery cost (8 month old seedling) part	16	2100	300	2400
7	Carriage & planting CR, manuring , insecticide appln	21	3150	0	3150
8	Cost of Insecticide and fertilizer	21	0	3150	3150
9	First weeding (Complete weeding)	7	1050	0	1050
10	Manuring	5	750	0	750
11	2nd weeding complete weeding	5	750	0	750
12	Soil working (50 cms. Radius around plants 0	7	1050	0	**1050**
13	Fire line tracing and inspection path	3	450	0	**450**
14	Soil conservation measures in the form of staggered trended of 2m L x 50 cmd.	10	1500	0	**1500**
15	Watch and ward	7	1050	0	**1050**
Total		102	11850	3450	**15300**
2nd year Maintenance					
16	Casualty replacement with nursery cost	12	1800	0	1800
17	Weeding (complete weeding)	6	900	0	900
18	Application of fetilzer	4	600	0	600
19	Cost fertilizer	12	0	1800	1800
20	Soil working (50 cms radius around plants)	7	1050	0	1050
21	Fire line tracing (2m.wide fire line over 400 m long)	3	450	0	450
22	Watch & ward	15	2250	0	2250

Total		59	7050	1800	8850
3rd year Maintenance					
23	Weeding & application of fertilizer	7	1050	0	1050
24	Cost of fertilizer	12	0	1800	1800
25	Soil working (50 cms radius around plants)	7	1050	0	1050
26	Fire line tracing (2m.wide fire line over 400 m long)	3	450	0	450
27	Watch & ward	15	2250	0	2250
Total		44	4800	1800	6600
4th year Maintenance					
28	Fire line tracing (2m.wide fire line over 400 m long)	3	450	0	450
29	Watch & ward	15	2250	0	2250
		18	2700	0	2700
COST NORM ABSTRACT					
	Year	**No Person days**	**Material Cost**	**Cost of labour**	**Total cost in Rs.**
	0th year	132	13800	6000	19800
	1st year	102	11850	3450	15300
	2nd year	59	7050	1800	8850
	3rd year	44	4800	1800	6600
	4th year	18	2700	0	2700
	Total	355	40200	13050	53250

19.4.6.2 There is 19130.46 ha existing old plantations in the division. The old plantation will be maintained during the plan period which is around 1913 ha per year where maintenance, cleaning and protection is prescribed. The cost norm that will be followed in maintenance of old existing plantations will be as under.

1. Tending @1.0 mandays/ha
2. Protection @ 0.1 mandays / ha.

The total cost f or treatment of old platation will be Rs 165/- per ha .The total annual requirement of old platation will be Rs 3, 15,645/- or Rs. 3.0 lakhs with subsequent rise of 5% every year.

The total annual requirement under this working circle will be Rs 1, 51, 72,395/- or Rs. 152 lakhs with subsequent raise of 5% every year.

19.4.8. **Treatment of Protection Working Circle –** In his Working Circle the Eco fragile area like catchment area of river and reservoir, high precipitous, heavy biotic interference etc. have been taken. The total area of the Working Circle is 27119.59 ha.The work prescribed are maintenance and construction of boundary pillars, engagement of anti smuggling squad, repair of roads, strengthening of communication net work etc.

The cost for implementation of prescription under Protection Working Circle Rs. 2,71,19,000/- or Rs.271 lakhs annually with subsequent raise of 5% every year as per the details fuenished in the **Table 19.5**

Table No 19.5 Cost Norm break up per ha for treatment for Protection Working Circle.			
Sl No	**Item of Work**	**Cost Norm per ha @150 per Mds**	**Cost involved (in Rs.)**
1	Boundary Maintenance	5	750/-
2	Repair/Const. of B.pillar	2	300/-
3	Silvicultural Operations	15	2250/-
4	Soil and Moisture conservation	20	3000/-
5	Watch and Ward (Engagement of Anti smuggling squad with provision of mobility)	15	2250/-
6	Purchase of Arms & ammunition,VHF, Cell phone etc	2	300/-
7	Maintenance of forest road.	2	300/-
8	Fire protection measures	5	750/-
9	Incentive, publicity and awareness	2	300/-
	Total		**10,200/- or 10,000/-**

19.4.9. **Estimation for Bamboo (Overlapping) Working Circle -** The total area under Bamboo (Over lapping) Working Circle is 7,966.613 ha. Thus the average annual bamboo treatment area will be 797 ha. In addition to bamboo working, also there is prescription of bamboo plantation in the open patches available in the bamboo area

The cost norm that will be followed in plantation working circle is given in table 19.5 The total annual requirement under this working circle will be Rs 17,92,575/- or Rs. 18.0 lakhs.

The cost norm that will be followed in Bamboo Working Circle is as follows.

Table No.-19.6	**Cost norm for Bamboo Working per hector**			
Sl. No.	**Items of works**	**Man days per ha**	**Labour cost (@ Rs. 150/-**	**Total cost in Rs.**
1	Demarcation of coupe	0.1	15	15
2	Bamboo working	4(Avg.no.ofclumps to be worked= 5 clumps/day & Avg.no of clumps= 20 nos/ ha	600	600
2	Silvicultural operation	10	1500	1500
3	Fire Protection Measures	1	150	150
			Total	**2265 or 2250**

19.4.10. For treatment type- C area, bamboo plantation is prescribed @ 50 nos/ha. Assuming 25% of the Bamboo Working Circle area to be Type-C area, the area proposed for plantation is around 2000 ha. Thus annual Plantation area is 200 ha.

Based on the cost norm furnished in table 19.7 (400 plants/ ha), the cost norm for 50 plants/ha comes to Rs. 3000/- per ha. Hence the annual plantation is Rs.6.0 lakhs

The total annual requirement under this working circle will be Rs 24.0 lakhs with subsequent raise of 5% every year.

19.4.11. The cost norm per bamboo plantation (400 Plants /ha) is given in the following **Table.19.7**

Table No. 19.7 COST NORM/ Ha. FOR RAISING OF BAMBOO PLANTATION UNDER OBDP(STATE PLAN) SCHEME

400 Plants per Ha./Wage rate @ Rs.150/- per day

A. RAISING OF NURSERY (400 Seedlings)

Sl. No.	Item of work	Period	Mandays	Labour cost @	Material	Total in
1	2	3	4	5	6	7
1.	Cost of seed and transport	May	1	150		150
2.	Preparation of nursery bed in central	May	1	150		150
3.	Treatment & working of bed	May-June	1	150		150
4.	Watering central nursery & weeding	May-June	6	900		900
5.	Fencing of temp. nursery site	March - April	1	150		150
6	Cost of nursery fencing materials	March - April		0	200	200
7.	Cost of polythene bags (9”x5”x200g)	March - April		0	200	200
8.	Cost of soil sand & CDM	March - April		0	250	250
9.	Preparation of soil mixture	March - April	1	150		150
10.	Filling of polythene bags	March - April	2	300		300
11.	Transplanting of rhizome to polypots and	March - April	2	300		300
12.	Cost of shading materials	March - April		0	100	100
13.	Cost of insecticides for nursery	March - April		0	50	50

14.	Cost of chemical fertilizer for nursery	Mar – May.		0	100	100
15.	Application of sectisides & fertilizer	Mar – May	1	150		150
16.	Watering of polypots	Apr/May/Jun	3	450		450
17.	Weeding, Grading & sorting	May – Jun.	1	150		150
18.	Contigency.			0	300	300
	TOTAL.		**20**	**3000**	**1200**	**4200**
B. ADVANCE WORK PREPLANTING OPERATION – 0TH YEAR						
Sl. No.	**Item of work**	**Period**	**Mandays**	**Labour cost @**	**Material**	**Total in**
1	Survey Demarcation & pillar posting	April	2	300		300
2	Site preparation	April	2	300		300
3	Alignment & stacking of pits	May	2	300		300
4	Digging of pits of size 45 cm cube	May	33	4950		4950
	TOTAL		**39**	**5850**	**0**	**5850**
	GRAND TOTAL	**(Raising of nursery & advance work)**				**10050**
C. FIRST YEAR / PLANTING YEAR						
Sl. No.	**Item of work**	**Period**	**Mandays**	**Labour cost @**	**Material**	**Total in**
1	Transportation of of seedlings with polypots	July	1	150		150
2	Planting including casualties	July – Aug.	4	600		600
3	Cost of fertilizer and insecticide	July – Aug.			600	600
4	1stm weeding (around the plant 1M radius)	Aug.-Sept.	2	300		300
5	Manuring	Sept - Oct	2	300		300
6	2nd weeding (around the plant 1M	Oct. Nov	2	300		300
7	Soil working (1 M radius around the plant)	Oct. – Nov.	2	300		300
8	Fire tracing & inspection path	Jan. – Feb..	3	450		450
9	SMC measures in form	Jan. –	10	1500		1500

	of staggered	Feb..				
10	Watch & ward	Oct. – Mar...	7	1050		1050
11	Contigency			0	200	200
	TOTAL		**33**	**4950**	**800**	**5750**
D. SECOND YEAR MAINTENANCE						
Sl. No.	**Item of work**	**Period**	**Mandays**	**Labour cost @**	**Material**	**Total in**
1	Casuality replacement with nursery cost	Mar - July	3	450		450
2	Application of fertilizer	Aug. - Sept	1	150		150
3	Cost of fertilizer	Aug. - Sept			300	300
4	2nd weeding (around the plant 1M	Aug. - Sept	2	300		300
5	Soil working (1 M radius around the pit)	Oct. – Nov.	2	300		300
6	Fire tracing (2 M wide fire line over 400 m.	Mar – June	3	450		450
7	Watch & ward	Whole year	15	2250		2250
8	Contigency(Approx.5% of total.)			0	200	200
	TOTAL		**26**	**3900**	**500**	**4400**
E. THIRD YEAR MAINTENANCE						
Sl. No.	**Item of work**	**Period**	**Mandays**	**Labour cost @**	**Material**	**Total in**
1	Weeding &Application of fertilizer	Aug. - Sept	2	300		300
2	Cost of fertilizer	Aug. - Sept			300	300
3	Soil working (1 M radius around the pit)	Oct. – Nov.	2	300		300
4	Fire tracing (2 M wide fire line over 400 m.	Mar – June	3	450		450
5	Watch & ward	Whole year	15	2250		2250
6	Contigency				200	
	TOTAL		**22**	**3300**	**500**	**3800**

ABSTRACT					
SL .No.	**YEAR OF OPERATION**	**Mandays**	**Labour cost @**	**Material Cost**	**Total in Rs.**
A	NURSERY	20	3000	1200	4200
B	ADVANCE WORK	39	5850	0	5850
C	PLANTATION 1ST YEAR	33	4950	800	5750
D	MAINTENANCE 2ND YEAR	26	3900	500	4400
E	MAINTENANCE 3RD YEAR	22	3300	500	3800
	TOTAL	**140**	**21000**	**3000**	**24000**
Cost per plant. = Rs.60/-					

19.4.13 **Treatment of Wildlife (overlapping) Working Circle -** The total area under this Working Circle is 99,755.50 ha. Thus the average annual area of this Working Circle is 9975.00 ha. The different type of treatment prescribed are engagement of anti poaching squad for protection including vehicle, creation of waterholes, game tanks, research, publicity and maintenances of permanent structure.

The cost for implementation of prescription under Wildlife (OL) Working Circle Rs. 55,36,125/- or Rs.55.0 lakhs annually with subsequent raise of 5% every year as per the details fuenished in the **Table 19.8**

Table No 19.8 Cost norm breakup per ha for treatment of Wild Life Working Circle.			
Sl No	**Item of Work**	**Cost Norm per ha @150 per Mds**	**Cost involved (in Rs.)**
1	Saltlick	0.1	15
2	Game tank, watch tower	1	150
3	10 water holes/ year	2	300
4	Fodder Plantation	0.1	15
5	Protection	0.5	75
	Total		**555**

19.4.14 **Treatment of N.T.F.P. (Overlapping) Working Circle** - The total area under Non-Timber Forest Produce (Over lapping) Working Circle is 99,755.50 ha. Therefore, the average annual area is 9975.00 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 and its value addition among the villagers is to be taken up through street play, beating drums, printing of poasters, announcement through mike and audio-visual provision for spreading the message. Thus, annual expenditure on Non-Timber Forest Produce (overlapping) Working Circle is kept at lump sum amount of Rs.10.0 lakhs per annum with subsequent annual rise of 5% every year.

19.4.15 **Treatment of J. F. M. (Overlapping) Working Circle -** At present in Dhenkanal Division there are 326 numbers of registered VSS assigned for protection forest in different patches. The total area assigned to 326 numbers of VSS committees is 38,193.80 ha. Prescription is made for strengthening of the existing VSS through different income generating programmes, resolution of intra and intra VSS dispute for proper co- ordination and motivation for protection of forests, creation of new VSS, incentive and rewards & exposure visit to the VSS etc.

Thus annual expenditure on JFM (overlapping) Working Circle is taken a sum amount of Rs.10.0 lakhs per annum with annual escalation of 5%.

19.4.16 **Other Development Activities:**

19.4.16.1**. Promotion of Eco-Tourism - In** Dhenkanal Division 02 Eco-Tourism zone namely Kapilas and Saptasajya has been identified**.** For their development an annual expenditure of Rs.10.0 lakhs is estimated with 5% annual increase.

19.4.16.2 .**Purchase of Stationery (Library, Equipments, and Maps & Tools)** - An amount of Rs.2.0 lakh is estimated on lump sum basis with an annual raise of 5 % every year.

19.4.16.3 **Creation of Research Plots –** In Dhenkanal division there is no research plot to ascertain the growth and quality of species and other allied information. Therefore, it is prescribed to establishment of a research plot with an estimated amount of Rs.10.0 lakh. Further for improving the research activities Rs. 5.0 lakhs. Thus an amount of Rs.15.0 lakhs is prescribed annually under the component with 5 % annual increase in the subsequent year.

19.4.16.4Collection of Forest produces (Timber, Firewood on irregular Exploitation).

The expenditure on these collections is kept on lump sump basis of Rs. 5 lakhs with subsequent raise of 5% every year.

19.4.16.5 **Forest Roads**

The division has a network of 272.28 km. of forest roads. The forest roads require frequent maintenance, for this a minimum of Rs.0.30 lakhs. per km is required per annum. Thus the total expenditure on repair and maintenance of road is Rs.20.0 lakhs per annum with a subsequent raise of 5% annually.

19.4.16.6 Maintenance of Boundary

The total length of the boundary is 1263.86 km. and total no of pillars is 10095 nos. As verified the position of the pillars are Good-1945, Damage-4249 and Missing - 3901 nos. The average length of the boundary to be maintained annually is 252.77 km. or 253 km (once in 5 years). It is prescribed for mainantance and construction of damaged and missing pillars within the plan period of ten years.

Thus the cost projected for the purpose is as under.

(i) Cost of clearance of boundary line =253 km x 10 MD x 200.00 = Rs.506000/-

(ii) Maintenance of damaged pillars per annum

=425 no x 5MD x 200.00 = Rs.425000/-

(iii) Construction of missing (Masonary) Pillar @ of Rs.2000 per pillar

= 390 x 2000 = Rs.780000/-

Hence the total cost per annum on boundary line maintenance and pillar posting is Rs. 17,11000/- or 17 lakhs with a subsequent raise of 5% every year.

19.4.16.7 **Forest Consolidation**

There are 47 proposed Reserved Forest Blocks over an area of 13008.17. There are many objections raised by FSO, most of them related to demarcation. For proper demarcation of these blocks an annual expenditure of Rs. 5.0 lakh is required with a subsequent raise of 5% every year.

19.4.16.8 Buildings:

The condition of buildings is deplorable and many quarters require immediate renovation. The residential and non-residential buildings need to be renovated and newly constructed to meet the minimum amenities of the staff. Also there is need of a Authorised Courtroom for trial of the confiscation proceeding and a conference hall to carryout FDA and VSS meetings. The Division has no FRH in the divisional headquarter at Dhenkanal which is badly necessary. Similarly, there is need of upgradation of common toilet facility in the Division office and cold drinking water facility. For carrying out these works an annual expenditure of Rs. 10.0 lakhs. is required with an escalation of 5% every year.

19.4.16.9 **Miscellaneous Contingencies -** An amount of Rs.5.0 lakhs. per annum is estimated with subsequent rise of 5 % every year to meet the miscellaneous expenditure of this division.

19.5. **Projected Cost Analysis**:

19.5.1. Basing on the above analysis, the componntwise estimated cost to be required for implementation of the Plan during the period from 2016-17 to 2025-26 is given in the **Table no. 19.9**

TABLE-19.9 Estimated cost for the Plan period from 2015-16 to 2024-25 in Lakh.

Items	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**Total**
Estt.	261	274	288	302	317	333	350	368	386	405	3284
SWC	46	48	50	53	56	59	62	65	68	71	578
E-Co.WC	1112	1168	1226	1287	1351	1419	1490	1565	1643	1725	13986
Plat. W.C	152	160	168	176	185	194	204	214	225	236	1914
Prot.W.C.	271	285	299	314	330	347	364	382	401	421	3414
BambooW.C	24	25	26	27	28	29	30	32	34	36	291
Wildlife WC	55	58	61	64	67	70	74	78	82	86	695
NTFP WC	10	11	12	13	14	15	16	18	19	21	149
JFM WC	10	11	12	13	14	15	16	18	19	21	149
Eco-Tourism	10	11	12	13	14	15	16	18	19	21	149
Purch.of stationery	2	2	2	2	2	2	2	2	2	3	21
Research Plot	15	16	17	18	19	20	21	22	23	24	195
Forest Produce	5	5.25	5.5	5.75	6	6.25	6.5	6.75	7	7.25	61.25
Boundary Maint.	17	18	19	20	21	22	23	24	25	26	215
Forest Road	20	21	22	23	24	25	26	27	28	29	245
F.Consolidn.	5	5.25	5.5	5.75	6	6.25	6.5	6.75	7	7.25	61.25

Building	10	11	12	13	14	15	16	17	18	19	149
Misc. Cont.	5	5.25	5.5	5.75	6	6.25	6.5	6.75	7	7.25	61.25
Total	**2030**	**2134.75**	**2242.5**	**2355.25**	**2474**	**2598.25**	**2729.5**	**2870.25**	**3013**	**3165.75**	**25661.75 or 25662/-**

19.6 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 as under.

19.6.1 Timber: The number of trees available for marking in Selection Coupe is limited to 2 trees of Sal per ha and 2 trees of non-Sal per ha. Thus the total timber obtained from Selection Working Circle coupe annually is calculated as follows:

Total number of trees available for felling = 4 trees per ha.

The unit volume of each tree = 3 units

The number of units available per ha = 12 units

Total area of the Selection series =15271.29 ha.

Annual Selection Area Available =1527 ha

Total units available per year = 18,324 units

Cost per unit = Rs.1456 /-

Value of timber available = Rs.266.79 or 267 lakhs

19.6.2 Bamboo: As per the yield estimated based on the field enumeration result vis-à-vis its analysis the average production of bamboo in the division is 204.15 Sale Units (Total production of four year rotation is 816.6 Sale Units). The prevailing selling price of one sale unit of bamboo is Rs. 3450/- for the year 2013-14. Thus the value of the bamboo to be harvested annually will be Rs. 28.17 or 28 lakh.

19.6.3 Kendu Leaf: The annual average production of Kendu Leaves in the division is 21634 quintals. The average rate per quintal is Rs.5965.00 and the total value of Kendu leaves in this division is 1290 lakhs.

19.6.4 Fire Wood: The value of firewood is calculated as follows. It is generally known that for one cubic meter of timber outturn, there will be one MT of fire wood outturn. The annual production of timber is 270240 cft or 7652 cum. So, the out turn of firewood will be 7652 MT, the value of one MT is Rs.2000 and so the total value of firewood is Rs.153. lakhs.

19.6.5 The average revenue received in the division during last five years of the plan period (2009-10 to 2013-14) as reflected in table 7.15 is Rs. 54.93 lakhs. This includes timber, firewood, and miscellaneous revenue. The average revenue received on rents on buildings and other misc. receipts is Rs.5.0 lakhs. Estimated total benefit per annum from the forest is depicted in the following **Table No -19.10.**

Table: -19.10 ESTIMATION OF TOTAL REVENUE

S.No.	Item	Value (Rs. lakh)
1	Timber	267
2	Bamboo	28
3	Kendu leaves	1290
4	Firewood	153
5	Revenue	5
Total		**1743**

19.6.6 The projected benefit by assuming 5% annual raise for the next 10 years is calculated below:

Table:-19.11 ESTIMATED BENEFITS(IN LAKHS)

Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	Total
Amount	1830	1922	2018	2119	2225	2336	2453	2576	2705	2840	23024

19.6.7 COST-BENEFIT ANALYSIS:

The cost benefit ratio of the plan is as follows:

Total Cost of the plan = 25662 lakhs

Total Projected Benefit = 23024 lakhs

Cost-Benefit Ratio = 1: 0.90

19.7. Conclusion: As seen the cost benefit ratio appears to be not much encouraging. This is due to long gestatation period in the forst sector. The management prescription outline in the plan definitely yield result after 30 to 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.

CHAPTER – XX
MISCELLANEOUS REGULATIONS

20.1 GENERAL CONSIDERATIONS:

This chapter concerns the whole Division and include all those prescriptions regulation and recommendations not made earlier in the main Working Circles. Thus the prescriptions made here would be applicable to all the forest blocks included in the revision. Some of the important subject for which regulations proposed area as follows:-

20.2 PETTY FELLING:

In normal course, irregular felling of trees should not be permitted. The petty felling would be permitted in emergency and extraordinary circumstances including urgent department requirements and socio- religious functions only those trees shall be marked for felling which are silviculturally available and whose removal will not create a permanent gap in the canopy.

20.3 DEVIATION:

Any large and un-usual operation not prescribed in the working plan constitutes a deviation, normally it is with reference to harvesting of Forest produce. In normal course, the irregular felling of trees shall not be permitted. However, to meet emergencies this can be resorted, to in manner and extent as provided in writing to competent authority.

20.4 RIGHTS & CONCESSION:

The rights and concessions existing under different provisions have been discussed in Chapter 1 and also in individual working circles. However, these rights, concessions and privileges are subject to the good condition of the forests and if such resources are exhausted or damaged, all such rights, concessions or privileges shall cease to exist.

20.5 RESEARCH PLOTS:

There is no research plot in the tract, if developed area will be excluded from the present working plan.

20.6 ROADS, PATHS, BRIDGES, BUILDING:

The list of above infrastructure with their year, cost of construction/ repair/ Scheme would be documented here. Since most of such infrastructure could not be maintained regularly during the outgoing plan period special emphasis is required to be given in the revision for their maintenance.

20.6.1 Forest roads

The Division has a network of 272.28 kms. forest roads. The roads form a major communication network for transportation of forest produce, effective supervision and checking of illegal activities like smuggling and poaching etc. The forest dwellers as well as local people use these roads and they are important social capital assets that need proper maintenance.

The forest roads should be provided with good drains to allow surface runoff. Cross-drains should be provided before monsoon especially on high slopes. The causeways, culverts, home pipe culverts and temporary bridges should be improved. Light murrum turfing of road should be done periodically to prevent soil loss and erosion due to surface runoff. Roads are required to be repaired during the winter season. The Range officer will prepare plan and estimate for repair and special repair after verification of forest roads.

20.6.2 Buildings

In the past there was a shortage of residential accommodations, particularly for the Forest Guards of the Division. In many Beats, the FGs were living in rented thatched house in the village. However, now the difficulty for construction of new buildings and maintenance of old ones has become easier due to fund made available under TFC, State CAMPA and State plan. The Range infrastructure has improved many folds. However some more funds is required for construction of residential and non-residential quarters.

20.7 MAINTENANCE OF FOREST BLOCK BOUNDARIES.

20.7.1. The boundaries of various forest blocks are poorly maintained due to a variety of reasons including paucity of funds. A field staff's often not aware of correct boundary of forest blocks under this jurisdiction. This has given scope for encroachment. During field verification, most of the boundary pillars were found missing. Nor could numbers of boundary pillars be ascertained in many other cases. Hence boundary pillars are required to be periodically repaired and numbered. Boundary lines are also required to be cleared and properly maintained. Details of block boundaries e.g. length of forest boundary, number of pillars, pillar to pillar bearings and distances, and a record of maintenance of boundaries shall be meticulously maintained in the Divisional Office.

20.7.2. In Dhenkanal Division total length of the boundary line comes to 1263.86 Kms and the total no of the pillar is 10095 nos out of which the position of the the pillars is good-245, damaged-4249 and missing-3901 nos. It is prescribed to maintain the boundary line once in five year with annual length of treatment being 253 Kms. Further it is prescribed for maintenance and construction of damaged and missing pillar within the plan period i.e. in ten years. Hence during the currency of the plan period the boundary line and pillars shall be maintained as per guide lines mentioned below.

(i) A five year cycle of maintenance of boundaries and boundary pillars is prescribed with annual length of treatment being about 253 Kms. However no specific block wise programme has been prescribed; rather the D.F.O has been given the liberty of deciding the blocks to be treated in a particular year. While selecting the blocks, the aspects that shall be taken into account are (a) the block adjacent to human habitatation/susceptible to encroachment should be taken on priority basis (b) arbitrary assignment of annual areas shall not be resorted to for equal distribution of this work among different Ranges as has been in practice (c) as far as possible entire block should be attended at a time in a systematic manner.

(ii) The inter Divisional boundaries shall be cleared to a width of 12 m, external boundaries and common block boundaries to 6 m and enclosed village ring lines to 3 m. Compartment lines where they do not follow natural features like nallah, road, bridges etc shall be cut to a width of 3 m.

(iii) The boundary cleared forest blocks would be taken for construction of missing pillars besides repair of existing damaged pillars. The pillars to be constructed would be either of stone masonry; stone mud mortar with cement pointing or of dry stone packing depending on location of such pillars and/or reach-ability of masonry material.

20.7.3. Every Forester shall submit quarterly certificate of having inspected the boundaries of all the blocks within their respective jurisdictions to the Range Officers concerned, for transmission of the same to the Divisional Forest Officer on 1st January, 1st April, 1st July and 1st October every year. Similarly every Forest Guard in charge of Beats should submit a monthly/annually certificate of physical verification of boundaries of all forest blocks under his charge conforming that no fresh encroachment has taken place and it should be reflected in his tour diary. Vulnerable areas must be verified by the Range Officers.

20.7.4. Since gradually all the topo sheets and maps are being digitized for development of soft ware for use of GIS technology and remote sensing photo imageries in the forest management, there is need for GPS (Geographical positioning System) reading of all the boundary pillars. The DFO shall ensure obtaining this data at the time of boundary verification and hence, the forest personnel beforehand shall be trained in handling GPS instruments.

20.8 MAINTENANCE OF MAPS & RECORDS:

The Divisional Forest Officer, Dhenkanal Division shall fill up the Control Forms No. 1 to 7 in three sets each year for transmission, one set each to the concerned Conservator of Forests (Territorial) and the Working Plans Officer. The third set shall be retained in the Divisional Office. It shall be the responsibility of the Conservator of Forests (Territorial) to see that the DFO concerned fills up and transmit the control forms to appropriate quarters timely and regularly. Any deviation on the above score shall be viewed seriously. As far as Control Form 1 is concerned, Conservator of Forests (Territorial) shall take expeditious steps to get the deviations, if any, approved by the competent authority.

The compartment histories have been filled up during the revision of the out going plan. The DFO should take responsibility to maintain and record the current histories of the compartments. A separate divisional notebook should be maintained by the DFO to reflect records of those important activities that cannot be recorded in compartment histories. Activities like VSS/JFM, micro-planning, RDF works, crop condition, regeneration status and other prescribed details should also be entered regularly. The DFO should make all efforts to inspect postings and maintenance of Plantation Journals and Nursery Journals as per the Orissa Forest Plantation Manual, 1977

Three sets of management maps in 1:25,000 scale, working plan maps in 1:50,000 scale and Index maps in 1:25,000 scales will be prepared. Two sets will be supplied to DFO and one set retained with WPO, Angul. DFO shall procure the blank copies of 1:25000 scale maps for different purposes from Survey of India. The compartment maps were provided to the DFO along with the compartment histories and management prescriptions.

20.9 MONITORING OF OLD PLANTATIONS:

Old plantations after the prescribed 3rd year operations shall be monitored from time to time with regard to survival percentage, growth characteristics, injuries to the crop and other indicators to be posted up-to-date as per the plantation manual 1977 to be continued till harvest of the plantation.

20.10 FIRE PROTECTION:

In spite of the Orissa Forest (fire protection) Rules 1979, fire continues to be the major threat to forest regeneration and establishment. Without exceptions all blocks are burnt every year. Fire Watcher system needs strengthening. JFM 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 be taken in time.

20.11 GRAZING:

With the increase in cattle population, grazing has become a serious problem. Without involvement of the local community this particular problem just cannot be solved. Stall-feeding, dairy Co-operative Societies should be encouraged and area specific method should be worked out by the DFO to manage grasses in the line of Range Management. Special care will be taken during year of working in Plantation, Eco-restoration and Selection Working Circle area.

20.12 ENCROACHMENTS:

Encroachments are common by the local villagers and some times they break or shift the boundary pillars. So boundary maintenance is of utmost importance for controlling this problem. Besides, a resurvey of the encroached area can only reflect the exact extent of encroachment in the Division. An ACF or the Prosecution Range Officer should be entrusted to monitor the cases booked for encroachments in order to expedite the matter. There should be periodical monitoring of the encroachments at the DFO level. The Range Officer should review all the new encroachment cases once in two months. The scope of new encroachments shall be minimized with the continuous monitoring in the field.

20.13 COMMUNICATION NETWORK:

The Division has a fairy well laid-out network of VHF system. However, its maintenance is still a problem as no technically trained personnel are available to man the stations. DFO should take efforts provide training to the existing Forest Guards/ Foresters who are handling the VHF sets.

20.14 FOREST CONSOLIDATION:

There are 47 nos of Demarcated Forest blocks (DPF) over an area of 13008.17 ha. These blocks are under various stages of notification. Out of these proposals for 30 blocks have been dropped or returned, mostly for resubmission after suitable modifications. Proposals for 05 blocks have been cancelled by the FSO and proposals for 12 blocks not submitted. During the outgoing plan perid not a single proposal was moved. As seen during field survey there is no clear cut demarcation of the DPFs due to non-maintenance and most of the boundary pillars are not available in the field. Also the maps of the DPF are not readily available in the Division office. The DFO should take proactive & immediate steps for demarcation of the boundaries along with posting of pillars of the DPF and to resubmit/submit the proposals and get the blocks notified finally as Reserved Forests. These blocks should be brought to management fold of Working Plan as and when there is clear cut demarcation along with map prepared or they get notified under Section 4(1) of Orissa Forest Act. Similarly there is Debottar Forest area (5261.0 ha) and Lakharaj Forest area (3634.0 ha) as per record. In the field these are not traceable. The DFO should take immediate step for demarcation of this forest area and other consolidation activity for its notification. Besides during field exercises it is observed that in the Division there are undemarcated forest areas adjoining to Reserve Forests. The DFO should take demarcation

of such undemarcated forest areas and its length, number of pillaras required should be assessed. The year wise plans for demarcation of such areas along with funds required based on prevailing rate should be chalked out by the DFO and complete the work as earliest.

20.15 VILLAGE FORESTS:

There are 217 village forests notified by Government of Orissa between 1990 to 1993.These forests have been raised by the Social Forestry wing of the Forest Department. These shall be maintained as per the guidelines issued by Government of Orissa.

20.16 DISPOSAL OF SEIZED AND CONFISCATED PRODUCE VIS-A-VIS PROSECUTION CASE:

It has been observed that aforesaid aspect is invariably neglected in the Division. Hence special drive is to be ensured for timely action on this issue. This will not only help in checking pilferage of Govt. Revenue but would also help in acting as a deterrand in commission of further forest offences. The seized produce of U.D. cases need to be handed over to OFDC Ltd. immediately for disposal. Hon'ble Courts concerned have to be moved for according permission for disposal of seized produce to avoid loss of perishable goods. In case of delay in taking over delivery by the OFDC Ltd. steps may be taken to dispose the same departmentally as per prevailing procedure. The staff responsible for loss of seized produce by way of not taken adequate steps for disposal may be taken to task.

20.17 MANAGEMENT OF FOREST NOT COVERED UNDER THE REVISION:

As per D.L.C. report over 1, 78,820.59Ha other type of forests under different categories is existing in the tract of the Division. However the present revision includes 99,755.50 Ha.There is still about 44% of the forest of the tract remain without any management intervention. Hence general guidelines to be prescribed here for management of this chunk of forest area while drafting the plan. However expedious steps shall be taken to consolidate all such good forest areas into PF blocks for intensive management.

20.18 ANNUAL PLAN OF OPERATION

The annual plan of operations should be prepared one year in advance along with the treatment plan and map by each Range Officer. The Divisional Forest Officer shall check and consolidate the action plan and submit the same to the Regional Chief Conservator of Forests for approval. The total funds required shall be made available to the Divisional Forest Officer for successful implementation of Working Plan.

CHAPTER – XXI

ESTABLISHMENT AND LABOUR

21.1 ESTABLISHMENT:

The Division has originally 05 Ranges namely Dhenkanal, Sadangi, Kamakhya Nagar (East), Kamakhya Nagar (West) and Hindol. During re-organization of the Orissa Forest Department with effect from 1-10-2003 vide Order No-13228/F&E. Dated. 08.08.2003, Govt. of Odisha, three new ranges namely Kapilas, Bhuban and Odapada (Mahabir Road) were created and they are carved out of the existing five Ranges.The increasing work pressure and the challenges in the field from protection point of view, there is need of review of position of field staffs in the Division. The number of vacancies of Forest Guard and Forester is increasing day by day. So, filling up the direct recruitment quotas/promotion quotas should be done expediously.

The cadre strength and present position of the establishment of Dhenkanal Forest Division is given below.

TABLE-21.1 Cadre strength of the establishment of Dhenkanal Forest Division

SL. No.	Name of the Post	Sanctioned strength	Present Position
(1)	(2)	(3)	(4)
1	D.F.O.	01	01
2	A.C.F.	03	03
3	Forest Ranger	08	05
4	Dy. Ranger	10	03
5	Sr. Grade F.E.O.	00	00
6	Forester	48	37
7	Forest Guard	130	61
8	Jeep Driver	02	01
10	Section Officer	01	01
11	Sr. Asstistant	08	07
12	Jr. Asstistant	11	08
13	Jr. Steno	00	00
14	Group- D	07	06
	Total	**229**	**133**

Source: Divisional Forest Officer, Dhenkanal

TABLE No.-21.2 STAFF POSITION OF DIFFERENT RANGES OF DHENKANAL FOREST DIVISION.									
Name of the Range	Cadre strength of staff				Staff in Position				Remarks
	F.R	Dy.Ranger	Forester	Forest Guard	F.R	Dy.Ranger	Forester	Forest Guard	
1	2	3	4	5	6	7	8	9	10
Dhenkanal	-	1	3	14	-	1	6	7	
Sadangi	1	1	4	46	1	-	3	5	
K.Nagar(E)	-	1	3	14	-	-	2	19	
K.Nagar(W)	1	1	4	16	1	-	3	7	
Hindol	1	1	4	17	1	-	4	9	
Bhuban	-	1	2	7	-	1	3	5	
Kapilash	1	1	2	5	1	-	3	5	
Mahabirod	1	1	5	15	1	-	3	8	
Total	5	8	27	134	5	2	27	65	
Source: Divisional Forest Officer, Dhenkanal									

21.2 ADMINISTRATIVE ORGANIZATION:

The administrative units such as Ranges, Sections, Beats, Checkgate after reorganization is furnished in the following **Table-21.3**

TABLE-21.3 ADMINISTRATIVE ORGANIZATION			
Sl. No	Range	Section	Beat
1	Dhenkanal	1-Sadar	1. Kunjakanta
			2. Mahisapat
			3. Bhagabanpur
		2-Baldiabandha	4. Baldiabandha
			5. Kurumtangara
		3-Badagila	6. Badagila (A)
			7. Badagila (B)
			8. Mangalpur
		4-Bhapur	9. Bhapur
			10. Chandrasekharprasad
			11. Indipur
		5-Ghatipiri	12. Kalikaprasad
			13. Gobindaprasad
		6-Meramandali	14. Meramandali
		7-Gadasila	15. Korian
			16. Kaunriapal
2	Mahabirod	8-Dihadol	17. Dihadol
			18. Sanda
			19. Ambapalash
		9-Dadaraghati	20. Domuhani

			21. Rangathali
			22. Vejia
			23. Ghagarmunda
		10-Mahabirod-I	24. Jhilli
			25. Kuturia
		11-Mahabirod-II	26. Gadapalasuni
			27. Dasipur
		12-Pangatira	28. Pangatira
			29. Biribolei
3	Hindol	13-Hindol	30. Hindol
			31. Karnapur
			32. Sinkol
			33. Kantamilla
		14Bampa	34. Babandha
			35. Brahmaniapal
		15Rasol	36. Rasol
			37. Pasasing
		16Dandiri	38. Dandiri A
			39. Dandiri B
			40. Kanaka A
			41. Kanaka B
			42. Gurujanga
		17-Bimbori	43. Bimbori
			44. Khaliborei
			45. Fasigaon
		18-Khajuriakata	46. Sarasing
4	Kapilash	19-Deogaon	47. Deogaon
			48. Biradia
		20-Sorisiapada	49 Sorisiapada
			50 Mahisiakada
			51 Bania
		21-Chatighara	52 Chatighara A
			53 Chatighara B
		22-Kapilash Zoo	
5	Sadangi	23-Sadangi	54. Sadangi
			55. Nabakasipur
			56. Dolar
			57. Odisinga
			58. Baniapada
		24-Khankira	59. Khankira
			60. Tolarpasi
			61. Nihalprasad (Nischinta)

			62. Chhotatentuli
			63. Mundamari
		25-Joranda	64. Joranda
			65. Raitala
			66. Goradapal
			67. Nathua
6	K.Nagar West	26-Muktapasi	68. Muktaposi
			69. Kamarda
			70. Kankili
			71. Kadabasanta
			72. Pakatamunda
			73 Baghamunda
			74 Rangamatia
		27-Kamakhyanagar	75Kamakhyanagar
			76. Sahala
			77. Gundichanali
			78. Mahulapal
		28-Anlabereni	79. Anlabereni
			80. Kadalipal
		29-Kirtanpur	81Kirtanpur
			82. Kalbudhia
			83. Phuljhar
7	K Nagar East	30-Kankadahad-I	84 Kankadahad
			85. Rodanga
		31-Kankadahad-II	86. Childa
			87. Bahadapal
		32-Jiridamali	88. Batagaon
			89. Khateibereni
		33-Birasal I	90. Birasal
			91. Haladikundi
			92. Khanheipal
		34-Birasal-II	93. Kandar
			94. Koi
			95. Baradakota
			96. Ekul
			97. Khidikidwar
8	Bhuban	35-Bhuban	98. Bhuban
			99. Mahulpal (B)
			100. Nilakanthapur
		36-Mathakaragola	101. Mathakaragola
			102. Marthapur
		37-Jiral	103. Jiral
			104. Rankia

21.3 SUGGESTION:

21.3.1 After reorganization the staffing position of the Division has increased to some extent. However 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. Hence the sanctioned strength shall have to be filled up through regular recruitment when ever any vacancy arises.

21.3.2. At present Government has taken very praise worthy step to provide the anti smuggling/ poaching squad/ striking force having one unit consisting of 10 members under TFC, IFMS, State CAMPA etc. This provision needs to be continued in all vulnerable pockets with provision of mobility.

21.3.3. The Dhenkanal Division is smuggling prone Division being located near to the big cities like Cuttack, Bhubaneswar and Angul. 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 to operate the check gate around the clock.

21.4. LABOUR:

21.4.1. **Labourers** – In Forest Department different activities both traditional forest operations like coupe work and allied operation, plantation work, protection as well as development activities like roads, causeway, culvert, buildings are taken up around the year. In view of the above both skilled and unskilled labourers are required for the Department as discussed in Chapter-VI of part-I of this plan skilled labourers are not readily available as Dhenkanal Division come within the most industrialized District. However, unskilled labourers are generally available.

21.4.2. 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. Similarly the daily wages rate for semiskilled is Rs. 170/-, skilled- Rs.190/- and highly skilled - Rs.205/- per day.

CHAPTER – XXII

CONTROL AND RECORDS

22.1 CONTROL FORMS:

It is imperative to maintain the different control forms for monitoring the implementation of the working plan.

22.1.1 Coupe Control Forms – The coupe control form is maintained for the control of all silvicultural operation such as felling, subsidiary cultural operation, cleaning, thinning, burning etc. which may be prescribed or suggested to be carried out in a given coupe for the duration of the Working Plan.Normally 02 no of coupe control form, are maintained during each working plan year starting from 1st July to 30th June.

(i) **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				
TABLE-22.1 Coupes, which could not be worked out as per the prescription				
Sl. No.	Name of WC	Name of FS	Coupe No.	Reason of deviation

(ii). **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						
TABLE-22.2 Control of all silvicultural operation						
Working Circle	Felling Series	Block and comp't	Coupe No -			
			Year	Area	Volume	Silvicultural operation

22.1.2. **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.

TABLE-22.3 Felling Control Form								
WC	FS	Block comp't	Coupe No -					
			Species	Girth	Trees marked	Unit	Trees retained	% Retained

22.1.3. 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.

22.2. **General Prescription of the Working Plan**:

22.2.1. 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 2016-17 to 2025-26. 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.

22.2.2. Deviation – A large or unusual operation which is not prescribed in the Working Plan causes 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.

22.2.3. Minor deviation can be sanctioned at the level of C.F, Working Plan or the P.C.C.F. as the case may be but 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 below.

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.

22.2.4. **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 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.

TABLE-22.4 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

22.2.5. **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.

22.3 MAINTENANCE OF RECORDS:

22.3.1 Register of Forest Blocks: Registers of RF, PF & VF are to be maintained properly as per codal provisions, contain copies of the original notification, 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.

22.3.2 Compartment Histories: Compartment History Files for all the compartments of the forest blocks have to be prepared in three sets in accordance with the standard instructions contained in the O.F.D. Code and National Working Plan Code 2004. A stock map on 1:25,000 scales showing growing stock of the compartment has to be attached to each such file.

22.3.3 Plantation Journals: Journals for plantations will be maintained, in the forms prescribed in Orissa Forest Plantation Manual 1977 along with plantation Maps.

22.3.4 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, with an index number.

22.3.5 Register of Silvicultural Operations. A register shall be maintained at the Division level giving details of subsidiary silvicultural operations carried out in Selection and Bamboo coupes. Details of the coupes, forest blocks, area covered, clumps, trees attended to etc. will be covered.

22.3.6 Fire Maps: Fire maps shall be maintained as per Rule 283 (22) of the Orissa Forest Department Code and National Working Plan Code 2004.

22.4. Coupe Control Form:

22.4.1. The format of coupe control form as per as per National Working Plan Code-2004 is as under.

TABLE-22.5 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

22.4.2. The format of felling control form is as under.

TABLE-22.6 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

22.4.3. **Selection Working Circle**:

TABLE-22.7 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:	

TABLE-22.8 SUMMARY OF UNITS MARKED				
Year	Units marked	Excess or deficit	Running excess or deficit	Remarks
1	2	3	4	5
2026-27				
2027-28				
2028-29				
2029-30				
2030-31				
2031-32				
2032-33				
2033-34				
2034-35				
2035-36				

22.4.4. **Eco- Restoration Working Circle**:

TABLE-22.9 ECO RESTORATION CONTROL								
WORKING CIRCLE: Eco- Restoration								
…… Eco-Restoration Series								
Year of Treatment	Area Prescribed					Achievement (in Ha.)		
	Coupe No.	Forest block details				Area	Running Excess/Deficit	Remarks
2026-27								
2027-28								
2028-29								
2029-30								
2030-31								
2031-32								
2032-33								
2033-34								
2034-35								
2035-36								

22.4.5. Plantation **Working Circle:**

TABLE-22.10 CONTROL OF CULTURAL OPERATIONS							
WORKING CIRCLE: Plantation							
PLANTING SERIES:							
Reference: Paragraph-							
Prescription						Results	
Year	Coupe No.	Forest Block	Status	Comptt	Area in Ha.	Years in which actually done	Remarks
1	2	3	4	5	6	7	8
2026-27							
2027-28							
2028-29							
2029-30							
2030-31							
2031-32							
2032-33							
2033-34							
2034-35							
2035-36							

22.4.6. **Protection Working Circle:**

TABLE-22.11 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.			
2026-27								
2027-28								
2028-29								
2029-30								
2030-31								
2031-32								
2032-33								
2033-34								
2034-35								
2035-36								

22.4.7. **Bamboo (Overlapping) Working Circle:**

TABLE-22.12 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
2026-27					
2027-28					
2028-29					
2029-30					
2030-31					
2031-32					
2032-33					
2033-34					
2034-35					
2035-36					

22.4.8. **Wildlife (overlapping) Working Circle**:

TABLE-22.13	**WILDLIFE CONTROL**		
WORKING CIRCLE: Wildlife (Overlapping)			
Year of Treatment	Activities Done		
	Location	Type of Work	Remarks
2026-27			
2027-28			
2028-29			
2029-30			
2030-31			
2031-32			
2032-33			
2033-34			
2034-35			
2035-36			

22.4.9. **NTFP (Overlapping) Working Circle**:

TABLE-22.14	**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	
2026-27								
2027-28								
2028-29								
2029-30								
2030-31								
2031-32								
2032-33								
2033-34								
2034-35								
2035-36								

22.4.10J.F.M. (overlapping) Working Circle:

TABLE-22.15 WORKING CIRCLE: Joint Forest Management (overlapping)			
Reference: Paragraph no:			
Year	Activities done		
	Nos. of VSS	Microplans done	Remarks (Activities done etc.)
2026-27			
2027-28			
2028-29			
2029-30			
2030-31			
2031-32			
2032-33			
2033-34			
2034-35			
2035-36			

TABLE- 22.16 WORKING CIRCLE: Joint Forest Management (overlapping)			Management of Village Forests
Reference: Paragraph no:			
Year	Activities done		
	Nos. of VFs	Work done	Remarks
2026-27			
2027-28			
2028-29			
2029-30			
2030-31			
2031-32			
2032-33			
2033-34			
2034-35			
2035-36			

22.5 DEVIATION STATEMENTS:

Deviation statements are to be maintained as per Rule-132 of the O.F.D. Code and para 81 of the National Working Plan Code, 2004 in the prescribed format.

CHAPTER – XXIII

SUMMARY OF PRESCRIPTION

23.1 GENERAL CONSTITUTION:

Under this Chapter, Summery of Prescription of this Working Plan is given including that of Miscellaneous Regulations in a tabular form to act as a ready reckoner for quick reference. The total plan area is 99,755.50 Ha.

23.2 FUTURE MANAGEMENT DISCUSSED AND PRESCRIBED

23.2.1 Basis OF Proposal

Heading	Prescription	Para
General Consideration	National Forest Policy 1988 and ground realities.	10.1
General objectives of Management	Conservation of flora & fauna, Biodiversity conservation, to prevent degradation, to improve productivity, to provide sustained yield of different forest produce, to meet the demand and employment oppertunities of the local peoples, to create sense of belongingness of local people on forest etc.	10.2
Methods of treatment to be adopted identify forest of crops	Different methods vis-à-vis their justification.	10.3
Constitution of Working Circle	Eight (08) Working Circles – 1.Selection Working Circle 2.Eco-Restoration Working Circle 3.Plantation Working Circle 4. Protection Working Circle 5.Bamboo (OL) Working Circle 6. W L Management (OL) Working Circle 7.NTFP (OL) Working Circle 8. Joint Forest Management (OL) Working Circle.	10.4
Period of Working Plan and necessity for intermediate revision	Plan period 2016-17 TO 2025-26, Review of prescrition after after 05 years.	10.5

23.2.2 The Selection Working Circle

Heading	Prescription	Para
General Constitution	Forest with good vegetation and matured trees. Compartments – 36, RFs – 03 namely Ranjagarh, Antapur and Kandhra.	11.1
General character of vegetation	Mainly fall under 04 forest types – (a) 3C/C3 Northern Indian Tropical Moist, Mixed Deciduous forest (b) 3C/C2e Northern Indian Tropical MoistPeninsular Sal Forest (c) 5B Northern Tropical Dry deciduous Forest (d) C3/E3 Moist bamboo Brakes.	11.2
Felling Series & Cutting Sections	Three (03) Felling Series, Ten(10) Annual Coupes.	11.3
Blocks & Compartments	Three (03) RF, Thirty six (36) Compartments, Area-15271.294 Ha.	11.4
Special Objectives of Management	To improve boidiversity of the forest, Soil & water conservation, To improve stand structure, to remove matured & silviculturally available trees on sustainable basis.	11.5
Analysis and valuation of the crop	Good vegetation having crop density 0.4 to 0.6 , Regeneration	11.6

	Survey and 5% enumeration conducted.	
Silvicultural System	Selection System.	11.7
Rotation and Conversion (FC) period	Rotation - 120 Years, Felling Cycle - Ten (10) Years.	11.8
Exploitable Diameters.	Sal & other species > 120 cm, Bandhan > 90 cm.	11.9
Calculation of yield	Yield regulated by area. For calaulation of yield Smythies safe-guarding formula adopted.Trees Limit per ha for Sal - 02,Others -02.	11.10
Table of felling.	Three (03) RFs divided into three (03) individual Felling Series and ten (10) Coupes each.	11.11
Methods of Executing the felling	Demarcation of annual coupe, Marking rules, Execution of Marking & Felling.	11.12
Subsidiary Silvicultural Operations.	To be carried out after the main felling followed by SMC measures and gap plantation where ever nececessary.	11.13
Control	Maintenance of Compratment history and Control forms etc.	11.14
Miscellaneous Regulations	Regulation of Grazing, fire protection, Right & Concessions etc.	11.15
Intermediate Revision	Review of Prescription after five years	11.16.
Economic analysis and effects of prescriptions	Cost benefit analysis	11.17

23.2.3 The Eco-Restoration (Rehabilitation) Working Circle

Heading	Prescription	Para
General Constitution	Root stock available for rehabilitation and in various stages of degradation.	12.1
General character of vegetation	Mixed Miscellaneous Forest with poor natural regeneration.	12.2
Special Objectives of Management	Improve the condition of existing forest, soil productivity & biodiversity in general, restocking of barren areas, improve microclimate, To meet demand and improve economic condition of local people etc.	12.3
Area & allotment	AREA – 35448.66 Ha. Fifty nine (59) RF, Ninety (90) Compartments	12.4
Constitution of Rehabilitation Series and Cycle	Ten (10) Rehabilitation Series costituted.	12.5
Analysis and Valuation of Crop	Area is mostly under the different stages of degradation due to biotic factors. 1% enumeration and Regeneration Survey conducted.	12.6
Silvicultural System	Cleaning, thinning, SMC and gap plantations.	12.7
Rotation, Yield and Yield regulation	No rotation and conversion period is prescribed.	12.8
Exploitable Diameters.	No exploitable diameter is required.	12.9
Ecorestoration Cycle	Ten (10) Years Rehabilitation Cycle proposed.	12.10
Table of Treatment Series	Ten (10) Treatment Series divided into Ten (10) annual coupes each.	12.11
Treatments Prescribed	Cultural operation like cleaning, singling out of coppice shoots, SMC works, cutting back of high stumps, congestion clearance, SMC measures ,Gap plantation etc.	12.12
Methods of Execution of Rehabilitation.	Demarcation of annual coupes, Cultural operation including SMC works and gap plantation etc will be carried out with active participation of local people.	12.13
Miscellaneous Regulations	Protection, JFM, Maintenance of records, Rights & Concession etc.	12.14

23.2.4 The Plantation Working Circle

Heading	Prescription	Para
General Constitution	Old existing plantation, Permanent barren & open lands.	13.1
General character of vegetation	Tropical Dry / Moist /Scrub Forests.	13.2
Special Objectives of Management	To Restock the blank area through plantation, Tending operations of exsting plantations, improve biodervisty, treatment, harvest of old plantations and replanting.	13.3
Area & Allotment	Area - 21,916.09 ha out of which plantable area is 2785.0 ha in thirty four (34) RF & fifty four (54) Compartments	13.4
Constitution of Plantation series	Eight (08) plantation Series constituted over a plantable area of 2785.0 ha.	13.5
Analysis and Valuation of Crop	Area is mostly blank patches with practically no growth, Plantation survey and 1% enumeration conducted.	13.6
Silvicultural System	Artificial regeneration by gap plantation along with coppice system followed.	13.7
Choice of species	Soil, topography, local demand will be considered. Preference to indigenous, fruit bearing and NTFP species.	13.8
Plantation Cycle and Rotation	Planting cycle ten (10) years. For Eucalyptus 03 rotation for harvest.	13.9
Calculation of Yield	Only from Eucalyptus and other short term species raised.	13.10
Plantation Technique and Operations	Orissa Forest Plantation Manual, 1977, Demarcation of annual plantation coupes, Indication of coupes by sign boards.	13.11
Prepareation of site, treatment Map and Plan	Preparation of Site Map of 1: 25000 Scale and annual action plan. Prepareation of site to be completed by end of Jauary.	13.12
Stacking, Pitting & Planting	Alignment, Stacking & Pitting to be completed by end of February. Planting to be started after onset of monsoon and completed by July.	13.13
Post Plaanting Operations	As per Calendar of Operation prescribed in the Plantation Manual.	13.14
Nursery	To be started one year in advance preferably in permanent nurseries.	13.15
Control	Maintenance of plantation journals and records.	13.16
Treatment of existing plantations	Prunning, Thinning and Climber cutting. Harvesting of matured plantations and replanting.	13.17
Miscellaneous Regulations.	Protection from grazing & fire, JFM, Rights & Concession etc.	13.18
Soil and Water Conservation measures	Gully plugging, Contour bunding, Staggered Trenches, Percolation Tanks, Palisading, Agave plantation and Vegetative bunding.	13.19

23.2.5 The Protection Working Circle

Heading	Prescription	Para
General Constitution	Eco fragile area, catchment of major rivers and water reservoirs etc.	14.1
General character of vegetation	Tropical moist / Dry scrub forest.	14.2
Blocks, Compartments and Area.	Blocks – 28, Compartments –78, Area allotted – 27119.587 Ha.	14.3
Special objects of management	To protect delicate & eco-sensitive areas from degradation against biotic interference and Rehabilitation catchment and other such areas through gap plantation & SMC measures..	14.4
Analysis and Valuation of Crop	Area is mostly eco-sensitive and 1% enumeration conducted.	14.5
Silvicultural System	Rigid protection against biotic interference through enforcement coupled with silvicultural operation including planting...	14.6
Rotation and conversion period	No fellingrecommended. Only removal of uprooted and wind fallen.	14.7
Treatment Series and Cycle	Five (5) Treatment Series and Five (5) year cycle is prescribed.	14.8
Methods of Execution of treatment.	Division int annual protection areas, Demarcation of annual coupe and preparation of annual plan of operation.	14.9
Forest Protection Measures.	Protection against biotic interference – illicit felling, forest fire, grazing, encroachments, shifting cultivation etc.	1410
Silviculture Operations	Silviculture Cleaning, Thinning etc.	14.11
Artificial Regeneration	Gap planting in gaps 0.4 ha & more with indigenous species.	14.12
Other Regulations.	Protection from grazing, lopping, fire, climber cutting, SMC measures, improvement of forest road network, communication system and peoples participation.	14.13

23.2.6 The BAMBOO (O.L.) Working Circle

Heading	Prescription	Para
General Constitution	Though overlapping, only bamaboo producing area taken up.	15.1
General character of vegetation	D. strictus (Salia bamboo), B. arundinacea (Daba bamboo) available	15.2
Special Objectives of Management	Systematic management of Bamboo Forest, meeting demand of local people, artisans and paper mills, employment to local people.	15.3
Area & allotment	7966.61 Ha. Compartments. -18. RF- Kandhra & Hitinda	15.4
Analysis and Valuation of Crop	Bamboo in degraded condition and 1% enumeration conducted.	15.5
Silvicultural System	Culm Selection- cum -Clump improvement.	15.6
Cutting Cycle&CuttingSeries	02 Citting Series, 04 Years Cutting Cycle. Each Cutting series divided into four coupes namely A, B, C and D.	**15.7**
Table of bamboo cutting operation	Bamboo working will be from October to June. Sequence of cutting to be shown in the management Map,	15.8
Calculation of yield	Yield will be regulated by area.	15.9
Method of execution of operation	Through demarcation of annual coupes.	15.10
Working of bamboo	As prescribed rule by the C.C.F. (Central), Govt. of India.	15.11
Subsidiary silvicultural operation	After bamboo coupe working without damaging rhizomes & rootstocks.	15.12
Treatment Types	Three treatment types – A, B & C., Treatment of gregarious flowered areas	15.13
Artificial Regeneration	Plantation in available gaps of B & C treatment typeareas.	15.14
Miscellaneous Regulation	Treatment of clumps, control from grazing, fire, lopping, restriction of cutting along river,roads and hill slopes, right & concessions etc.	15.15

23.2.7 The Wild Life (O.L.) Working Circle

Heading	Prescription	Para
General Constitution	All Forest Blocks of the Division being Wild life an integral part of Forest Eco-system.	16.1
General character of vegetation	Tropical Moist / Dry / Scrub Forest.	16.2
Analysis and valuation of crop	Wild Life habitat continues to be degraded.	16.3
Area and allotment	99,755.50 Ha.	16.4
Special Objectives of Management	To protect, conserve, improve the wild life habitat and its habitat, promotion of eco-tourism, to create awareness to the people.	16.5
Method of Treatment	Mapping of wild life rich areas, protection of wild animals from poaching through enforcement, surveillance & awareness to the people, Habitat improvement & maintenance of elephant corridors, creation of water body, game tanks, tackling animal depredation.	16.6
Treatment of Kapilas and its adjoining areas	Special treatment of religious spots or places of tourist attraction like Kapilas and saptasajya.	16.6.1
Kapilas zoo	Improvement of Kapilas Zoo to promote WL conservation & awareness among the public.	16.6.2
Wild Life Census	Wild Life census at regular interval to know status of animals.	16.6.3
Man-Elephant conflict	Animal depredation mainly elephant to be tackled on priority basis to reduce man-animal conflict.	16.6.4
Common Injuries to wild animals	Poaching of animals, trafficking of animal products to be handled. The offenders to bo taken to tasks as per Act Rule.	16.6.5
Eco-tourism zones	Two Eco-tourism zones Kapilas & saptasajya identified for promotion of eco tourism.	16.6.6
Miscellaneous Regulations	Creation of awareness & publicity, increase capacity building, Inrastructure development, improvement of information network, tackling of wild life depredation, fire & grazing control, incentives & rewards to informers, strict implementation of Act & Rules, Right & Concessions.	16.7

23.2.8 The NTFP (OL) Working Circle

Heading	Prescription	Para
General Constitution	All Frest Blocks of the Division.	17.1
General character of vegetation	Tropical Moist / Dry / Scrub Forest.	17.2
Area and allotment	99,755.50 Ha.	17.3
Special objects of management	To ensure sustainable optimum production, utilization, value addition , marketing and regeneration of NTFP species, Enhance the skills of local peoples.	17.4
Analysis and Valuation of Crop	Potentiality survey through NTFP inventorisation.	17.5
Calculation of the Yield	Based on inventorisation and collection data..	17.6
Method of Collection & Prescription for improvement	Primary collectors to be guided, trained regarding collection, storage value addition and marketing. Improvement of NTFP Co-operative Societies and extension of research work.	17.7
Miscellaneous Regulations	Choice of species, marketing & research, training on scientific,sustainable, collection, storage, value addition & utilisation, awareness to local people on minimum selling price, Effective implementation of new policy and study of its impact, protection of NTFP species from grazing, fire & illicit felling etc.	17.8

23.2.9 The JFM (O.L.) Working Circle

Heading	Prescription	Para
General Constitution	Need for conservation of eco system by JFM Resolution. Area allotted – 38,193.80 Ha.	18.1
General character of vegetation	Tropical Moist / Dry / Scrub Forests.	18.2
Special objects of management	Involvement of local people in protection & regeneration of forests through formation of VSS, improvement of crop condition of the forst through protection, artificial regeneration and SMC measures in consonance with main WC, to make the villagers financial sound for posterior maintenance and management of assigned forest areas.	18.3
Analysis and Valuation of Crop	Degaded, density is less than 0.3 due to biotic interference.	18.4
Silvicultural System	To involve VSS member in Micro Plan preparation, tending operation of existing forest, reforestation,SMC measures etc	18.5
Management Prescriptions	As per village Forest Rules, 1985	18.6
Rotation and Conversion Period	To be followed according to main Working Circle and individual Micro Plan.	18.7
Felling Cycle	No separate felling cycle.	18.8
Calculation of the Yield	Intermediate yield to be shared as per JFM guideline.	18.9
Method of Execution	Constitution of VSS, duties of members, executive committee,preparation of Micro Plan, Entry Point Activities and forest department followed as prescribed in JFM resolution in vogue.	18.10
Silvicultural Operation	Cleaning, tending, SMC works, reforestation etc to be carried out as per Micro Plan with active involvement of the VSS members in consonance with main Working Circle. Sharing of usufructs as per JFM resolution in vogue.	18.11
Artificial Regeneration	Restocking of degraded area through artificial regeneration as prescribed in the main Working circle.	18.12
Miscellaneous Regulations	Reward & incentive, capacity building, maintenance of record etc.	18.13
Rights and concession	As per Orissa Forest Act & existing provision of JFM Resolution.	18.14

23.2.10 General Financial Forecast & Financial Plan of Operation

Heading	Prescription	Para
General Constitution	Over all prescription of working circles.	19.1
Cost of WP preparation	Total cost Rs. 27961491/- (Establishment Rs. 24925491/-, Working Plan Rs. 3036000/-) which comes to Rs. 281/- Per hectare.	19.2
Financial forecast	Expecred revenue, Infrastruture & establishment to be calculated based on prevailing cost norm.	19.3
Estimation of expenditure on different Working Circles	For treatment of Selection WC, Eco-restoration WC, Plantation WC, Prorection WC, Bamboo (OL) WC, Wild Life (OL) WC, NTFP (OL) WC, JFM (OL) WC, Other Development Activities.	19.4
Projected cost analysis	Yearwise estimated cost for the plan period 2016-17 to 2025-26.	19.5
Tangible benefit.	Tangible benefit from different forest produce including Cost benefit analysis.Total Cost of the Plan Rs25662 lakhs. Total Projected Benefit Rs. 23024 Lakhs, Cost-Benefit Ratio 1: 0.90	19.6
Conclusion	The cost benefit ratio normally dose not appears to be encouraging due to long gestatation period in the forestry sector. However the management prescriptions outlined in the plan definitely yield result after 30 to 40 years if implemented in true earnest. The investment is essential to to build capital assests for future generation, prosperity & food security for tribal and rural poor. Hence the prescriptions shall be implemented in true earnest.	19.7

23.2.11 Miscellaneous Regulations

Heading	Prescription	Para
General consideration	All those prescriptions not made earlier in the main working circles.	20.1
Petty Felling	Petty fellings in emergemcy & extraordinary circumstances permitted with due approval of higher authority.	20.2
Deviation	For any operation not prescribed in the WP records to be maintained.	20.3
Rights & Concession	As per Govt. of Orissa Act, Rules, Resolution etc.	20.4
Research Plots	To be created and maintained.	20.5
Roads, Paths, Bridges, Building	Construction & renovation oif roads, bidges, buildings etc recommended.	20.6
Maintenance of boundary	Maintainance of forest blocks at regular interval recommended.	20.7
Maintenance of Maps and Records	Maintenance of maps, compartment histories, control forms.	20.8
Monitoring of old plantation.	As per Orissa Village Forest Rules, 1985 & Orissa Plantation Manual, 1977.	20.9
Fire protection	Identification and precautionary measures for fire control.	20.10
Grazing	Promotion of stall feeding and dairy co-operative societies	20.11
Encroachments	Prevention of encroachment through continuous monitoring.	20.12
Communication network	Use of VHF system for instant communications.	20.13
Forest Consolidation	Needs sincere efforts to bring Debattar, Lakhrai & 47 nos of DPF to PRF.	20.14
Village forests	To be maintained as per Govt. guide lines.	20.15
Disposal of seized and confiscated Produce vis-a- vis prosecution case	To be regulated through Acts , Rules, Executive instruction etc.	20.16
Management of forest not covered under the revision	Forest areas out side the working plan fold to be brought under proper notification / demarcation as per Orissa Forest Act, 1972.	20.17
Annual plan of operation	Planning for timely utilization of funds.	20.18

23.2.12 Establishment and Labour

Heading	Prescription	Para
Establishment	Need to fill up vacancies and promotion of the staff.	21.1
Administrative Organisation	For the timeing no modification suggested.	21.2
Suggestations	Sanctioned strength to be filled of regular recruitment, the engagement of anti smuggling/poaching squad on the different scheme, Establishment of more forest check gate.	21.3
Labour	Availability of skill and unskilled labour for forest work	21.4

23.2.13 Control and Records

Heading	Prescription	Para
Control forms	Maintenance of Coupe / Felling / Plantation Control Forms.	22.1
General Prescriptions of the WP	Deviation of WP prescription in Silviculcture system to be maintained in the format of Deviation statement. Prior Approval of Competent Authority mandatory.	22.2
Maintenance of records	Maintenance of compartment history, plantation journal and register, register of forest blocks, fire maps etc.	22.3
Coupe Control Form	Format of Coupe Control form/Felling Control Form of different WC to be maintinded.	22.4
Deviation statement	To be mainted as pre Rule 132 of OFD code and National WP Code.	22.5

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ANNEXURE - I													
Monthly rainfall (mm) of Dhenkanal Sadar Block													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2001	0.00	0.00	50.00	0.00	45.00	188.00	719.00	269.00	154.0	117.00	21.00	0.00	1563.00
2002	34.20	0.00	0.00	35.00	107.50	257.00	187.00	262.00	149.00	11.00	8.00	0.00	1050.70
2003	0.00	26.00	27.00	13.00	43.00	305.00	365.00	631.00	316.00	415.00	26.00	17.50	2184.5
2004	0.00	0.00	18.00	0.00	5.50	170.00	230.50	254.00	194.00	207.00	0.00	0.00	1079.00
2005	24.00	0.00	35.00	22.00	82.00	188.00	600.50	160.00	379.00	235.50	21.00	0.00	1747.00
2006	0.00	0.00	50.00	49.00	184.00	160.50	313.50	561.10	188.00	46.00	13.00	0.00	1565.10
2007	0.00	25.00	0.00	0.00	32.00	162.00	255.00	321.00	403.00	27.00	2.00	0.00	1227.00
2008	73.00	0.00	9.00	4.00	60.00	227.00	465.00	408.00	298.00	5.00	0.00	0.00	1549.00
2009	17.00	0.00	0.00	0.00	60.00	27.00	669.00	343.00	141.00	317.00	13.00	0.00	1587.00
2010	0.00	0.00	25.30	0.00	196.00	195.00	211.00	260.00	186.00	114.00	14.00	42.00	1243.30
2011	0.00	62.00	0.00	55.00	164.00	355.00	135.00	468.00	431.00	0.00	0.00	0.00	1670.00
2012	115.0	0.00	0.00	28.00	70.00	108.50	431.00	387.00	282.50	131.00	102.00	0.00	1655.00
2013	0.00	0.00	0.00	49.50	65.50	219.50	389.00	149.50	267.00	565.00	0.00	0.00	1705.00
2014	0.00	32.50	91.00	0.00	141.00	27.50	462.00	329.80	152.08	119.20	0.00	0.00	1355.08

Monthly rainfall (mm) of Odapada Block													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2001	0.00	0.00	55.00	5.00	18.00	213.00	739.00	550.00	86.00	118.00	8.00	0.00	1792.00
2002	17.00	0.00	0.00	13.00	51.00	197.00	106.00	300.00	62.00	33.00	0.00	0.00	779.00
2003	0.00	18.00	1.00	23.00	13.00	141.00	274.00	352.10	241.00	298.00	0.00	47.00	1408.10
2004	18.00	24.00	0.00	16.00	2.00	50.00	348.00	238.00	125.00	166.00	0.00	0.00	987.00
2005	37.00	0.00	28.00	1.50	45.00	203.00	636.00	124.00	286.00	189.00	0.00	0.00	1549.50
2006	0.00	0.00	41.00	16.00	73.00	279.00	332.00	549.30	210.00	24.00	0.00	0.00	1524.30
2007	0.00	30.00	0.00	0.00	20.00	272.00	192.00	258.00	423.00	43.00	0.00	0.00	1238.00
2008	73.00	0.00	0.00	23.00	97.00	312.00	307.00	295.00	342.50	0.00	0.00	0.00	1449.50
2009	0.00	0.00	32.00	0.00	38.00	64.00	543.50	193.00	202.00	220.00	14.00	0.00	1306.50
2010	0.00	0.00	18.00	0.00	116.90	202.00	321.50	199.50	222.00	206.00	8.00	63.00	1356.90
2011	0.00	62.00	2.00	19.00	91.00	203.00	133.50	367.00	392.00	5.00	0.00	0.00	1274.50
2012	96.00	0.00	0.00	7.00	45.00	241.50	304.00	360.00	355.00	38.00	86.50	0.00	1533.00
2013	0.00	0.00	0.00	72.00	31.00	202.50	411.00	50.00	195.00	440.00	0.00	0.00	1401.50
2014	0.00	24.00	6.10	0.00	145.00	33.00	436.00	263.00	196.00	92.00	0.00	0.00	1195.10

Monthly rainfall (mm) of Gondia Block													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
2001	0.00	0.00	55.00	18.00	64.00	165.00	758.00	353.00	148.00	130.00	11.00	0.00	1702.00
2002	25.00	0.00	0.00	0.00	88.00	188.00	293.00	258.00	105.00	22.00	16.00	0.00	995.00
2003	0.00	0.00	35.00	39.50	61.00	236.50	347.50	433.00	341.70	395.30	32.00	26.00	1947.50
2004	0.00	0.00	0.00	4.50	20.00	159.50	352.50	199.00	168.50	136.00	0.00	0.00	1040.00
2005	37.00	0.00	28.00	1.50	45.00	203.00	636.00	124.00	286.00	189.00	0.00	0.00	1549.50
2006	0.00	0.00	22.60	32.40	84.60	187.00	294. 80	445.90	288.80	0.00	2.00	0.00	1358.10
2007	0.00	0.00	0.00	0.00	64.60	251.80	237.60	362.80	404.40	40.10	4.20	0.00	1365.50
2008	42.00	0.00	6.00	29.00	52.00	324.50	269.00	283.20	300.00	13.00	0.00	0.00	1318.70
2009	94.00	0.00	0.00	0.00	126.00	82.00	501.00	220.00	88.00	134.00	16.00	0.00	1261.00
2010	0.00	0.00	7.00	0.00	93.00	237.00	177.00	113.00	148.00	155.00	8.00	15.50	953.50
2011	0.00	34.00	0.00	56.00	49.00	232.00	136.00	337.00	288.00	9.00	0.00	0.00	1141.00
2012	98.00	0.00	0.00	36.00	25.00	103.00	260.70	476.00	105.00	73.00	69.00	0.00	1245.70
2013	0.00	0.00	0.00	35.00	157.00	324.00	299.00	129.00	198.00	449.00	0.00	0.00	1591.00
2014	0.0	44.00	9.00	0.00	154.00	75.00	637.00	301.00	349.50	74.00	0.00	0.00	1643.50

Monthly rainfall (mm) of Hindol Block													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**June**	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
2001	0.00	0.00	117.00	19.00	71.00	372.00	760.00	382.00	178.00	164.00	19.00	0.00	2082.00
2002	11.00	0.00	17.00	148.50	166.00	180.05	52.50	271.00	247.00	19.00	8.50	0.00	1120.55
2003	0.00	28.00	5.00	22.00	3.00	165.00	376.00	593.00	151.00	444.00	0.00	45.00	1832.00
2004	5.00	0.00	0.00	78.00	60.00	201.00	333.00	181.00	123.00	186.00	0.00	0.00	1167.00
2005	10.20	0.00	31.00	16.00	85.00	203.00	770.60	109.60	689.20	550.00	23.00	0.00	2487.60
2006	0.00	0.00	95.00	46.00	175.00	107.80	405.20	584.80	275.20	6.00	6.80	0.00	1701.80
2007	0.00	29.00	0.00	0.00	162.00	297.20	127.50	247.30	563.20	25.00	0.00	0.00	1451.20
2008	49.00	0.00	47.20	38.00	46.00	240.30	278.00	313.00	318.50	12.20	0.00	0.00	1342.20
2009	22.00	0.00	15.00	0.00	96.00	179.00	1071.00	225.00	91.00	302.00	6.00	0.00	2007.00
2010	0.00	0.00	0.00	0.00	186.00	201.00	258.00	372.00	320.00	154.00	28.00	84.00	1603.00
2011	0.00	43.00	0.00	68.00	172.00	346.00	195.00	454.00	502.00	141.00	0.00	0.00	1921.00
2012	126.00	0.00	0.00	8.00	29.00	98.00	475.30	455.00	289.00	89.00	65.00	0.00	1634.30
2013	0.00	0.00	0.00	83.00	78.00	347.00	464.00	145.00	332.00	940.00	0.00	0.00	2389.00
2014	0.00	42.00	6.50	0.00	115.00	61.00	409.00	237.00	262.50	129.00	0.00	0.00	1262.00

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
2001	0.00	0.00	53.00	3.00	60.00	206.00	563.00	405.00	149.00	165.00	5.00	0.00	1609.00
2002	11.00	0.00	0.00	10.00	117.20	262.00	83.60	443.00	193.00	17.00	0.00	0.00	1136.80
2003	0.00	9.00	14.00	9.00	25.00	112.00	301.00	391.00	186.00	360.00	0.00	31.00	1438.00
2004	0.00	47.00	51.00	104.00	55.00	125.00	419.00	278.00	99.00	104.00	0.00	0.00	1282.00
2005	42.00	0.00	26.00	9.00	68.00	244.00	652.00	229.00	245.00	173.00	0.00	0.00	1688.00
2006	0.00	0.00	10.00	8.00	104.00	104.00	285.00	529.00	310.00	39.00	0.00	0.00	1389.00
2007	0.00	20.00	0.00	37.00	194.00	312.20	245.00	423.00	53.00	10.20	0.00	0.00	1294.40
2008	59.00	7.00	0.00	0.78	64.00	260.00	158.00	354.00	237.00	32.00	0.00	0.00	1171.78
2009	54.00	0.00	0.00	0.00	130.00	69.00	510.00	182.00	122.00	91.00	16.00	0.00	1174.00
2010	0.00	0.00	22.00	22.00	113.20	157.00	166.00	152.00	172.00	93.00	0.00	41.00	938.20
2011	0.00	23.00	0.00	10.00	162.00	237.00	192.00	375.00	484.00	32.00	0.00	0.00	1515.00
2012	126.00	0.00	0.00	60.00	35.00	200.00	279.00	397.00	218.00	86.00	73.00	0.00	1474.00
2013	0.00	0.00	0.00	16.00	34.00	200.00	449.00	116.00	301.00	370.00	0.00	0.00	1486.00
2014	0.00	15.00	15.00	78.00	76.00	551.00	301.00	161.00	73.00	0.00	0.00	0.00	1270.00

Monthly rainfall (mm) of Bhuban Block

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
2001	0.00	0.00	33.00	0.00	77.00	63.00	418.00	310.00	85.00	167.00	8.00	0.00	1161.00
2002	0.00	0.00	0.00	17.00	141.00	125.00	246.00	331.00	295.00	40.00	0.00	0.00	1195.00
2003	0.00	0.00	0.00	0.00	60.00	270.00	352.00	316.00	197.00	229.00	7.00	0.00	1431.00
2004	2.00	54.00	0.00	4.00	0.00	85.00	376.00	178.00	104.00	113.00	0.00	0.00	916.00
2005	18.00	0.00	47.00	27.00	47.00	196.00	624.00	265.00	216.00	142.00	23.00	0.00	1605.00
2006	0.00	0.00	1.00	27.00	25.00	116.00	194.60	401.00	432.00	59.00	35.00	0.00	1290.60
2007	0.00	17.00	0.00	0.00	35.00	260.00	193.00	312.00	441.00	40.00	12.00	0.00	1310.00
2008	54.00	0.00	6.00	8.00	13.00	310.00	367.00	463.00	419.00	0.00	0.00	0.00	1640.00
2009	68.00	0.00	0.00	0.00	174.00	86.00	514.00	209.00	105.00	222.00	0.00	0.00	1378.00
2010	0.00	0.00	0.00	0.00	120.00	182.00	145.00	245.00	179.00	103.00	15.00	31.00	1020.00
2011	0.00	26.00	0.00	0.00	65.00	287.00	203.00	519.00	308.00	27.00	0.00	0.00	1435.00
2012	92.00	0.00	0.00	0.00	84.00	64.00	333.00	409.00	166.00	80.00	89.00	0.00	1317.00
2013	0.00	0.00	0.00	34.00	180.00	428.00	221.00	133.00	209.00	391.20	0.00		1596.20
2014	0.00	58.00	17.00	90.00	122.00	562.00	436.00	245.00	164.00	0.00	0.00	0.00	1694.00

Monthly rainfall (mm) of Parjang Block													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**June**	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
2001	0.00	0.00	13.50	11.00	31.50	251.00	702.00	601.00	75.00	111.00	0.00	0.00	1796.00
2002	0.00	0.00	0.00	11.00	96.00	130.00	47.00	352.00	141.00	27.00	7.00	0.00	811.00
2003	0.00	12.00	0.00	0.00	15.00	233.00	268.00	300.00	242.00	279.00	0.00	22.00	1371.00
2004	0.00	0.00	22.00	10.00	42.00	173.00	313.00	276.00	56.00	111.00	0.00	0.00	1003.00
2005	15.00	0.00	0.00	5.00	15.00	205.00	792.00	103.00	117.00	277.00	0.00	0.00	1529.00
2006	0.00	0.00	0.00	12.00	11.00	99.00	197.00	427.00	179.00	6.00	0.00	0.00	931.00
2007	0.00	17.00	0.00	39.00	23.00	145.00	307.00	239.00	393.00	44.00	8.00	0.00	1215.00
2008	75.00	13.00	0.00	9.00	81.00	318.00	139.00	259.00	318.00	70.00	0.00	0.00	1282.00
2009	42.00	0.00	0.00	0.00	51.00	27.00	588.00	145.00	135.00	69.00	0.00	0.00	1057.00
2010	0.00	0.00	0.50	0.00	121.00	109.00	187.00	220.00	107.00	39.00	3.00	20.00	806.50
2011	93.00	10.00	0.00	0.00	47.00	155.00	180.00	206.00	465.00	24.00	0.00	0.00	1180.00
2012	118.00	0.00	0.00	0.00	15.00	213.00	295.00	535.00	277.00	60.00	106.00	0.00	1619.00
2013	0.00	0.00	0.00	8.00	107.00	127.00	359.00	106.00	156.00	385.00	0.00	0.00	1248.00
2014	0.00	16.00	19.00	0.00	143.00	24.00	584.00	175.00	185.00	66.00	0.00	0.00	1212.00
Monthly rainfall (mm) of Kankadahada Block													
Year	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**June**	**July**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total**
2001	0.00	0.00	51.00	5.00	43.00	144.00	573.00	377.00	70.00	43.00	0.00	0.00	1306.00
2002	4.00	0.00	0.00	0.00	71.00	349.00	130.00	383.00	147.00	11.00	4.90	0.00	1099.90
2003	0.00	0.00	0.00	0.00	5.00	119.00	309.00	380.00	323.50	247.00	0.00	0.00	1383.50
2004	0.00	18.00	0.00	30.00	0.00	198.00	275.00	185.00	59.00	123.00	0.00	0.00	888.00
2005	7.00	0.00	48.00	40.00	48.00	189.00	656.00	182.00	133.00	287.00	0.00	0.00	1590.00
2006	0.00	0.00	28.00	28.00	108.00	63.00	163.00	529.00	289.00	92.00	0.00	0.00	1300.00
2007	0.00	1.00	0.00	14.00	37.00	258.00	417.00	176.00	362.00	21.00	2.00	0.00	1288.00
2008	159.00	12.00	0.00	22.00	41.00	422.00	217.00	400.00	389.00	14.00	0.00	0.00	1676.00
2009	121.00	0.00	0.00	0.00	186.00	187.00	895.00	292.00	131.00	159.00	33.00	0.00	2004.00
2010	0.00	0.00	0.00	97.00	0.00	215.00	231.00	251.00	151.00	107.00	0.00	46.00	1098.00
2011	0.00	0.00	0.00	20.00	177.00	379.00	163.00	466.00	517.00	55.00	0.00	0.00	1777.00
2012	215.00	0.00	0.00	0.00	0.00	216.00	325.00	346.00	145.00	52.00	43.00	0.00	1342.00
2013	0.00	0.00	0.00	3.00	90.00	305.00	556.40	188.00	253.00	305.00	0.00	0.00	1700.40
2014	0.00	8.00	0.00	0.00	48.00	35.00	605.00	465.00	321.00	125.00	0.00	0.00	3621.00

SOURCE:-COLLECTORATE, DHENKANAL

ANNEXURE - II

Monthly Meteorological data of Dhenkanal District.												
		temperature in degree celsius		Average Relative Humidity(%)					temperature in degree celsius		Average Relative Humidity(%)	
Year	Month	Average Maximum	Average Minimum	0830hrs	1730hrs		Year	Month	Average Maximum	Average Minimum	0830hrs	1730hrs
2001	January	29.6	12.0	74	44	41.6	2002	January	28.5	13.9	74	57
	February	34.7	16.4	71	38	51.1		February	33.5	15.5	70	45
	March	36.8	21.1	72	46	57.9		March	37.9	19.9	74	45
	April	39.7	23.9	60	41	63.6		April	40.5	23.6	64	46
	May	41.1	25.6	64	47	66.7		May	41.0	24.7	66	46
	June	32.2	23.9	81	78	56.1		June	32.3	22.6	71	62
	July	29.7	23.2	88	85	52.9		July	35.1	24.7	75	62
	August	31.3	23.6	86	85	54.9		August	31.6	23.0	76	79
	September	DNA	DNA	DNA	DNA	0		September	32.6	22.6	78	80
	October	33.3	22.7	79	76	56		October	34.2	20.5	69	65
	November	30.7	19.9	77	69	50.6		November	31.3	15.3	58	56
	December	28.5	12.3	63	57	40.8		December	29.6	11.9	61	51
2003	January	28.7	14.1	68	51	119	2004	January	27.5	15.1	76	54
	February	31.7	15.7	66	43	109		February	32.0	11.8	61	49
	March	35.8	17.8	65	33	98		March	37.3	17.1	73	54
	April	40.5	22.4	63	42	105		April	39.7	20.9	65	39
	May	41.6	24.1	67	45	112		May	39.1	23.3	61	45
	June	38.1	23.6	69	56	125		June	37.7	23.6	65	64
	July	33.6	22.5	81	77	158		July	33.0	21.5	82	83
	August	31.9	21.9	83	77	160		August	31.2	21.9	82	80
	September	31.6	21.7	83	81	164		September	32.8	20.8	71	77
	October	31.1	20.1	85	DNA	85		October	31.4	18.5	71	68
	November	29.6	13.6	73	61	134		November	29.3	13.3	56	51
	December	26.9	10.7	74	57	131		December	29.0	10.5	55	53

N.B:-DNA=Data Not Available

Monthly Met data of Angul												
		Temperature in degree celsius		Average Relative Humidity(%)					temperature in degree celsius		Average Relative Humidity(%)	
Year	Month	Average Maximum	Average Minimum	0830hrs	1730hrs		Year	Month	Average Maximum	Average Minimum	0830hrs	1730hrs
2005	January	28.7	10.9	57	54	111	2006	January	29.4	13.3	58	52
	February	32.8	14.2	62	41	103		February	35.7	15.0	43	40
	March	36.6	18.2	66	48	114		March	35.8	22.1	51	52
	April	39.0	22.2	68	51	119		April	39.2	26.4	60	46
	May	41.3	26.9	65	44	109		May	38.2	27.5	68	54
	June	40.0	28.5	61	51	112		June	36.0	22.6	64	58
	July	33.7	23.3	79	81	160		July	32.7	21.0	68	62
	August	32.5	25.3	76	74	150		August	30.9	19.6	80	65
	September	32.3	24.6	76	81	157		September	32.7	21.0	69	62
	October	32.3	21.8	74	77	151		October	33.6	14.4	59	54
	November	28.9	20.7	61	60	121		November	28.7	18.3	62	47
	December	26.6	14.1	60	60	120		December	29.4	16.0	51	47
2007	January	29.8	14.6	64	58	122	2008	January	28.7	13.1	82	74
	February	32.2	16.3	61	61	122		February	29.4	15.6	83	74
	March	35.6	16.9	61	50	111		March	35.6	20.3	77	73
	April	29.9	24.2	57	45	102		April	38.8	23.5	69	58
	May	29.2	25.6	50	48	98		May	40.7	25.9	62	61
	June	36.1	25.9	71	70	141		June	33.2	24.5	59	52
	July	33.69	25.2	88	66	154		July	31.9	24.7	77	71
	August	32.8	24.9	81	74	155		August	31.7	24.0	82	79
	September	32.0	24.5	78	77	155		September	31.5	24.0	80	74
	October	32.2	20.5	73	75	148		October	32.6	21.7	75	66
	November	30.0	17.0	58	62	120		November	29.8	17.1	77	72
	December	29.1	13.0	65	62	127		December	29.2	14.2	81	78

N.B:-DNA=Data Not Available												
Monthly Met data of Angul												
		temperature in degree celsius		**Average Relative Humidity(%)**					**temperature in degree celsius**		**Average Relative Humidity(%)**	
Year	**Month**	**Average Maximum**	**Average Minimum**	**0830hrs**	**1730hrs**		**Year**	**Month**	**Average Maximum**	**Average Minimum**	**0830hrs**	**1730hrs**
2009	January	31.3	13.9	80	75	155	2010	January	27.6	11.4	72	62
	February	34.4	17.9	69	54	123		February	33.1	15.3	78	56
	March	37.5	19.3	68	59	127		March	38.4	21.2	80	56
	April	42.1	24.6	68	54	122		April	42.9	25.5	76	47
	May	40.5	25.2	68	55	123		May	39.4	24.9	75	63
	June	40.4	26.3	59	58	117		June	38.0	23.5	78	63
	July	31.3	24.4	79	75	154		July	33.5	22.0	74	67
	August	33.5	25.0	77	70	147		August	31.6	21.3	70	67
	September	33.6	24.5	75	73	148		September	32.5	22.4	74	70
	October	32.2	19.7	77	73	150		October	32.0	21.2	72	65
	November	30.1	17.2	76	70	146		November	DNA	DNA	DNA	DNA
	December	28.1	12.4	79	64	143		December	26.0	13.9	71	74

ANNEXURE –III

LIST OF VILLAGE FORESTS							
SL. No.	NAME OF RANGE	NAME OF TAHSIL	NAME OF G.P.	NAME OF VILLAGE FOREST	YEAR	AREA IN Ha.	NOTIFICATION No.
1	Dhenkanal	Dhenkanal	Gadasila	Ankarantipur	86-87	3.00	B
2				Ankarantipur	87-88	5.00	B
3				Mulasinga	85-86	3.00	E
4				Mulasinga	86-87	5.00	B
5				Mulasinga	87-88	5.00	B
6				Siminai	85-86	3.50	B
7				Siminai	86-87	5.00	B
8				Siminai	87-88	5.00	B
9				Sankarpratappur	86-87	2.00	B
10				Sankarpratappur	87-88	10.00	E
11			Sasan	Panchupati	86-87	4.78	B
12				Panchupati	87-88	1.00	B
13				Sainbiri	86-87	1.00	B
14				Gadasila	86-87	1.91	B
15				Chainpur	85-86	5.00	E
16			Balarampur	Mahidharpur	86-87	2.00	B
17				Kandabindha	89-90	20.00	E
18				Tamada	90-91	12.00	E
19				Tamada	91-92	5.00	E
20			Indipur	Besalia	88-89	5.00	B
21				Besalia	89-90	17.00	B
22				Besalia	89-90	3.11	E
23				Khuntajhari	89-90	10.00	B
24				Khuntajhari	91-92	8.00	E
25				Indipur	89-90	10.20	B
26				Indipur	90-91	10.00	E
27			Kalanga	Kalanga	89-90	2.60	B
28			Kaimati	Kaimati	85-86	2.50	E
29				Kukudajhar-Khamar	85-86	5.00	F
30			Ghatipiri	Ostapala	89-90	2.00	E
31				Gobindaprasad	91-92	5.00	E
			TOTAL	31 Nos		179.6	
32	Kapilas		Beltikiri	Jankhira	85-86	6.00	F
			TOTAL	**1 Nos**		**6.00**	
33	Sarangi	Dhenkanal	Kasipur	Bhaliapat	89-90	5.00	F
34				Bhaliapat	89-90	5.00	E
35				Baliapat	90-91	10.00	F
36			Kaluria	Latadeipur	85-86	5.00	F
37			Mandar	Mandar	90-91	10.00	F
38				Deulasahi	90-91	10.00	F

39				Chitalpur	90-91	10.00	F
40			Pingua	Karanda	88-89	5.00	F
41			Bidyadharpur	Jhili	87-88	10.00	F
42				Jhili	88-89	10.00	F
43				Jhili	89-90	9.00	F
44			Joranda	Atinda	85-86	3.50	F
45				Chhatia	85-86	4.50	F
46				Joranda	90-91	5.00	F
			TOTAL	**14 Nos**		**102.00**	
47	Bhuban	K.Nagar	Mahulpal	Kunda	88-89	6.00	A
48				Mrudanga	89-90	6.00	A
49				Mrudanga	90-91	8.00	F
50				Kunda	89-90	6.00	F
51				Sarangapur	90-91	4.00	F
52			Balibo	Anlajhari	89-90	10.00	A
53				Anlajhari	90-91	7.00	F
54				Balibo	88-89	5.00	F
55				Gurudabandi	90-91	10.00	F
56				Gurudabandi	90-91	4.76	F
57				Kesarpur	91-92	10.00	F
58			Baruan(B)	Baruan	89-90	6.00	D
59				Baruan	89-91	0.15	D
60				Odisa-Samili	89-90	5.00	D
61			Nuapani	Odisa	89-90	8.89	D
62				Odisa	89-90	30.00	D
63			Bhuban	Maulagoda	90-91	4.12	E
64			Dhalpada	Kuninda	90-91	6.07	F
65				Dhalapada	89-90	10.00	F
66				Dhalapada	90-91	6.00	F
67				Rendapanta	88-89	15.00	F
68				Rendapanta	89-90	3.79	F
69			Bhusal	Kirtanpur	90-91	4.734	F
70				Kirtanpur	90-91	5.00	
71				Asurabandha	90-91	10.00	F
72			Ektali	Chandar	88-89	3.48	F
73			G.N. Prasad	Shyamal	89-90	6.00	G
74			Kuninda	Kuninda	91-92	4.00	H
75			Jagannathpur	Danpasi	90-91	3.11	F
76				Danpasi	91-92	7.00	F
			TOTAL	**30 Nos**		**215.10**	
77	K.Nagar (W)	K.Nagar	Kusumjodi	Anlaberini	88-89	10.00	C
78				Khatuahata	90-91	2.70	D
79			Mahulpal	Mahupal	92-93	10.00	H
80				Mahupal	93-94	40.00	H(K-West)
81				Mahulpal	89-90	0.19	E
82				Mahulpal	90-91	6.44	E

83			R N Pur	Rainarasinghpur	90-91	5.00	D
84				Rainarasinghpur	91-92	1.00	E
85				Rainarasinghpur	92-93	10.00	G
86			Sogar	Upparajhagadapada	91-92	8.00	F
87				Godabhaga	91-92	4.00	F
88				Sogar	92-93	6.00	H(K-West)
89			Muktaposi	Jautukaposi	88-89	1.46	D
90				Muktaposi	87-88	20.00	D
91				Kamarda	86-87	5.00	D
92				Kamarda	86-87	5.00	D
93				Kamarda	87-88	5.00	D
94				Kamarda	88-89	5.00	D
95				Kamarda	89-90	10.00	E
96				Kamarda	90-91	8.00	E
97				Siarimalia	91-92	32.26	E
98				Siarimalia	91-92	5.00	E
99				Anlaberini	88-89	10.00	C
100				Kadalipal	88-89	5.00	C
101			Kantioputosahi	Khuntabati	90-91	5.00	D
102			Kumusi	Basantapada	87-88	5.00	E
103				Basantapada	88-89	5.00	E
104			Basoi	Basoi	89-90	5.00	E
105			Barihapur	Barihapur	89-90	10.00	E
106			Kotagara	Godarbil	92-93	10.00	H
			TOTAL	**30 Nos**		**255.05**	
107	K.Nagar (E)	K.Nagar	Badasuala	Tulasipasi	89-90	5.00	D
108				Lokanathpur	88-89	5.00	D
109				Lokanathpur	89-90	10.00	F
110				Lokanathpur	90-91	7.00	F
111				Archua	90-91	0.76	F
112				Archua	91-92	6.00	F
113			Birasal	Hadagari	88-89	6.00	D
114				Raibole	90-91	20.00	F
115				Raibole	92-93	10.00	H
116				Bhalumunda	89-90	5.00	D
117				Rahani	87-88	3.00	F
118				Rahani	88-89	1.80	F
119				Rahani	91-92	6.00	F
120				Birasal	87-88	5.00	D
121				Panisia	90-91	10.00	F
122				Koriapala	90-91	5.00	F
123				Kankana	92-93	10.00	H
124				Haladikundi	88-89	5.00	D
125				Haladikundi	88-89	5.00	F
126				Tandimunda	91-92	35.00	F
127			Makuakateni	Khajuria	88-89	5.00	D

128				Khajuria	92-93	20.00	H
129				Patharkata	88-89	15.00	F
130				Kolibaniakateni	89-90	1.74	F
131				Kolibaniakateni	89-90	5.26	F
132				Makuakateni	92-93	5.00	H
			TOTAL	**26 Nos**		**212.56**	
133	Mahabirod		Patrapada	Jatia	85-86	5.00	C
134				Katabahal	85-86	5.00	C
135				Lodhani	85-86	4.00	C
136				Katarpada	85-86	3.00	C
137				Barbank	85-86	5.00	C
138				Patrapada	85-86	5.00	C
139				Patrapada	86-87	6.00	C
140				Ludhani	86-87	3.00	C
141				Patrapada	87-88	8.00	C
142				Surangi	89-90	13.02	D
143				Basantpur	87-88	5.00	E
144			Saranga	Jatia	85-86	5.00	C
145			Lodhani	Katabahal	85-86	5.00	C
146				Lodhani	85-86	5.00	C
147				Lodhani	86-87	4.00	C
148				Patrapada	85-86	3.00	C
149				Patrapada	86-87	6.00	C
150				Patrapada	87-88	5.00	C
151				Patrapada	90-91	4.18	D
152				Palasahi	91-92	5.00	F
153				Palasahi	92-93	10.00	H
154			Kandarsingha	Katarpada	85-86	3.00	C
155				Barbank	85-86	5.00	C
156			Kantiokateni	Kadalipal	88-89	5.00	C
157			Badjhara	Badjhara	86-87	0.53	D
158				Badjhara	87-88	5.00	D
159				Badjhara	88-89	10.00	D
160				Badjhara	88-89	10.00	D
			TOTAL	**28 Nos**		**152.73**	
161	Hindol	Hindol	Giridharprasad	Berhampur	87-88	5.00	B
162				Giridharprasad	85-86	8.00	B
163				Giridharprasad	86-87	2.00	B
164				Vingira	86-87	3.30	B
165				Asarada	86-87	4.00	B
166				Asarada	87-88	1.31	B
167				Sanahindol	87-88	2.20	B
168				Ranjagole	88-89	7.00	F
169				Barasingha	90-91	10.00	F
170			Nuabag	Nuabag	85-86	5.00	B

171				Ostapal	86-87	4.30	B
172				Badagole	87-88	2.23	B
173				Badagole	88-89	4.00	F
174				Sarasingha	87-88	6.00	A
175				Kainaguruja	90-91	10.00	F
176			Jarada	Thenga	87-88	1.77	B
177				Balikiari	87-88	5.00	A
178			Chitalpur	Panchupada	86-87	2.11	B
179				Panchupada	91-92	20.00	F
180			Dudurkote	Nandapur	86-87	3.64	B
181				Nandapur	87-88	2.12	B
182				Gorillo	88-89	8.00	F
183				Dudurkote	86-87	4.00	A
184			Nizigarh	Rajmohanpur	85-86	2.00	A
185				Rajmohanpur	86-87	9.00	A
186				Rajmohanpur	87-88	10.00	F
187				Saradhapur	91-92	10.00	F
188				Mangalpur	87-88	5.00	A
189				Gobindabereni	91-92	20.00	F
190				Tarakbeda	86-87	4.00	A
191				Madhupur	88-89	5.00	F
192				Kumursingha	88-89	10.00	F
193				Kantimila	88-89	5.00	F
194				Sanmunda	91-92	5.00	F
195			Patla	Patla	86-87	3.00	A
196				Jharbeda	91-92	5.00	F
197				Nuapada	86-87	4.00	A
198				Nuapada	87-88	5.00	A
199				Panubereni	87-88	2.38	B
200			Babandha	Bedapada	86-87	5.00	A
201				Kaduamada	87-88	10.00	E
202				Kaduamada	87-88	16.32	E
203				Kaduamada	87-88	10.00	E
204				Bahandei	87-88	10.00	E
205			Kansara	Kansara	87-88	6.00	A
206				Kansara	88-89	5.00	F
207				Gobardhanpur	88-89	5.00	F
208				Bileikhali	90-91	5.00	F
209				Bileikhali	91-92	10.00	F
210				Anlabeda	91-92	5.00	F
211			Rasol	Nuakiari	88-89	6.00	F
212			Bompa	Brahmaniapal	88-89	10.00	F
213				Bompa	88-89	1.78	F
214				Bompa	88-89	2.00	F
215			Baunsapokhari	Jhobaninandar	90-91	10.00	F

216			Hatura	Bangu	91-92	5.00	F
217			Karanda	Thakar	85-86	7.68	B
			TOTAL	**57 Nos**		**355.14**	
			G. TOTAL	**217 Nos**		1478.18	

N.B:- The references of Notification Nos. are as follows.

24465 FFAH dt. 10.10.90	**:**	**A**	**29570 F & E dt. 9.12.92**	**:**	**E**
19412 F & E dt. 4.11.91	**:**	**B**	**2861 F & E dt. 3. 1.93**	**:**	**F**
1719 F & E dt.25.1.92	**:**	**C**	**10536 F & E dt.15.4.93**	**:**	**G**
3764 F & E dt. 18.2.92	**:**	**D**	**27514 F & E dt.17.12.93**	**:**	**H**

Source:- DFO Dhenkanal Division,

ANNEXURE-IV

DEVLOPMENT (FOREST) DEPARTMENT
NOTIFICATOIN

The 22nd December 1959

No. 44094-C.F.Inpursuence of sub-section (3) of section 20-A of the Indian Forest Act, 1927 (XVI of 1927), as amended subsequently in its application to the State of Orissa by Orissa Act XI of 1954, the State Government do hereby certify that the documents mentioned in the schedule hereto annexed had been prepared under the authority of the Ruler of Dhenkanal State before the date of merger and has been under the authority of the State Government continued to be recognized, maintained and acted upon thereafter.

SCHEDULE

1. Revised Working plan for the Reserved Forests of Dhenkanal State, 1943-1963.
2. Working plan Map of the Reserved forests of Denkanal State.

By order of Governor
G.C.DASH
Secretary to Government.

ANNEXURE-V

CO-OPERATION & FORESTRY DEPARTMENT

Notification

The 11th June 1969

No. 12087-11F-47/68-C.F.-In pursuance of sub-section (3) of section 20-A of the Indian Forest Act, 1927 (16 of 1927) as amended in its application to the State of Orissa, the State Government do here by certify that the documents mentioned in the scheduled hereto annexed had been prepared under the authority of the Rules of Hindol state before the data of the merger and has been under the authority of the State Government continued to be recognized, maintained and acted upon thereafter.

SCHEDULE

1. Forest map of Kandhra Reserve Forest Area =27,608 acres
2. Forest map of Nandania Reserve Forest Area =1,586 acres
3. Forest map of Potalo Reserve Forest Area =1,910 acres
4. Forest map of Bampa Reserve Forest Area = 5,820 acres
5. Forest map of Ambithi Reserve Forest Area = 1,148 acres
6. Forest map of Kanara Reserve Forest Area = 126.92 acres
7. Forest map of Kai Reserve Forest Area = 6,472 acres

By order of the Governor
C.G.SOMIAH
Secretary to Government

ANNEXURE-VI

THE ORISSA GAZETTE
EXTRAORDINARY
PUBLISHED BY AUTHORITY
No. 1631 CUTTACK, FRIDAY, DECEMBER 11, 1970

REVENUE DEPARTMENT
NOTIFICATION

The 26th October 1970

Boundaries
North – Sarangi Madar Road, Aswakhola Reserve Forest area and Bausabereni village.
West - Village Sarangi.
South – Sarangi Nihalaprasad Road.
East - Lahada Reserve Forests, a part of Sarangi village and Bausabereni village.

DESCRIPTION

The boundary description of the Sarangi Forest Block, the boundary lines of Sarangi Block have been cleared to a width of 15'. The starting point, i.e., pillar No.1 starts from Northwest corner of the block, which is situated on Sarangi-Mandar P.W.D. Road at a distance of Ch.49.30 from Sarangi Junction (where Mandar-Sarangi P.W.D. Road and Nihalaprasad-Sarangi P.W.D. Road meet). Then the lines goes in a North-Easterly direction from pillar No.1 over a distance of Ch.33.20 meeting pillar No.4 and from there it takes South-East direction and runs over a distance of Ch.9.40 and meets [pillar No.6 and from there it turns towards south and runs over a distance of Ch.19.80 links and meets pillar No.9 and from there I goes South-Easterly direction over a distance of Ch.13.00 and meets pillar No.11 and from there it goes towards North-East over a distance of Ch.10.80 and meets pillar No.12 and from there it turns towards South over a distance of Ch.27.80 and meets pillar No.13 and from there taking a Westerly direction it goes over a distance of Ch.20.60 links and meets pillar No.14 and from there it goes towards North-Westerly direction over a distance of Ch.8.10 and meets pillar No.15 and from there it goes towards West over a distance of Ch.16.60 and meets pillar No.16 and

from there it goes towards North over a distance of Ch.21.90 and meets pillar no.1 which is the starting point.

Thus the entire traverse of the block comes to 2 miles, 21 chains, 40links consisting of 18 pillars.

The limits of the reserved forest are the lines marked in green on an copy of the 16”-1 mile cadastral map of the village specified below which has been signed by the Collector of the Dhenkanal district and deposited in his Record Room

Name of village – Sarangi

ADMITTED RIGHTS

The following rights and privileges are admitted to the genuine inhabitants and forest cess payers of the locality whose names have been entered in the enumeration register which forms part of the settlement records subject to condition that such rights are exercisable up to the limit of which the reserve forest can bear under proper management-

(i) Local tenants may take timber of unreserved species free and reserved species at concession rates as in practice or as may be decided by the Government from time to time from annual coupes set aside for them provided the timber is for their own bonafide domestic consumption only.

(ii) They may take timbers of unreserved and reserved species for plough and agricultural implements from annual coupes free of charges.

(iii) They may take fuel and fencing materials from annual coupes free or on payment of only the cost involved if the cutting is done departmentally as may be settled by the Divisional Forest Officer in respect of each land.

(iv) They may collect dry and fallen branches (not fit for timbers) even of the reserved species from any where outside the annual coupes.

(v) They may take minor forest produce like edible roots, fruits, leaves, creepers and grass free only for their personal consumption.

(vi) Permits procured from the forest Department should cover all removal except IV and V above.

(vii) No free grazing is permitted. They may be allowed to graze their cattle on payment of grazing at concessional rate as prescribed from time to time under rules subject to the number, which the forest can support, and subject to such Silvicultural Rules and control as may be necessary in the interest of the Forest. No grazing for sheep's, pigs, and goats are permitted.

(viii) The right holders shall not sell or barter timber or any forest produce obtained in exercise of the above rights except in the case of panas and members of the aboriginal tribes, poorer classes and landless laborers who can sell to other local persons for their personal use and they have to maintain the external boundary annually against payment of wages at prescribed rate.

(ix) Admitted rights shall pass on to their successors.

OTHER ADMITTED RIGHTS

(Here mention enclosures, footpaths, watercourse, etc.) Other rights Nil. There is no enclosures inside the block.

The P.W.D. Road from Sarangi to Mandar passing inside the block is excluded from the reserve for public use.

(No.59327-F.S.-45/70-R.)

By order of the Governor

B.B.PARIDA

Deputy Secretary to Government.

ANNEXURE-VII

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.

(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

ANNEXURE - VIII

PROTECTION OF RESERVE FOREST AND PROTECTED FOREST AREA BY THE COMMUNITY

Forest, Fisheries & A. H. Department, Government of Orissa

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Resolution No. 10 F (Pron) 4 / 90 / 29825 / FFAH, Bhubaneshwar, 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 Sarpanch of the concerned Gram Panchayat, the Ward Members belonging to the village, the local Forester, Revenue Inspector, VLW and such 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

ANNEXURE – IX

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.

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
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.

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.

(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.
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).

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.

Name of the Vana Samrakshana Samiti
District or Forest Division
Subdivision or Forest Range
Police Station
Village
Name of the Forest Block
Legal status of the Forest land
Area (Hectare) of the Forest Land
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	
Name and address with date	Signature	Name and address with date	Signature
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.

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.

ANNEXURE – X

RESOLUTION

Order No. 22180 / FE Bhubaneshwar 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:

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.

ANNEXURE – XI

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 has 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.

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.-368	
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, Bermabpur Circle, Berhampur
5	O/o Conservator of Forests, Sambalpur Circle, Sambalpur
6	O/o Conservator of Forests, Korapur Circle, Koraput
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
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.-369	
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

Table No.-370	
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

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:

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

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

Government have further decided to create 21 Establishments for the new Circles and Division as named below:

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:

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
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

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

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

Deployment plan of ministerial and other office staff of the abolished Divisions/Circles in reorganised C=Divisions / Circles/ Headquarters		
Sl. No	Name of the Existing field Divisions / Circles.	Name of the Divisions/Circles in reorganised 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, Rairangpur	Rairangpur 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.-377

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
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 (Wl) 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 Wl 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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ANNEXURE – XII

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.

Annexure –XIII

List of VSS/EDC functioning in Dhenkanal Forest Division.												
Sl. No	Name of the Range	Name of the VSS/EDC	VSS Code No	Year/Month of Regd. of VSS	Name of the Section	Name of the GP	Name of the CD Block	Name of the RF/KF/VF	Forest Area assigned in Ha.			Remarks
									RF	PF/VF/KF/ Other	Total	
1	Dhenkanal	Karadamada	0009/01-004	31.08.98	Bhapur	Bhapur	Dhenkanal	Belabania RF-B	21.06		21.06	
2	Dhenkanal	Madhapur (Karadasing)	0145/01-024	31.12.99	Bhapur	Ghatipir	Odapada	Belabania RF	54.00		54.00	
3	Dhenkanal	Dhamanapalsahi (Kalikaprasad)	199/01-036	16.08.03	Bhapur	Kalanga	Odapada	Matiamundia RF	135.00		135.00	
4	Dhenkanal	Tenua	0084/01-015	23.03.99	Bhapur	Bhapur	Dhenkanal	Belabania RF Sulia RF	6.00 12.30		18.30	
5	Dhenkanal	Rajuapatna	268/01-050	24.05.95	Bhapur	Baliamba	Dhenkanal	Saptasajya RF	31.00		31.00	
6	Dhenkanal	Kalikaprasad	179/01-027	27.03.03	Bhapur	Kalikaprasad	Odapada	Matiamundia RF	200.00		200.00	
7	Dhenkanal	Jhumpudia Sabarsahi	0019/01-005	28.12.98	Bhapur	Chandrasekhar Prasad	Dhenkanal	Sulia (A)-RF	33.70		33.70	
8	Dhenkanal	Mahindrapur	192/01-035	27.06.03	Bhapur	Kalanga	Odapada	Matiamundia RF	200.00		200.00	
9	Dhenkanal	Bhubanpur	007/01-002	14.07.98	Bhapur	-do-	Odapada	Sulia-B RF	72.00		72.00	
10	Dhenkanal	Kalanga	220/01-040	25.02.04	Bhapur	-do-	Odapada	Bhagarakhol, Nikhipal, Neda, Bibekananda VF		48.76	48.76	
11	Dhenkanal	Raidihi	267/01-049	24.05.05	Bhapur	Baliamba	Dhenkanal	Saptasajya RF	92.00		92.00	
12	Dhenkanal	Bhagirathipur	266/01-048	24.05.05	Bhapur	Baliamba	Dhenkanal	Saptasajya RF	66.00		66.00	
13	Dhenkanal	Lambodarpur	280/01-052	31.03.07	Bhapur	Bhaliabolkateni	Dhenkanal	Saptasajya RF Kankadahad RF		194.56	194.56	
14	Dhenkanal	Maniabandha	0020/01-006	28.12.98	Dhenkanal	Municipality	Dhenkanal	Majuri RF-A	100.00		100.00	
15	Dhenkanal	Mahisapat (Kainapada)	175/01-025	13.01.13	Dhenkanal	-do-	Dhenkanal	Majuri RF	150.00		150.00	
16	Dhenkanal	Gajamara	0028/01-009	14.01.99	Dhenkanal	-do-	Dhenkanal	Majuri RF-A	95.00		95.00	

17	Dhenkanal	Sanakurumutangara	271/01-051	05.07.05	Dhenkanal	Baladiabandha	Dhenkanal	Patapuri RF	34.00		34.00	
18	Dhenkanal	Mulising	261/01-045	11.04.05	Dhenkanal	Siminai	Odapada	Revenue Forest		14.7	14.70	
19	Dhenkanal	Gudianali (Chandiasahi)	264/01-046	16.05.05	Dhenkanal	Muncipality	Dhenkanal	Megha RF	100.00		100.00	
20	Dhenkanal	Kusupada	260/01-044	21.03.05	Dhenkanal	Gobindpur	Dhenkanal	Patapuri RF	100.00		100.00	
21	Dhenkanal	Gobindpur	249/01-042	23.12.04	Dhenkanal	-do-	Dhenkanal	Patapuri RF	80.00		80.00	
22	Dhenkanal	Mahulpada	259/01-043	17.03.05	Dhenkanal	Baladiabandha	Dhenkanal	Patapuri RF	70.00		70.00	
23	Dhenkanal	Shyamacharanpur	0026/01-008	02.01.99	Dhenkanal	Muncipality	Dhenkanal	Megha-A RF	108.00		108.00	
24	Dhenkanal	Korian	0137/01-022	22.11.99	Dhenkanal	-do-	Dhenkanal	Korian RF	116.00		116.00	
25	Dhenkanal	Borapada	0121/01-020	18.07.2000	Dhenkanal	-do-	Dhenkanal	Megha RF	130.00		130.00	
26	Dhenkanal	Saradahikor	0093/01-017	23.09.99	Dhenkanal	Baladiabandha	Dhenkanal	Godabolua-B RF	84.00		84.00	
27	Dhenkanal	Kauchi	0088/01-016	23.03.99	Dhenkanal	Gobindpur	Dhenkanal	Patapuri RF-B	108.00		108.00	
28	Dhenkanal	Kamuning	0073/01-013	18.02.99	Dhenkanal	Saptasajya	-do-	Majuri RF-A	88.00		88.00	
29	Dhenkanal	Bhanjakusum	182/01-029	31.03.13	Dhenkanal	Gobindpur	-do-	Charkhola RF	52.00	50.00	102.00	
30	Dhenkanal	Kathagada (Parbatiasahi)	0022/01-007	02.01.99	Dhenkanal	Municipality	-do-	Charkhola-A RF	80.00		80.00	
31	Dhenkanal	Kanteikolia & Barabanka	187/01-034	19.04.03	Dhenkanal	Gobindpur	-do-	Charkhola RF	65.00		65.00	
32	Dhenkanal	Sankhua Acchanda	185/01-032	31.03.03	Dhenkanal	Kaimati	-do-	Patapuri Rf Kapilash RF	80.00 120.00		200.00	
33	Dhenkanal	Galapada Gobindpur	184/01-031	31.03.03	Dhenkanal	Gobindpur	-do-	Charkhola RF	55.00		55.00	
34	Dhenkanal	Sarakhia	0183/01-030	31.03.13	Dhenkanal	Kankadapal	-do-	Megha RF	75.00		75.00	
35	Dhenkanal	Mahisapat	0143/01-023	27.11.99	Dhenkanal	Municipality	-do-	Charkhola RF	196.00		196.00	
36	Dhenkanal	Deulasahi	204/01-038	17.01.04	Dhenkanal	-do-	-do-	Charkhola RF	80.00		80.00	
37	Dhenkanal	Morangapal	0051/01-011	30.01.99	Dhenkanal	Gobindpur	-do-	Charkhola RF-A	56.00		56.00	
38	Dhenkanal	Kathagada (Nuasahi)	0008/01-003	16.07.98	Dhenkanal	Municipality	-do-	Charkhola RF	80.00		80.00	
39	Dhenkanal	Gundichapada	265/01-047	24.05.05	Dhenkanal	Gundichapada	Odapada	Korian RF	142.00		142.00	

40	Dhenkanal	Kamadhenukot	180/01-028	27.03.03	Badagila	Dhirapatana	-do-	Saptasajya RF	150.00		150.00	
41	Dhenkanal	Majhisahi Banasahi	200/01-037	04.11.03	Badagila	Saptasajya	-do-	Saptasajya RF	144.00		144.00	
42	Dhenkanal	Gangadharprasad	117/01-020	04.10.99	Badagila	K.Prasad	-do-	Sadangi Khesra		70.80	70.80	
43	Dhenkanal	Krusnaprasad	0006/01-001	17.06.98	Badagila	-do-	-do-	Nakasunimundia VF		31.02	31.02	
44	Dhenkanal	Sadeibereni	221/01/041	25.02.04	Badagila	Saptasajya	-do-	Saptasajya RF	140.00		140.00	
45	Dhenkanal	Chasapada	213/01-039	23.02.04	Badagila	Dhirapatana	-do-	Khesra KF		16.20	16.20	
46	Dhenkanal	Nuaganpatna	0039/01-010	25.01.99	Badagila	K.Prasad	-do-	Saptasajya RF	96.00		96.00	
47	Dhenkanal	Majuri	186/01-033	19.04.03	Badagila	Kankadahad	-do-	Majuri RF	125.00		125.00	
48	Dhenkanal	Sudhadhikateni	177/01-026	17.02.03	Gadasila	Gadasila	Odapada	Matharagadi RF	80.00		80.00	
49	Dhenkanal	Podapada	247/07-001	30.11.04	Gadasila	Odapada	Odapada	Matharagadi RF	100.00		100.00	
50	Dhenkanal	Nimidha	0054/01-012	05.02.99	Gadasila	Nimidha	-do-	Nimidha RF	136.00		136.00	
51	Dhenkanal	Baliamba	281/01-053	25.07.07	Bhapur	Baliamba	Dhenkanal	Saptasajya-A RF	164.00		164.00	
52	Dhenkanal	Kakudibhaga	287/01-054	25.04.08	Bhapur	Kakudibhaga	Dhenkanal	Ghantabaja RF	150.00		150.00	
53	Dhenkanal	Madhusahupatna	288/01-055	30.06.08	Bhapur	Madhusahupatna	-do-	Saptasajya RF	35.00		35.00	
54	Dhenkanal	Barsupal	290/01-056	25.10.08	Bhapur	Kakudibhag	-do-	Ghantabaja RF	80.00		80.00	
55	Dhenkanal	Similipatana	305/01-057	28.08.12	-do-	Ghatipiri	-do-	Ghantabaja RF	96.00		96.00	
56	Dhenkanal	Chatka Budheibereni	322/01-058	06.03.14	Ghatipiri	Kalanga	Odapada	Jaripal RF & Dinabandhupur KF	64.00	12.42	76.42	

Sl. No	Name of the Range	Name of the VSS/EDC	VSS Code No	Year/Month of Regd. of VSS	Name of the Section	Name of the GP	Name of the CD Block	Name of the RF/KF/VF	Forest Area assigned in Ha.			Remarks
									RF	PF/VF/ Other	Total	
1	Hindol	Tantisahi (Sarasing)	0059/03-005	16.02.99	Hindol	Nuabaga	Hindol	Koi RF	46.00		46.00	
2	Hindol	Sinkol	218/03-026	25.02.04	Hindol	Nizigarh	-do-	Kandhara RF	200.00		200.00	
3	Hindol	Debahali	0032/03-002	19.01.19	Hindol	Nuabaga	-do-	Koi RF	66.00		66.00	
4	Hindol	Ambithi	219/03-027	25.02.04	Hindol	Kansara	-do-	Ambithi RF	100.00		100.00	
5	Hindol	Bagadharia	237/03-029	12.10.04	Hindol	Nuabaga	-do-	Koi RF	100.00		100.00	
6	Hindol	Bandhabhuin	238/03-030	12.10.04	Hindol	Baunsapokhari	-do-	Nandania RF	160.00		160.00	
7	Hindol	Karabira	239/03-003	12.10.04	Hindol	-do-	-do-	Nandania RF	180.00		180.00	
8	Hindol	Karnapur	0160/03-018	15.02.2000	Hindol	-do-	-do-	Nandinia RF	200.00		200.00	
9	Hindol	Tantichira	176/03-021	20.01.03	Hindol	Nizigarh	-do-	Koi RF	50.00		50.00	
10	Hindol	Pada	216/03-024	31.03.04	Hindol	Hatura	-do-	Koi RF	100.00		100.00	
11	Hindol	Nuabaga	217/03-025	25.02.04	Hindol	Nuabaga	-do-	Koi RF	40.00		40.00	
12	Hindol	Badagola	240/03-032	12.10.04	Hindol	Madhapur	-do-	Jatia DPF		25.00	25.00	

13	Hindol	Kansara	215/03-023	23.02.04	Hindol	Kansar	-do-	Kansara RF	50.00		50.00	
14	Hindol	Ostapal	0061/03-007	16.02.99	Hindol	Nuabaga	-do-	Koi RF	36.00		36.00	
15	Hindol	Alusing	246/03-035	24.11.04	Hindol	Nizigarh	-do-	Kandhara RF	140.00		140.00	
16	Hindol	Gobindabereni	0170/03-020	19.06.02	Hindol	Nizigarh	-do-	Koi RF	200.00		200.00	
17	Hindol	Mundiapasi	276/03-043	24.12.05	Rasol	Rasol	-do-	Kandhara RF	75.00		75.00	
18	Hindol	Nuakiari	0062/03-008	18.02.99	Rasol	Rasol	-do-	VF		160.00	160.00	
19	Hindol	Lahada	228/03-028	13.07.04	Rasol	Dandiri	-do-	Kandhara RF	200.00		200.00	
20	Hindol	Dandiri (Kurum Sahi)	273/03-042	29.11.05	Rasol	Dandiri	-do-	Kandhar RF	120.00		120.00	
21	Hindol	Madhapur	0159/03-017	21.02.2000	Rasol	Madhapur	-do-	Kandhar RF	160.00		160.00	
22	Hindol	Kathakhumpa	242/03-034	12.10.04	Rasol	Dandiri	-do-	VF		60.00	60.00	
23	Hindol	Dandiri (Khamarsahi)	277/03-044	09.11.06	Rasol	-do-	-do-	Kandhara RF	175.00		175.00	
24	Hindol	Illirisinga	0040/03-004	25.01.99	Rasol	Madhapur	-do-	Kandhara RF	160.00		160.00	
25	Hindol	Kukupangi	0128/03-015	15.10.99	Rasol	-do-	-do-	Kandhara RF	100.00		100.00	
26	Hindol	Alusing	0070/03-009	22.02.99	Bimbori	Nabakishorpur	-do-	KF		100.00	100.00	
27	Hindol	Balisahi (Khaliborei)	0060/03-006	18.02.99	Bimbori	Khaliborei	-do-	KF		100.00	100.00	
28	Hindol	Gobindpur	0071/03-	22.02.99	Bimbori	-do-	-do-	KF		50.00	50.00	

			010									
29	Hindol	Phasigaon	0033/03-003	19.01.99	Bimbori	Nabakishorpur	Hindol	Hitinda RF & KF	200.00		200.00	
30	Hindol	Kapisahi	0031/03-001	19.01.99	Bimbori	-do-	-do-	Hitinda RF	200.00		200.00	
31	Hindol	Kharchuli	0072/03-011	22.02.99	Bimbori	Gandanali	-do-	KF		200.00	200.00	
32	Hindol	Kalipoi	241/03-033	12.10.04	Bimbori	Nabakasipur	-do-	VF		70.00	70.00	
33	Hindol	Jagannathpur	0161/03-019	21.02.2000	Bampa	Buhalipal	-do-	Jagannathpur VF		118.00	118.00	
34	Hindol	Buhalipal	214/03-022	23.02.04	Bampa	-do-	-do-	Buhalipal VF		200.00	200.00	
35	Hindol	Patalu	0098/03-014	31.04.99	Bampa	-do-	-do-	Patalo RF	150.00		150.00	
36	Hindol	Giridharprasad	0081/03-013	22.03.99	Bampa	Giridharprasad	-do-	Bampa RF	200.00		200.00	
37	Hindol	Pasasing	0077/03-012	22.03.99	Bampa	Gandanali	-do-	Bampa RF	100.00		100.00	
38	Hindol	Kharadali	258/03-039	15.03.05	Bampa	Bampa	-do-	Kharadali VF		171.00	171.00	
39	Hindol	Bramhanipal	250/03-036	01.02.05	Bampa	-do-	-do-	Patalo RF	100.00		100.00	
40	Hindol	Lokanathpur	263/03-041	16.05.05	Bampa	-do-	-do-	Bampa RF	150.00		150.00	
41	Hindol	Babandha (Sabarsahi & Sanasahi)	0129/03-016	15.10.99	Bampa	Babandha	-do-	Babandh VF		100.00	100.00	
42	Hindol	Balikiari	256/03-038	07.03.05	Bampa	Jarada	-do-	Bampa RF	125.00		125.00	
43	Hindol	Balisahi	255/03-037	07.03.05	Bampa	Chitalpur	-do-	Bampa KF		100.00	100.00	

44	Hindol	Babandha (Badasahi)	262/03-040	24.04.05	Bampa	Babandha	-do-	Babandh VF		165.00	165.00	
45	Hindol	Khanda	292/03-045	31.10.08	Rasol	Khaliborei	-do-	Kandhara & Hitinda RF	200.00		200.00	
46	Hindol	Panchupada	295/03-046	20.08.09	Rasol	Chitalpur	-do-	Panchupada VF		64.00	64.00	
47	Hindol	Saradhapur	296/03-047	20.08.09	Hindol	Hindol	-do-	Koi RF	168.00		168.00	
48	Hindol	Babandha (Harijana Sahi)	313/03-048	31.10.13	Bampa	Babandha	Hindol	Revenue Forest (Jungle-II mela & Parbat-II)		104.44	104.44	

Sl. No	**Name of the Range**	**Name of the VSS/EDC**	**VSS Code No**	**Year/Month of Regd. of VSS**	**Name of the Section**	**Name of the GP**	**Name of the CD Block**	**Name of the RF/KF/VF**	**Forest Area assigned in Ha.**			**Remarks**
									RF	**PF/VF/ Other**	**Total**	
1	Kapilash	Latabainsia	0069/02-008	18.02.99	Deogaon	Deogaon	Gondia	Ramei RF	40.00		40.00	
2	Kapilash	Tangarsahi	0114/02-013	04.10.99	Deogaon	Bidharpur	-do-	Ramei RF	96.00		96.00	
3	Kapilash	Chandrasekharpur	0068/02-007	18.02.99	Deogaon	Neulapoi	-do-	Kapilash RF	112.00		112.00	
4	Kapilash	Deogaon	188/06-001	29.05.03	Deogaon	Deogaon	-do-	Kapilash RF	190.00		190.00	
5	Kapilash	Dagirapali	189/06/002	29.05.03	Deogaon	-do-	-do-	Kapilash RF	88.00		88.00	
6	Kapilash	Biswanathpur	0067/02-006	18.02.99	Deogaon	-do-	-do-		120.00		120.00	
7	Kapilash	Kaimati	251/06-016	05.02.05	Deogaon	Beltikiri	Dhenkanal	Kapilash RF	90.00		90.00	
8	Kapilash	Dihabainsia	248/06-015	20.12.04	Deogaon	Deogaon	Gondia	Ramei RF	30.00		30.00	
9	Kapilash	Rampa	278/06/021	28.02.07	Deogaon	Nagiapasi	Dhenkanal	Kapilash RF	118.00		118.00	

10	Kapilash	Bidharpur	201/06-003	04.11.03	Deogaon	Bidharpur	-do-	Ramei RF	198.00		198.00	
11	Kapilash	Biradia	272/06-019	31.08.05	Deogaon	Nagiapasi	Dhenkanal	Kapilash RF	192.00		192.00	
12	Kapilash	Chhanabolua	252/06-017	05.02.05	Deogaon	Nagiapasi	Gondia	Kpailash RF	100.00		100.00	
13	Kapilash	Dahimal	253/06-018	05.02.05	Deogaon	Nagiapasi	-do-	Kapilash RF	100.00		100.00	
14	Kapilash	Sorisiapada	0130/02-015	17.11.99	Sorisiapada	Sorisiapada	-do-	Kapilash RF-A	200.00		200.00	
15	Kapilash	Ragadisahi	274/06-020	29.11.05	Sorisiapada	Sorisiapada	-do-	Rasunia PRF		40.00	40.00	
16	Kapilash	Balipur	205/06-005	17.01.04	Sorisiapada	-do-	-do-	Kapilash RF	190.00		190.00	
17	Kapilash	Padhanitangar	207/06-007	17.01.04	Sorisiapada	-do-	-do-	Rasunia KF		90.00	90.00	
18	Kapilash	Bhanrgoda	232/06-013	24.09.04	Sorisiapada	-do-	-do-	Kapilash RF	120.00		120.00	
19	Kapilash	Ramei	234/06-014	20.12.04	Sorisiapada	Sorisiapada	-do-	Ramei RF	104.00		104.00	
20	Kapilash	Deojhar	211/06-011	23.02.04	Sorisiapada	-do-	-do-	Ramei RF	150.00		150.00	
21	Kapilash	Bania	203/06-004	19.12.03	Sorisiapada	-do-	-do-	Kapilash RF	200.00		200.00	
22	Kapilash	Mahisakada	206/06-006	17.01.04	Sorisiapada	-do-	-do-	Kapilash RF	196.00		196.00	
23	Kapilash	Saratentulia	208/06-008	17.01.04	Sorisiapada	-do-	-do-	Kapilash RF	180.00		180.00	
24	Kapilash	Similia	209/06-009	17.01.04	Sorisiapada	-do-	-do-	Kapilash RF	150.00		150.00	
25	Kapilash	Chaulia	210/06-010	29.01.04	Sorisiapada	-do-	-do-	Ramei RF	160.00		160.00	
26	Kapilash	Jankhira	0097/01-019	31.03.99	Biradia	Beltikiri	Dhenkanal	Jankhira VF		30.00	30.00	
27	Kapilash	Nagiapasi	0096/01-018	31.03.99	Biradia	Nagiapasi	Dhenkanal	Kapilash RF	192.00		192.00	
28	Kapilash	Harekrusnapur	0074/01-014	18.02.99	Biradia	-do-	-do-	Kapilash RF	108.00		108.00	
29	Kapilash	Kolha	227/06-012	13.07.04	Chatighar	Sorisiapada	Gondia	Kapilash RF	152.00		152.00	
30	Kapilash	Nagena	293/06-022	31.07.09	Deogan	Deogan	-do-	Ramei RF	48.00		48.00	
31	Kapilash	Kadua	303/06-023	28.05.12	Deogan	Nagiapasi	Dhenkanal	Kapilash RF	32.00		32.00	EDC
32	Kapilash	Ambanali	304/06-024	28.05.12	Deogan	Nagiapasi	Dhenkanal	Kapilash RF	27.00		27.00	EDC

Sl. No	Name of the Range	Name of the VSS/EDC	VSS Code No	Year/Month of Regd. of VSS	Name of the Section	Name of the GP	Name of the CD Block	Name of the RF/KF/VF	Forest Area assigned in Ha.		
									RF	PF/VF/ Other	Total
1	Sadangi	Poduakhoj	233/02-034	07.10.04	Sadangi	Poduakhoj	Gondia	Ramei RF	60.00		60.00
2	Sadangi	Brundabanpur	0163/02-018	16.03.2000	Sadangi	Digamberpur	-do-	RF-A	200.00		200.00
3	Sadangi	Majhipal	0165/02-019	19.04.2000	Sadangi	Karamul	-do-	Aswakhola-A	200.00		200.00
4	Sadangi	Barada, Sogar, Boradapatna, Kumbharunibati	173/02-023	27.09.02	Sadangi	Sadangi	-do-	Sadangi RF-B, Aswakhola RF-A	200.00		200.00
5	Sadangi	Dandeibereni	226/02-031	13.07.04	Sadangi	Poduakhoj	-do-	Gondia RF	125.00		125.00
6	Sadangi	Jharada	0168/02-021	30.04.2000	Sadangi	Sadangi	-do-	Sadangi-B & Ambakhol-A	163.20		163.00
7	Sadangi	Anthukudakateni	0115/02-014	04.10.99	Sadangi	Sadangi	-do-	Aswakhola RF-A	217.00		217.00
8	Sadangi	Chandan Barada	0110/02-012	07.06.99	Sadangi	-do-	-do-	Aswakhola RF Sadangi	60.00 40.00		100.00
9	Sadangi	Digamberpur	0050/02-050	25.01.99	Sadangi	Digamberpur	-do-	Raiguda RF	150.00		150.00
10	Sadangi	Dollar	275/02-038	26.12.05	Sadangi	Mandar	-do-	Aswakhola RF	150.00	44.00	194.00
11	Sadangi	Chhatakhumba	243/02-036	01.11.04	Sadangi	Gondia	-do-	Gondia RF-B	50.00		50.00
12	Sadangi	Nabakasipur	0131/02-016	17.11.99	Sadangi	Kasipur	-do-	Lahada-B	175.00		175.00
13	Sadangi	Baniapada	230/02-032	17.03.04	Sadangi	Poduakhoj	-do-	Gondia & Ramei RF	180.00		180.00
14	Sadangi	Palagandua	224/02-029	22.03.04	Sadangi	Sadangi	-do-	Lahada RF-B	80.00		80.00
15	Sadangi	Hatibari	191/02-026	27.06.03	Sadangi	Karmul	-do-	Aswakhola RF	150.00		150.00
16	Sadangi	Gopalpur (Bhaliakana)	231/02-033	25.06.04	Sadangi	Karmul	-do-	Aswakhola RF	115.00		115.00

17	Sadangi	Eleijang	0150/02-017	17.01.2000	Sorisiapada	Mathatentulia	-do-	VF		23.00	23.00
18	Sadangi	Baniapada, Colony Sahi, Sandaposipatna	181/02-024	31.03.03	Sorisiapada	Poduakhoj	-do-	Ramei RF	120.00		120.00
19	Sadangi	Mathatentulia	172/02-0222	22.06.02	Sorisiapada	Mathatentulia	-do-	Gondia RF-B	200.00		200.00
20	Sadangi	Radhadeipur	0167/02-020	28.04.2000	Joranda	Bainsia	-do-	Radhadeipur VF		63.00	63.00
21	Sadangi	Barahata	0002/02-002	1998	Joranda	Banasing	-do-	Rupabalia RF	24.28		24.28
22	Sadangi	Mahapada	236/02-035	12.10.04	Joranda	Kaluria	-do-	Rupabalia RF-B	105.00		105.00
23	Sadangi	Ambapada	0078/02-009	22.03.99	Joranda	Karamul	-do-	Aswakhola RF-A	110.00		110.00
24	Sadangi	Makundapur	0001/02-001	1998	Joranda	Karamul	-do-	Aswakhola RF	200.00		200.00
25	Sadangi	Goradapal Raipal	0085/02-011	20.03.99	Joranda	Karamul	-do-	Aswakhola RF & VF	58.00	12.00	70.00
26	Sadangi	Bainsia	0003/02-003	1998	Joranda	Bainsia	-do-	Aswakhola RF	200.00		200.00
27	Sadangi	Vegibolua	222/02-027	25.02.04	Joranda	Kaluria	-do-	Rupabalia RF	76.00		76.00
28	Sadangi	Atinda	223/02-028	22.03.04	Joranda	Joranda	-do-	Rupabalia RF	100.00		100.00
29	Sadangi	Mundamari	225/02-030	11.05.04	Khankira	Mathatentulia	-do-	Lahada Rf & Kapilash RF	200.00		200.00
30	Sadangi	Chhotatentuli	0034/02-004	19.01.99	Khankira	Khankira	-do-	Kapilash RF-A	200.00		200.00
31	Sadangi	Gharghari, Benajhari	245/02-037	08.11.04	Khankira	Khankira	-do-	Khankira RF & Kapilash RF	200.00		200.00
32	Sadangi	Khankira	190/02-025	27.06.03	khankira	Khankira	Gondia	Khankira RF	200.00		200.00
33	Sadangi	Dakhinapasi	0079/02-010	22.03.99	Sadangi	Bidharpur	-do-	Gondia RF-B	101.00		101.00
34	Sadangi	Sadangi	283/02-039	21.11.07	Sadangi	Sadangi	-do-	Sadangi RF	200.00		200.00
35	Sadangi	Nathua puruna sahi	284/02-040	05.01.08	joranda	Sogarposi	-do-	Rupabalia RF	52.00		52.00
36	Sadangi	Nathua nua sahi	285/02-041	05.01.08	Joranda	Sogarposi	-do-	Rupabalia RF	66.56		66.56
37	Sadangi	Bhatakateni	286/02-042	15.03.08	Joranda	Bansinga	-do-	Rupabalia RF	51.00		51.00

38	Sadangi	Godisahi nathua	291/02-043	25.10.08	Joranda	Sogarposi	-do-	Rupabalia RF	35.00		35.00
39	Sadangi	Singa	094/02-044	20.08.09	Joranda	Raitola	-do-	Aswakhola RF Sadangi RF	137.00 53.00		190.00
40	Sadangi	Ichhapur	298/02-045	24.05.11	Sadangi	Khandabandha	-do-	Lahada RF	86.00		86.00
41	Sadangi	Dhanianali (Kalyani Sahi)	299/02-046	24.05.11	Sadangi	Mathatentulia	-do-	Lahada RF-B	75.00		75.00
42	Sadangi	Bali Sahi	300/02-047	24.05.11	Sadangi	Sadangi	-do-	Aswakhola & Sadangi RF-B	87.00		87.00
43	Sadangi	Phuljhar	309/02-047	20.06.13	Khankira	Khankira	-do-	Lahad RF-A	172.00		172.00
44	Sadangi	Pimpudia	310/02-048	20.06.13	-do-	-do-	-do-	Lahada RF-A&B	188.00		188.00
45	Sadangi	Karadabani	311/02-049	01.10.13	-do-	Bega	-do-	Bega RF	150.00		150.00
46	Sadangi	Bhaliapata	315/02-050	30.11.13	Sadangi	Kashipur	-do-	Lahada RF	80.00		80.00
47	Sadangi	Barapal	316/02-051	30.11.13	-do-	Mathatentulia	-do-	Lahada RF-A	78.00		78.00
48	Sadangi	Sabarasahi	317/02-052	03.12.13	-do-	Sadangi	-do-	Lahada RF-B Raygada RF Sadangi RF	50.00 35.00 45.00		130.00
49	Sadangi	Nabalinga	326-02-053	09.05.14	Sadangi	Mandar	-do-	Aswakhola RF	125.00		125.00

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									RF	PF/VF/ Other	Total	
1	K.Nagar East	Maruabile	254/04-063	19.02.05	Kandar	Maruabile	Kankadahad	Ranjagarh RF	144.00		144.00	
2	K.Nagar East	Pitaladhua	270/04-064	23.06.05	Kandar	-do-	-do-	Ranjagarh RF	96.00		96.00	
3	K.Nagar East	Sarian	0010/04-003	16.12.98	Kandar	Maruabile	-do-	Ranjagarh RF- A Birasal-B	52.00 39.00		91.00	
4	K.Nagar East	Sasapasi	0066/04-017	18.02.99	Tarenipasi	Karagola	Kankadahad	Sasapasi VF		175.00	175.00	
5	K.Nagar East	Dangapal	0122/04-040	15.10.99	Tarenipasi	Kargila	Kankadahad	Dangapal RF		22.40	22.40	
6	K.Nagar East	Daunsanali	0123/04-041	12.10.99	Tarenipasi	Balikuma	-do-	Ranjagarh RF-A	150.00		150.00	
7	K.Nagar East	Childa	195/04-058	28.07.03	Tarenipasi	Kantol	-do-	Ranjagarh RF	200.00		200.00	
8	K.Nagar East	Urbengi	0082/04-021	20.03.99	Tarenipasi	Balikuma	-do-	VF		60.00	60.00	
9	K.Nagar East	Mandiapada	197/04-060	28.07.03	Tarenipasi	Kantol	-do-	Ranjagarh RF	200.00		200.00	
10	K.Nagar East	Palashadangi	0162/04-052	16.03.2000	Tarenipasi	Balikuma	-do-	Ranjagarh RF-A (Comp. No. 10)	200.00		200.00	
11	K.Nagar East	Tarenipasi	0104/04-030	18.05.99	Tarenipasi	Balikhuma	-do-	Ranjagarh RF-A (Comp. No. 9)	85.00		85.00	
12	K.Nagar East	Khateibereni	0035/04-009	19.01.99	Tarenipasi	-do-	-do-	Ranjagarh RF-A	120.00		120.00	
13	K.Nagar East	Rodanga	198/04-061	28.07.03	Tarenipasi	Kerjuli	-do-	Ranjagarh RF		200.00	200.00	

14	K.Nagar East	Patharakata	0065/04-016	18.02.99	Birasal	Makuakateni	Kankadahad	Ranjagarh RF	40.00		40.00	
15	K.Nagar East	Hadagari	0064/04-015	18.02.99	Birasal	Birasal	-do-	Maulabhanja RF	160.00		160.00	
16	K.Nagar East	Sendhasar	0141/04-045	12.01.09	Birasal	Maruabile	-do-	Birasal RF-B	70.00		70.00	
17	K.Nagar East	Khajuria	0105/04-031	18.05.99	Birasal	Makuakateni	-do-	Ranjagarh RF-A	148.00		148.00	
18	K.Nagar East	Majhipal	0107/04-033	18.05.99	Birasal	Birasal	-do-	Birasal RF-B	130.00		130.00	
19	K.Nagar East	Birasal	0108/04-034	07.06.99	Birasal	Birasal	-do-	Birasal KF		65.00	65.00	
20	K.Nagar East	Gunturigaon	0109/04-035	07.06.99	Birasal	Kerjuli	-do-	Ranjagarh RF-A	120.00		120.00	
21	K.Nagar East	Balikuma	0147/04-048	31.12.99	Birasal	Balikuma	-do-	Ranjagarh RF-A	100.00		100.00	
22	K.Nagar East	Kharkhari	0146/04-047	31.12.99	Birasal	Makuabill	-do-	Ranjagarh RF-A	154.00		154.00	
23	K.Nagar East	Dengabahali	0142/04-046	26.11.99	Birasal	Birasal	-do-	Birasal-B	40.00		40.00	
24	K.Nagar East	Koi (Balisahi)	0041/04-012	25.01.99	Birasal	Balikuma	-do-	Ranjagarh RF	196.00		196.00	
25	K.Nagar East	Koi(Ka)	0030/04-030	19.01.99	Birasal	Balikuma	-do-	Ranjagarh RF-A	144.00		144.00	
26	K.Nagar East	Bandania	005/04-002	11.06.98	Birasal	Birasal	-do-	Birasal RF-B	27.00		27.00	
27	K.Nagar East	Sadhuamunda	0086/04-023	19.03.99	Birasal	Maruabill	-do-	Ranjagarh RF (Comp No. 12)	89.00		89.00	
28	K.Nagar East	Haladikundi	0164/04-053	04.04.00	Birasal	Makuakateni	Kankadahad	Ranjagarh RF-A	100.00		100.00	
29	K.Nagar East	Tulasipasi	0037/04-010	21.01.99	Birasal	Badasuanl	K.Nagar	Maulabhanja RF	159.36		159.36	
30	K.Nagar East	Khatakhura	279/04-065	28.02.07	Birasal	Baligorada	K.Nagar	Maulabhanja RF	50.00		50.00	

31	K.Nagar East	Pallisamantarapur	0052/04-013	24.11.99	Kankadahad	Baisinga	-do-	Jiridamali RF	34.00		34.00	
32	K.Nagar East	Khairatangar	0094/04-026	11.03.99	Kankadahad	Batagaon	Kankadahad	VF		30.00	30.00	
33	K.Nagar East	Bhalumunda	0126/04-042	15.10.99	Kankadahad	Kanpura	K.Nagar	Anantapur RF	104.40		104.40	
34	K.Nagar East	Batagaon	0075/04-018	18.02.99	Kankadahad	Batagaon	Kankadahad	Ranjagarh RF (Comp. No. 10)	125.00		125.00	
35	K.Nagar East	Bramhania	0111/04/111	31.07.99	Kankadahad	Batagaon	Kankadahad	Bramhania VF		162.00	162.00	
36	K.Nagar East	Kampulei	0004/04-001	04.06.98	Kandar	Maruabill	Kankadahad	Ranjagarh RF-A	200.00		200.00	
37	K.Nagar East	Jiridamali	0076/04-019	18.02.99	Kankadahad	Kanpura	K.Nagar	Jiridamali KF		9.44	9.44	
38	K.Nagar East	Kandar	174/04-056	13.01.2003	Kandar	Maruabill	Kankadahad	Ranjagarh RF	200.00		200.00	
39	K.Nagar East	Tarajang	0083/04-022	20.03.99	Kankadahad	Makuakateni	Kankadahad	Tarajang VF		26.26	26.26	
40	K.Nagar East	Chheliabeda	0103/04-029	18.05.99	Kankadahad	Bainsinga	K.Nagar	Jiridamali RF/VF	66.80	16.00	82.80	
41	K.Nagar East	Bahadapal	194/04-057	28.07.2003	Kankadahad	Kantol	Kankadahad	Ranjagarh RF	200.00		200.00	
42	K.Nagar East	Kandheibolua	0166/04-054	28.04.2000	Birasal	Badasuanla	K.Nagar	Maulabhanaja RF	110.00		110.00	
43	K.Nagar East	Chakapal	0157/04-051	27.01.2000	Birasal	Raibolua	Kankadahad	Maulabhanaja RF-A	92.00		92.00	
44	K.Nagar East	Baghabasa	0156/04-050	27.01.2000	Birasal	Lokanathpur	-do-	Maulabhanaja RF-B	100.00		100.00	
45	K.Nagar East	Godipokhari	0038/04-011	21.01.99	Birasal	Raibolua	-do-	Maulabhanaja RF-B	196.00		196.00	
46	K.Nagar East	Makuakateni	297/04-066	14.01.11	Birasal	Makuakateni	-do-	Maulabhanaja RF	155.00		155.00	
47	K.Nagar East	Kerojoli	302-04-067	03.08.11	Kankadahad	Kerojoli	-do-	Kerajoli PF		196.00	196.00	

48	K.Nagar East	Patrasahi (Khajuria)	307/04-069	14.11.12	-do-	Makuakateni	-do-	Ranjagarh RF & Khajuria KF	52.00	10.00	62.00	
49	K.Nagar East	Dehuri sahi (Khajuria)	308/04-070	14.11.12	-do-	-do-	-do-	Ranjagarh RF & Khajuria KF	62.00	26.00	88.00	
50	K.Nagar East	Gopalsahi (Khajuria)	306/04-068	14.11.12	-do-	-do-	-do-	Ranjagarh RF & Khajuria KF	34.00	16.00	50.00	
51	K.Nagar East	Kalda	321-04-071	17.02.14	Kankadahad	Kerjoli	-do-	Ranjagarh RF (Comp. No. 1&2)	200.00		200.00	
52	K.Nagar East	Koi	0053/04-014	30.01.99	Birasal	Balikuma	-do-	Ranjagarh RF	112.00		112.00	

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									RF	PF/VF/ Other	Total	
1	K.Nagar West	Balipasi	0155/05-049	27.01.2000	Muktapasi	Sanda	Parjang	Kankili RF-B	38.00		38.00	
2	K.Nagar West	Kandhabol	0153/05-047	27.01.2000	K.Nagar	Kanpura	K.Nagar	Anantapur RF-A Madhi RF-B	90.00 44.00		134.00	
3	K.Nagar West	Rahabereni	0151/05-045	21.01.2000	Muktapasi	Basui	Parjang	Siarimali RF-B	158.00		158.00	
4	K.Nagar West	Majhikhaman	0144/05-043	07.12.99	Muktapasi	Muktapasi	-do-	Muktaposi VF		62.00	62.00	
5	K.Nagar West	Ratnapur	0125/05-035	15.10.99	Muktapasi	Basoi	-do-	Siarimali RF-B & Nandabiri RF-A	144.00		144.00	
6	K.Nagar West	Karnatpur	0135/05-039	16.11.99	Muktapasi	Basoi	-do-	Kankili RF B & Siarimali RF B	124.00		124.00	
7	K.Nagar West	Kamarda	0119/05-033	08.10.99	Muktapasi	Muktapasi	-do-	Anantapur RF-A	200.00		200.00	
8	K.Nagar West	Phuljhari	0154/05-048	27.01.2000	Kirtanpur	Kantapal	Parjang	Anantapur RF A, Comp. No. 13	46.00		46.00	
9	K.Nagar West	Rangamatia	0047/05-017	25.01.99	Muktapasi	Jayapurakateni	-do-	Anantapur RF-A, Comp. No. 26	148.00		148.00	
10	K.Nagar West	Sundhikateni	0057/05/022	05.02.99	Muktapasi	Jayapurakateni	-do-	Anantapur RF-A	200.00		200.00	
11	K.Nagar West	Muktapasi	0049/05-019	25.01.99	Muktapasi	Muktapasi	-do-	Siarimalia RF-B	200.00		200.00	
12	K.Nagar West	Siarimalia	0055/05-020	05.02.99	Muktapasi	Jayapurakateni	-do-	Siarimalia RF-B	28.00		28.00	
13	K.Nagar West	Pakatmunda	0016/05-004	07.12.98	Muktapasi	Bam	Kankadahad	Anantapur RF-A	200.00		200.00	
14	K.Nagar West	Baghamunda	0048/05-018	25.01.99	Muktapasi	Kuturia	-do-	Anantapur RF-A, Comp No. 28	200.00		200.00	
15	K.Nagar	Chunaragadi	0140/05-	26.11.99	Kirtanpur	Kantapal	-do-	Chunaragadi KF		50.23	50.23	

	West		042									
16	K.Nagar West	Nuarekula	0116/05-031	04.10.99	K.Nagar	Mahulpal	K.Nagar	KF		150.00	150.00	
17	K.Nagar West	Gundichanali	118/05-032	04.10.99	K.Nagar	Kanpura	-do-	Anantapur RF	200.00		200.00	
18	K.Nagar West	Kandhara	0024/05-007	02.01.99	Kirtanpur	Kandhara	Kankadahad	Anantapur RFA, Comp No. 7	176.00	24.00	200.00	
19	K.Nagar West	Kantiokateni	0158/05-050	30.01.03	Anlabereni	Kantiokateni	K.Nagar	Sundarakhol RF	72.00		72.00	
20	K.Nagar West	Galukateni	0027/05-009	16.01.98	K.Nagar	Baunsapal	K.Nagar	Sundarakhol RF-A, Comp. No. 2	200.00		200.00	
21	K.Nagar West	Adapalli	0046/05-016	25.01.99	K.Nagar	Kanpura	Kankadahad	Dababani KF		90.29	90.29	
22	K.Nagar West	Sahala	0036/05-011	21.01.99	K.Nagar	Batagan	-do-	Sahala PRF-A		125.02	125.02	
23	K.Nagar West	Kantapal Rangamatia	0092/05-027	23.03.99	Kirtanpur	Kantapal	-do-	Kantapal		175.40	175.40	
24	K.Nagar West	Kanpura	0089/05-025	23.03.99	K.Nagar	Kanpura	K.Nagar	Anantapur RF	200.00		200.00	
25	K.Nagar West	Ektali	0091/05-026	23.03.99	K.Nagar	-do-	-do-	Anantapur RF-A, Madhi RF-B	86.40		86.40	
26	K.Nagar West	Khuntabati	0063/05-024	16.02.99	K.Nagar	-do-	-do-	Khuntabati		40.90	40.90	
27	K.Nagar West	Jaypurakateni	0058/05-023	18.02.99	Muktapasi	Jayapurakateni	Parjang	Anantapur RF-A	200.00		200.00	
28	K.Nagar West	Jantaribol	0133/05-037	16.11.99	K.Nagar	Kanpura	Kankadahad	Madhi RF-B	114.40		114.40	
29	K.Nagar West	Mahimanagar	0095-05-028	23.03.99	K.Nagar	K.Nagar (NAC)	K.Nagar (NAC)	Anantapur RF-A, Madhi RF-B	200.00		200.00	
30	K.Nagar West	Kalabudhia	0025/05-008	02.01.99	Kirtanpur	Kandhara	Kankadahad	Anantapur RF-A, Comp No. 13	156.00		156.00	
31	K.Nagar West	Markata	0132/05-036	08.11.99	K.Nagar	Kadua	K.Nagar	Sundarakhol RF-A & Markata KF	118.00	68.14	186.14	
32	K.Nagar West	Kadalipal	0018/05-006	23.12.98	Anlabereni	Kantiakateni	K.Nagar	Sundarakhol RF-A	140.00		140.00	

33	K.Nagar West	Tandimunda	0056/05-021	03.02.99	K.Nagar	Batagaon	Kankadahad	Sahala PRF & Anantapur RFA	121.60	76.00	197.60	
34	K.Nagar West	Phuljhar	257/05-058	15.03.05	Kirtanpur	Batagaon	-do-	Anantapur RF	200.00		200.00	
35	K.Nagar West	Jhanjiribereni	244/05-057	01.11.04	Kirtanpur	Kerjuli	Kankadahad	Jhanjiriberena KF		44.76	44.76	
36	K.Nagar West	Patharagada	0014/05-002	07.12.98	Kirtanpur	Bam	-do-	Anantapur RF-A	200.00		200.00	
37	K.Nagar West	Sogarkateni	229/05-055	22.07.04	Anlabereni	Sogar	K.Nagar	Machhia RF	51.00		51.00	
38	K.Nagar West	Bainsinga	235/05-056	07.10.04	Anlabereni	-do-	-do-	Machhia RF	24.00		24.00	
39	K.Nagar West	Bam	0042/05-012	25.01.99	Kirtanpur	Bam	Kankadahad	Ambilijharana KF		200.00	200.00	
40	K.Nagar West	Pandua	0013/04-005	16.12.98	Anlabereni	Pandua	K.Nagar	Machhia-A	40.00		40.00	
41	K.Nagar West	Baruhan	0023/04-007	02.01.99	Anlabereni	Baruhan	K.Nagar	Machhia- B Class	76.00		76.00	
42	K.Nagar West	Mahuli	202/04-062	29.11.2003	K.Nagar	Mahulpal	K.Nagar	Anlabereni RF	180.00		180.00	
43	K.Nagar West	Saruali	212/05-054	22.03.04	K.Nagar	Mahulpal	-do-	Sunajhari RF	168.00	32.00	200.00	
44	K.Nagar West	Sunajhari	0106/04-032	18.05.99	Anlabereni	Mahulpal	-do-	Sunajhari RF	81.20		81.20	
45	K.Nagar West	Ambabola	112/04-037	31.01.99	Anlabereni	Baruan	-do-	Sunajhari RF	200.00		200.00	
46	K.Nagar West	Bampu	0113/04-038	04.09.99	K.Nagar	Mahulpal	K.Nagar	Bampu VF	93.00		93.00	
47	K.Nagar West	Udayagiri	0127/04-043	15.10.99	Anlabereni	Baruan	K.Nagar	Sunajhari RF (2, 3 & 5)	185.60		185.60	
48	K.Nagar West	Aluajharan	0090/04-025	23.03.99	Anlabereni	Kusumjodi	K.Nagar	Sunajhari RF	200.00		200.00	
49	K.Nagar West	Mota	314/05-059	01.11.13	K.Nagar	Mahulpal	K.Nagar	Suniamaru RF	200.00		200.00	
50	K.Nagar West	Kantajharia	320/05/060	05.02.14	Anlabereni	Budhibili	K.Nagar	Kantajhari KF		42.00	42.00	

Sl. No	Name of the Range	Name of the VSS/EDC	VSS Code No	Year/Month of Regd. of VSS	Name of the Section	Name of the GP	Name of the CD Block	Name of the RF/KF/VF	Forest Area assigned in Ha.			Remarks
									RF	PF/VF/ Other	Total	
1	Bhuban	Badamuktapasi	0101/04-027	31.03.99	Bhuban	Mathakaragola	Bhuban	Tipilei RF-B	64.00		64.00	
2	Bhuban	Jamunakot	0149/04-049	28.12.2001	Bhuban	Jamunakote	Bhuban	Tipilei RF-B	180.00		180.00	
3	Bhuban	Kumurisinga	0102/04-028	18.05.99	Bhuban	Dhalpada	Bhuban	Dhalpada RF	60.00		60.00	
4	Bhuban	Mathakargola	0021/04-006	28.12.98	Bhuban	Mathakaragola	Bhuban	Maulabhanja RF	200.00		200.00	
5	Bhuban	Rankia	269/08-001	09.06.05	Jiral	Bhuban	Bhuban	Sunajhari RF	200.00		200.00	
6	Bhuban	Shyamal	196/04-059	28.07.2003	Jiral	Bhuban	Bhuban	Bhuban RF	150.00		150.00	
7	Bhuban	Kamchhia	0087/04-002	23.03.99	Jiral	Jagannathpur	Bhuban	Suniamaru RF	110.00		110.00	
8	Bhuban	Budhibile	0136/04-044	16.11.19	Jiral	Budhibile	Bhuban	Ranjagarh RF	200.00		200.00	
9	Bhuban	Kesharpur	0012/04-004	16.12.98	Bhuban	Balibo	Bhuban	Balibo RF	180.00		180.00	
10	Bhuban	Balipada	0080/04-020	20.03.99	Jiral	Dighi	Bhuban	Bhairpur RF	200.00		200.00	
11	Bhuban	Tangarpada	0120/04-039	08.10.99	Bhuban	Mathakargola	Bhuban	Tangarpada KF		10.00	10.00	
12	Bhuban	Aghiragoda	0169/04-055	19.06.02	Bhuban	Baruan		Sunajhari RF	144.00	10.50	154.00	
13	Bhuban	Bhairpur	289/08-002	27.06.08	Jiral	Guneibill	Bhuban	Sunajhari RF & Bhairpur RF	200.00		200.00	

Sl. No	Name of the Range	Name of the VSS/EDC	VSS Code No	Year/Month of Regd. of VSS	Name of the Section	Name of the GP	Name of the CD Block	Name of the RF/KF/VF	Forest Area assigned in Ha.		
									RF	PF/VF/ Other	Total
1	Mahabirod	Dhalpur	0100/05-030	31.03.99	Dadaraghati	Basulei	Parjang	Talcher Border RF-B	140.00		140.00
2	Mahabirod	Sundarmundi	0148/05-044	31.12.99	Dadaraghati	Ghagaramunda	Kankadahad	Anantapur RF	100.00		100.00
3	Mahabirod	Basulei	178/05-052	10.10.01	Dadaraghati	Basulei	Parjang	Talcher Border RF-B	200.00		200.00
4	Mahabirod	Kadapada	0099/05-029	31.03.99	Dadaraghati	-do-	-do-	Talcher Border RF	126.00		126.00
5	Mahabirod	Kulei	193/05-053	21.07.03	Dadaraghati	Gengutia	-do-	Kulei KF		12.00	12.00
6	Mahabirod	Taradanali	0044/05-014	25.01.99	Mahabirod	Jhilli	Kankadahad	Dolia RF-B	200.00		200.00
7	Mahabirod	Tipeijharan	0139/05-041	26.11.99	Mahabirod	Chandapur	Parjang	Tipeijharan KF		171.19	171.19
8	Mahabirod	Madarangamunda	0134/05-038	16.11.99	Mahabirod	Kuturia	Kankadahad	Madarangamunda KF		84.20	84.20
9	Mahabirod	Gurujanguli	171/05-050	18.06.02	Pangatira	Dasipur	-do-	Girigobardhan KF		54.98	54.98
10	Mahabirod	Padapatia	0017/05-005	23.12.98	Mahabirod	Kuturia	Kankadahad	Anantapur RF	160.00		160.00
11	Mahabirod	Jhilli	0015/05-003	07.12.98	Mahabirod	Jhilli	-do-	Anantapur RF-B	200.00		200.00
12	Mahabirod	Pitiri	0010/05-001	21.10.98	Dihadol	Pitiri	Parjang	Kahalpal B		74.00	74.00
13	Mahabirod	Kalada	0152/05-046	21.01.2000	Dihadol	Kalada	Parjang	Kalda KF		104.00	104.00
14	Mahabirod	Khalpal	0043/05-013	25.01.99	Dihadol	Pitiri	-do-	Khalpal RF-B	160.00		160.00
15	Mahabirod	Patrapada	0045/05-	25.01.99	Dihadol	Patrapada	-do-	Barabanka-B	180.00		180.00

			015								
16	Mahabirod	Anlakata	0124/05-034	15.10.99	Dihadol	Kumusi	-do-	Barabanka-B	120.00		120.00
17	Mahabirod	Kumusi	0029/05-010	19.01.99	Dihadol	Kumusi	-do-	Barabanka-B	175.00		175.00
18	Mahabirod	Nuakualo	0138/05-040	22.11.99	Dihadol	Kual	-do-	Kualo KF		12.90	12.90
20	Mahabirod	Manikamara	282/07-02	07.08.07	Mahabiroad	Manikamara	-do-	Talcher Border RF	200.00		200.00
21	Mahabirod	Jaka	301/07-03	08.09.11	Dadaraghati	-do-	-do-	Jaka Gramya Jungle		75.00	75.00
22	Mahabirod	Majhika	312/07-004	07.10.13	Dadaraghati	Ghagaramunda	Kankadahad	Revenue Forest, Jungle-II mela		110.96	110.96
23	Mahabirod	Talasahi (Mahabirod)	318/07-005	03.12.13	Mahabirod	Mahabirod	Kankadahad	Revenue Forest, Jungle-II mela		17.14	17.14
24	Mahabirod	Uparasahi (Mahabirod)	319/07-006	03.12.13	Mahabirod	Mahabirod	Kankadahad	Revenue Forest, Gramya Jungle		104.61	104.61
25	Mahabirod	Kuturia	323/07-007	02.05.14	Mahabirod	Kuturia	Kankadahad	Anantapur RF	149.00		149.00
26	Mahabirod	Patia Sahi, Jarada	324/07-008	05.05.14	Mahabirod	Gadapalasuni	Kankadahad	Jarada VF		50.00	50.00
27	Mahabirod	Taradanali Nuasahi	325/07-009	05.05.14	Mahabirod	Jhilli	Kankadahad	Dolia RF	200.00		200.00

ANNEXURE-XIV

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Dhenkanal

Name of R.F. : Godabolua Plots taken - 15 Area- 1500 Sq. m, Period – March,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0		0	0	0		Deficient
2	Anchu	0	2	0	0	0	6	0.4	Deficient
3	Asan	0	9	19	0	0	103	6.86	Deficient
4	Bahada	0	3	1	0	0	13	0.86	Deficient
5	Bela	0	15	1	0	0	49	3.26	Deficient
6	Bentha	0	4	1	0	0	16	1.06	Deficient
7	Bhalia	0	4	1	0	0	16	1.06	Deficient
8	Bheru	0	4	1	0	0	16	1.06	Deficient
9	Bija	0			0	0			Deficient
10	Chara	0	4	15	0	0	72	4.8	Deficient
11	Chauli	0	2	2	0	0			Deficient
12	Dhaura	0	15	4	0	0	61	4.06	Deficient
13	Giringa	0	3	1	0	0	13	0.86	Deficient
14	Gohira	0			0	0			Deficient
15	Halda	0	5		0	0	15	1	Deficient
16	Jamun	0	12		0	0	36	2.4	Deficient
17	Kangada	0	3		0	0	9	0.6	Deficient
18	Karada	0	19		0	0	57	3.8	Deficient
19	Kasi	0			0	0			Deficient
20	Kendu	0	56	32	0	0	296	19.73	Fair
21	Khaira	0			0	0			Deficient
22	Khakada	0			0	0			Deficient
23	Kuchila	0		1	0	0	4	0.26	Deficient
24	Kumbhi	0	4		0	0	12	0.8	Deficient
25	Kurein	0	82	5	0	0	266	17.73	Fair
26	Kurum	0	1		0	0	3	0.39	Deficient
27	Kusum	0	1	5	0	0	23	1.53	Deficient
28	Mahula	0	6	5	0	0	38	2.53	Deficient
29	Mai	0			0	0			Deficient
30	Mundi	0	4		0	0	12	0.8	Deficient
31	Neem	0	15	3	0	0	57	3.8	Deficient
32	Rohini	0			0	0			Deficient
33	Sahada	0			0	0			Deficient
34	Sal	0	48	33	0	0	276	18.4	Fair
35	Sidha	0			0	0			Deficient
36	Sunari	0			0	0			Deficient
37	Telkuruma	0	5	8	0	0	47	3.13	Deficient
38	Tentala	0			0	0			
39	Misc.	0	0	0	0	0	0	0	

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Dhenkanal

Name of R.F. : Patapuri Plots taken - 10 Area- 1000 Sq. m, Period - March, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan		9	11	2	19	126	12.6	Fair
4	Bahada	0	5	3			27	2.7	Deficient
5	Bela	0	18	8	0	0	86	8.6	Deficient
6	Bentha	0	4	1	0	0	16	1.6	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	4	2		0	20	2	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	10	6			54	5.4	Deficient
17	Kangada	0	9	4		0	43	4.3	Deficient
18	Karada	0	9	3	1	0	40	4	Deficient
19	Kasi	0	0	0	0	0			Deficient
20	Kendu	0	27	5	0	0	101	10.1	Fair
21	Khaira	0		0	0	0			Deficient
22	Khakada	0	19	8	3	0	92	9.2	Deficient
23	Kuchila	0	5	1	0	0	16	1.6	Deficient
24	Kumbhi	0			0	0			Deficient
25	Kurein	0	23	5	0	0	89	8.9	Deficient
26	Kurum	0	2	2	0	0	14	1.4	Deficient
27	Kusum	0		0	0	0			Deficient
28	Mahula	0		0	0	0			Deficient
29	Mai	0	1	0	0	0	3	0.3	Deficient
30	Mundi	0		0	0	0			Deficient
31	Neem	0	14	4	0	0	50	5	Deficient
32	Rohini	0	0	0	0	0			Deficient
33	Sahada	0	5	2	0	0	23	2.3	Deficient
34	Sal	0	3	1	1	0	18	1.8	Deficient
35	Sidha	0	2	1	2	0	23	2.3	Deficient
36	Sunari	0	2	4	1	0	27	2.7	Deficient
37	Telkuruma	0	1			0	3	0.3	Deficient
38	Tentala	0		1	2	0	14	1.4	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Dhenkanal									
Name of R.F. : Gantabaja Plot No. plots taken - 10 Area- 1000 Sq. M Period – March, 2013									
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0		0	0	0		Deficient
2	Anchu	0	2	0	0	0	6	0.6	Deficient
3	Asan	0	3	0	0	0	9	0.9	Deficient
4	Bahada	0	16	11	0	0	92	9.2	Deficient
5	Bela	0	28	1	0	0	88	8.8	Deficient
6	Benta	0	2	1	0	0	10	1	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	1	0	0	0	3	0.3	Deficient
9	Bija	0	14	8	0	0	74	7.4	Deficient
10	Chara	0	5	2	0	0	23	2.3	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	18	0	0	0	54	5.4	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	11	7	0	0	61	6.1	Deficient
17	Kangada	0	6	0	0	0	18	1.8	Deficient
18	Karada	0	1	2	0	0	11	1.11	Deficient
19	Kasi	0	9	2	0	0	35	3.5	Deficient
20	Kendu	0	9	7	0	0	55	5.5	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	0	0	0	0	0		Deficient
23	Kuchila	0	1	0	0	0	3	0.3	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	20	4	0	0	68	6.8	Deficient
26	Kurum	0	2	0	0	0	6	0.6	Deficient
27	Kusum	0	1	0	0	0	3	0.3	Deficient
28	Mahula	0	13	0	0	0	39	3.9	Deficient
29	Mai	0	8	0	0	0	24	2.4	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	7	1	0	0	25	2.5	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	38	15	5	0	199	19.9	Fair
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	15	0	0	0	45	4.5	Deficient
37	Sunaragodi	0	0	0	0	0	0		Deficient
38	Tentala	0	21	0	0	0	63	6.3	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Dhenkanal									
Name of R.F. : Charkhola Plots taken - 10 Area- 1000 Sq. M , Period - March, 2013									
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0		0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	3	2	1	0	22	2.2	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	18	7	2	0	93	9.2	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	1	0	0	0	3	0.3	Deficient
8	Bheru	0	5	0	0	0	15	1.5	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	6	1	0	0	22	2.2	Deficient
11	Chauli	0	25	6	0	0	99	9.9	Deficient
12	Dhaura	0	6	0	0	0	18	1.8	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	2	1	0	0	10	1	Deficient
16	Jamun	0	4	1	1	0	21	2.1	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	2	5	0	0	26	2.6	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	17	6	0	0	75	7.5	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	2	6	0	0	30	3	Deficient
23	Kuchila	0	11	3	0	0	45	4.5	Deficient
24	Kumbhi	0	3	7	0	0	37	3.7	Deficient
25	Kurein	0	37	1	0	0	115	11.5	Fair
26	Kurum	0	0	2	0	0	8	0.8	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	1	0	1	0	8	0.8	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	15	1	1	0	54	5.4	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	2	1	1	0	18	1.8	Deficient
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	15	0	0	0	45	4.5	Deficient
37	Sunaragodi	0	0	0	0	0	0		Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Dhenkanal									
Name of R.F. : Saptasajya			**Plots taken - 20**		**Area- 2000 Sq. M , Period - March, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0		0	0	0		Deficient
2	Anchu	0	5	0	0	0	15	0.75	Deficient
3	Asan	0	14	2	2	0	60	3	Deficient
4	Bahada	0	10	1	0	0	34	1.7	Deficient
5	Bela	0	4	1	0	0	16	0.8	Deficient
6	Benta	0	67	1	0	0	205	10.25	Fair
7	Bhalia	0	5	2	0	0	23	1.15	Deficient
8	Bheru	0	68	4	2	0	230	11.5	Fair
9	Bija	0	3	0	0	0	9	0.45	Deficient
10	Chara	0	3	0	0	0	9	0.45	Deficient
11	Chauli	0	10	0	0	0	30	1.5	Deficient
12	Dhaura	0	3	0	0	0	9	0.45	Deficient
13	Giringa	0	1	0	0	0	3	0.15	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	2	0	0	0	6	0.3	Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	40	0	0	0	120	6	Deficient
18	Karada	0	0	0	0	0	0		Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	4	0	0	0	12	0.6	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	38	5	2	0	144	7.2	Deficient
23	Kuchila	0	4	0	0	0	12	0.6	Deficient
24	Kumbhi	0	2	1	0	0	10	0.5	Deficient
25	Kurein	0	19	2	0	0	46	2.3	Deficient
26	Kurum	0	9	4	0	0	43	2.15	Deficient
27	Kusum	0	4	0	0	0	12	0.6	Deficient
28	Mahula	0	21	3	3	0	90	4.5	Deficient
29	Mai	0	4	0	0	0	12	0.6	Deficient
30	Mundi	0	4	0	0	0	12	0.6	Deficient
31	Neem	0	9	2	0	0	35	1.75	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	4	0	0	0	12	0.6	Deficient
34	Sal	0	46	62	49	0	631	31.55	Good
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	7	1	3	0	40	2.0	Deficient
37	Telkuruma	0	3	0	0	0	9	0.45	Deficient
38	Tentala	0	26	0	0	0	78	3.9	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Dhenkanal

Name of R.F. : Mayuri Plots taken - 10 Area- 1000 Sq. M, Period - March, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0		0	0	0		Deficient
2	Anchu	0	18	11	0	0	98	9.8	Deficient
3	Asan	0	3	3	0	0	21	2.1	Deficient
4	Bahada	0	0	0	0	0	0	1.7	Deficient
5	Bela	0	33	21	0	0	183	18.3	Fair
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	18	0	0	0	54	5.4	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	0	0	0	0	0		Deficient
11	Chauli	0	20	18	0	0	132	13.2	Fair
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	25	0	0	0	75	7.5	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	15	14	1	0	106	10.6	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	24	15	0	0	132	13.2	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	2	3	3	0	33	3.3	Deficient
23	Kuchila	0	15	12	0	0	93	9.3	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	32	16	14	0	230	23	Moderate
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	0	0	1	1	9	0.9	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	19	14	16	0	193	19.3	fair
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	0	0	0	0	0		Good
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	3	0	0	0	9	0.9	Deficient
37	Telkuruma	0	0	0	0	0	0		Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Aswakhola Plots taken - 10 Area- 1000 Sq.M , Period - March, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	2	0	0	0	6	0.6	Deficient
3	Asan	0	3	0	7	0	44	4.4	Deficient
4	Bahada	0	1	0	0	0	3	0.3	Deficient
5	Bela	0	62	20	1	4	291	29.1	Moderate
6	Benta	0	6	0	0	1	23	2.3	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	1	0	0	1	8	0.8	Fair
9	Bija	0	0	0	0	1	5	0.5	Deficient
10	Chara	0	0	0	0	0	0		Deficient
11	Chauli	0	6	1	0	0	23	2.3	Deficient
12	Dhaura	0	4	1	1	0	21	2.1	Deficient
13	Giringa	0	9	0	0	0	27	2.7	Deficient
14	Gohira	0	0	0	1	5	30	3	Deficient
15	Halda	0	14	3	1	1	64	6.4	Deficient
16	Jamun	0	1	0	0	0	3	0.3	Deficient
17	Kangada	0	13	0	0	1	44	4.4	Deficient
18	Karada	0	13	4	0	0	51	5.1	Deficient
19	Kasi	0	0	0	0	2	10	1	Deficient
20	Kendu	0	23	0	1	0	74	7.4	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	22	1	0	1	75	7.5	Deficient
23	Kuchila	0	4	5	5	0	57	5.7	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	66	8	0	0	230	23	Moderate
26	Kurum	0	0	0	0	4	20	2	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	0	0	0	0	0		Deficient
29	Mai	0	0	0	0	1	5	0.5	Deficient
30	Mundi	0	0	0	1	2	14	1.4	Deficient
31	Neem	0	20	1	0	0	64	6.4	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	20	4	0	0	76	7.6	Deficient
34	Sal	0	3	2	2	0	27	2.7	Good
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	1	1	1	0	12	1.2	Deficient
37	Telkuruma	0	14	0	0	0	42	4.2	Deficient
38	Tentala	0	1	0	0	0	3	0.3	Deficient
39	Misc.								Deficient

REGENERATION SURVEY. Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Baliposi Plots taken - 6 Area- 600 Sq. M , Period - June, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	2	2	1	0	22	3.66	Deficient
3	Asan	0	0	1	0	0	4	0.66	Deficient
4	Bahada	0	0	0	0	3	15	2.5	Deficient
5	Bela	0	11	16	13	0	162	27	Moderate
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	3	0	15	2.5	Deficient
9	Bija	0	0	2	1	1	18	3	Deficient
10	Chara	0	1	0	0	0	3	0.5	Deficient
11	Chauli	0	1	2	0	0	11	1.8	Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	1	5	30	3	Deficient
15	Halda	0	0	0	0	2	10	1.66	Deficient
16	Jamun	0	6	3	0	0	30	5	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	15	3	5	0	82	13.66	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	26	7	3	0	121	20.16	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	12	4	0	0	52	8.66	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	1	0	0	0	3	0.5	Deficient
25	Kurein	0	53	15	0	0	219	36.5	Good
26	Kurum	0	1	1	1	0	12	2	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	2	2	1	0	19	3.16	Deficient
29	Mai	0	0	0	0	1	5	0.83	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	9	6	1	0	56	9.33	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	6	0	1	0	23	3.83	Deficient
34	Sal	0	0	0	2	0	0		Good
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	5	1	0	0	19	3.2	Deficient
37	Telkuruma	0	5	0	0	0	15	2.5	Deficient
38	Tentala	0	3	2	0	0	17	2.83	Deficient
39	Misc	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY. Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Bega Plots taken - 5 Area- 500 Sq.M , Period - June, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	1	2	0	0	11	2.2	Deficient
4	Bahada	0	3	0	1	0	14	5.8	Deficient
5	Bela	0	1	4	0	0	19	3.8	Deficient
6	Benta	0	0	1	0	0	4	0.8	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	2	0	8	1.6	Deficient
9	Bija	0	0	2	0	0	0		Deficient
10	Chara	0	5	8	0	0	47	9.4	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	1	0	0	4		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	2	3	0	0	18	3.6	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	7	2	0	0	29	5.8	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	10	4	3	0	46	9.2	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	11	5	0	0	53	10.6	Fair
23	Kuchila	0	4	1	0	0	16	3.2	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	47	2	0	0	149	29.8	Moderate
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	0	0	0	0	0		Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	6	2	0	0	26	5.2	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	1	0	0	4	0.8	Deficient
34	Sal	0	0	0	0	0	0		Deficient
35	Sidha	0	4	2	0	0	20	4	Deficient
36	Sunari	0	0	0	0	0	0		Deficient
37	Telkuruma	0	1	0	0	0	3	0.6	Deficient
38	Tentala	0	3	2	0	0	17	2.83	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY. Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Gondia Plots taken - 5 Area- 500 Sq. m , Period - March,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	1	0	0	0	3	0.3	Deficient
3	Asan	0	2	0	0	1	11	1.1	Deficient
4	Bahada	0	0	0	0	2	10	1	Deficient
5	Bela	0	35	1	0	0	109	10.9	Fair
6	Benta	0	12	0	0	0	36	3.6	Deficient
7	Bhalia	0	0	1	0	1	9	0.9	Deficient
8	Bheru	0	4	0	0	0	12	1.2	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	10	1	0	1	39	3.9	Deficient
11	Chauli	0	2	0	0	0	6	0.6	Deficient
12	Dhaura	0	7	0	0	0	21	2.1	Deficient
13	Giringa	0	56	0	0	1	173	17.3	Fair
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	1	5	0.5	Deficient
16	Jamun	0	47	2	0	2	159	15.9	Fair
17	Kangada	0	0	2	0	2	18	1.8	Deficient
18	Karada	0	68	4	0	0	356	35.6	Good
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	111	6	0	0	357	35.7	Good
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	62	6	0	0	210	21	Moderate
23	Kuchila	0	0	1	0	0	4	0.4	Deficient
24	Kumbhi	0	4	4	1	2	43	4.3	Deficient
25	Kurein	0	143	4	0	0	445	44.5	Excellent
26	Kurum	0	1	0	0	0	3	0.3	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	24	15	1	4	157	15.7	Fair
29	Mai	0	0	0	0	1	5	0.5	Deficient
30	Mundi	0	1	0	0	1	8	0.8	Deficient
31	Neem	0	2	0	0	0	6	0.6	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	8	4	0	0	40	4	Deficient
34	Sal	0	149	15	1	21	617	61.7	Excellent
35	Sidha	0	0	5	0	1	25	2.5	Deficient
36	Sunari	0	3	4	0	0	28	2.8	Deficient
37	Telkuruma	0	15	0	0	0	45	4.5	Deficient
38	Tentala	0	8	0	0	2	34	3.4	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

ABSTRACT OF REGENERATION. Size of plot- 10mX10m

Name of the Range:Sadangi

Name of R.F. : Khankira **Plots taken - 10** **Area- 1000 Sq. M , Period - March, 2013**

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	1	4	0	0	19	1.9	Deficient
2	Anchu	0	1	1	0	0	7	0.7	Deficient
3	Asan	0	12	18	1	113	11.3	11.3	Deficient
4	Bahada	0	3	6	1	2	38	3.8	Deficient
5	Bela	0	24	19	0	0	148	14.8	Fair
6	Benta	0	7	13	0	0	73	7.3	Deficient
7	Bhalia	0	0	1	0	1	9	0.9	Deficient
8	Bheru	0	10	7	0	0	58	5.8	Deficient
9	Bija	0	2	2	0	0	14	1.4	Deficient
10	Chara	0	26	32	4	0	226	22.6	Moderate
11	Chauli	0	2	0	0	0	6	0.6	Deficient
12	Dhaura	0	1	1	0	0	7	0.7	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	1	2	0	0	11	1.1	Deficient
16	Jamun	0	10	10	0	0	70	7	Deficient
17	Kangada	0	1	1	0	2	7	0.7	Deficient
18	Karada	0	28	13	2	0	146	14.6	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	35	17	1	0	178	17.8	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	11	14	0	0	89	8.9	Deficient
23	Kuchila	0	1	1	0	0	7	0.7	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	49	17	0	0	215	21.5	Moderate
26	Kurum	0	4	6	0	0	36	3.6	Deficient
27	Kusum	0	2	2	0	0	14	1.4	Deficient
28	Mahula	0	16	14	2	0	114	11.4	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	21	17	0	0	131	13.1	Fair
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	2	0	0	0	6	0.6	Deficient
34	Sal	0	32	43	2	0	278	27.8	Moderate
35	Sidha	0	3	3	0	0	21	2.1	Deficient
36	Sunari	0	10	8	0	0	62	6.2	Deficient
37	Telkuruma	0	19	4	0	0	73	7.3	Deficient
38	Tentala	0	1	1	0	0	7	0.7	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY. Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Lahada 'A' **Plots taken - 12** **Area- 1200 Sq. M Period - May,2013**

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	1	0	0	0	3	0.25	Deficient
2	Anchu	0	1	0	0	0	3	0.25	Deficient
3	Asan	0	10	27	0	0	138	11.5	Deficient
4	Bahada	0	4	5	1	0	37	3.2	Deficient
5	Bela	0	106	10	1	0	363	30.5	Good
6	Benta	0	2	0	0	0	6	0.5	Deficient
7	Bhalia	0	2	0	0	0	6	0.5	Deficient
8	Bheru	0	5	2	0	0	23	1.61	Deficient
9	Bija	0	0	1	0	0	4	0.33	Deficient
10	Chara	0	14	12	0	0	90	7.5	Deficient
11	Chauli	0	1	1	0	0	7	0.6	Deficient
12	Dhaura	0	4	1	0	0	16	1.33	Deficient
13	Giringa	0	50	0	0	0	150	12.5	Fair
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	1	1	6	0	37	3.08	Deficient
16	Jamun	0	14	7	2	0	80	6.66	Deficient
17	Kangada	0	1	0	0	0	3	0.25	Deficient
18	Karada	0	18	6	0	0	78	6.5	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	130	5	1	0	410	34.16	Good
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	22	8	4	0	118	9.83	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	6	1	0	0	22	1.83	Deficient
25	Kurein	0	257	56	6	0	1025	85.41	Excellent
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	16	2	0	0	58	4.83	Deficient
29	Mai	0	2	0	0	0	6	0.5	Deficient
30	Mundi	0	1	0	0	0	3	0.25	Deficient
31	Neem	0	3	0	0	0	9	0.75	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	10	0	0	0	30	2.5	Deficient
34	Sal	0	167	231	6	0	1459	121.58	Excellent
35	Sidha	0	3	6	0	0	33	2.75	Deficient
36	Sunari	0	2	1	0	0	10	0.8	Deficient
37	Telkuruma	0	22	0	0	0	66	5.5	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Lahada B plots taken - 12 Area- 1200 Sq. M , Period - MARCH, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	13	1	5	0	68	5.66	Deficient
2	Anchu	0	0	2	0	0	8	0.66	Deficient
3	Asan	0	14	6	0	0	86	7.16	Deficient
4	Bahada	0	2	11	5	0	75	6.25	Deficient
5	Bela	0	245	18	2	2	827	68.9	Excellent
6	Benta	0	48	0	0	0	144	12	Fair
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	10	2	0	0	38	3.16	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	0	15	8	1	105	8.75	Deficient
11	Chauli	0	0	2	0	0	8	0.7	Deficient
12	Dhaura	0	0	7	4	0	48	4	Deficient
13	Giringa	0	0	0	0	0	0		Fair
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	7	7	0	63	5.25	Deficient
17	Kangada	0	0	5	6	2	60	5	Deficient
18	Karada	0	190	51	0	0	774	64.5	Excellent
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	328	43	0	0	1156	96.33	Excellent
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	6	19	0	1	99	8.25	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	6	1	0	0	22	1.83	Deficient
25	Kurein	0	387	70	6	0	1441	120	Excellent
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	40	15	8	0	220	18.33	Fair
29	Mai	0	2	0	0	0	6	0.5	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	48	1	0	0	148	12.33	Fair
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	15	4	0	0	61	5.08	Deficient
34	Sal	0	210	77	22	9	1093	91	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	0	1	0	0	4	0.3	Deficient
37	Telkuruma	0	51	1	0	0	157	13.08	Fair
38	Tentala	0	13	0	0	0	39	3.25	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY. Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Nischinta **Plots taken - 10 Area - 1000 Sq. M , Period - June, 2013**

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	0	0	0	0		Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	0	0	0	0	0		Excellent
6	Benta	0	0	0	0	0	0		Fair
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	0	0	0	0	0		Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Fair
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	0	0	0	0	0		Excellent
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	8	0	0	0	24	2.4	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	0	0	0	0	0		Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	27	0	6	0	81	8.1	Deficient
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	0	0	0	0	0		Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	8	0	0	0	24	2.4	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	10	0	0	0	30	3	Deficient
34	Sal	0	0	0	0	0	0		Deficient
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	7	0	0	0	21	2.1	Deficient
37	Telkuruma	0	0	0	0	0	0		Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Sadangi									
Name of R.F. : Raigoda				**Plots taken - 11**	**Area - 1100 Sq. M , Period – May,2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	1	0	0	4	0.36	Deficient
2	Anchu	0	1	0	0	0	3	0.27	Deficient
3	Asan	0	0	2	0	0	8	0.72	Deficient
4	Bahada	0	0	2	0	0	6	0.54	Deficient
5	Bela	0	177	11	2	0	585	58.18	Excellent
6	Benta	0	1	0	0	0	3	0.27	Deficient
7	Bhalia	0	3	0	0	0	9	0.81	Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	1	1	0	1	12	1.09	Deficient
10	Chara	0	1	10	4	2	73	6.63	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	6	2	2	44	4	Deficient
13	Giringa	0	72	0	3	0	271	21	Moderate
14	Gohira	0	20	0	0	0	60	5.45	Deficient
15	Halda	0	8	0	0	0	24	2.18	Deficient
16	Jamun	0	4	0	0	2	22	2	Deficient
17	Kangada	0	30	11	0	2	144	13.09	Fair
18	Karada	0	130	2	0	0	398	36.18	Good
19	Kasi	0	0	0	0	1	5	0.45	Deficient
20	Kendu	0	125	13	0	0	427	38.81	Good
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	46	7	0	0	166	15.09	Fair
23	Kuchila	0	2	0	0	0	6	0.54	Deficient
24	Kumbhi	0	1	1	0	1	12	1.09	Deficient
25	Kurein	0	58	20	0	0	254	23.09	Moderate
26	Kurum	0	1	0	0	1	8	0.72	Deficient
27	Kusum	0	0	5	1	0	25	2.27	Deficient
28	Mahula	0	40	7	5	0	173	15.72	Fair
29	Mai	0	51	0	2	4	183	16.63	Fair
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	70	3	2	0	232	21.09	Moderate
32	Rohini	0	0	2	0	0	8	0.72	Deficient
33	Sahada	0	20	0	0	0	60	5.45	Deficient
34	Sal	0	68	16	12	0	328	29.81	Moderate
35	Sidha	0	8	1	0	0	28	2.54	Deficient
36	Sunari	0	3	2	0	2	27	2.5	Deficient
37	Telkuruma	0	85	5	0	0	275	25	Moderate
38	Tentala	0	110	0	0	0	330	30	Moderate
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY. Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Raitola Plots taken - 10 Area- 1000 Sq. M , Period – June , 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	1	3	0	0	15	0.5	Deficient
2	Anchu	0	1	2	1	0	16	1.6	Deficient
3	Asan	0	8	6	10	1	148	14.8	Fair
4	Bahada	0	5	3	5	0	52	5.2	Deficient
5	Bela	0	50	5	7	0	270	27	Moderate
6	Benta	0	1	4	0	0	19	1.9	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	2	5	1	0	31	3.1	Deficient
9	Bija	0	2	3	0	0	18	1.8	Deficient
10	Chara	0	8	4	8	0	80	8	Deficient
11	Chauli	0	2	3	0	0	18	1.8	Deficient
12	Dhaura	0	2	2	1	0	19	1.9	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	2	1	0	0	10	1	Deficient
16	Jamun	0	6	3	5	0	55	5.5	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	65	15	6	0	285	28.5	Moderate
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	61	7	2	0	221	22.1	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	23	9	2	0	115	11.5	Fair
23	Kuchila	0	0	0	1	0	5	0.5	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	96	16	3	0	367	36.7	Good
26	Kurum	0	11	4	0	0	49	4.9	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	12	7	29	0	209	20.9	Moderate
29	Mai	0	0	0	0	1	5	0.5	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	13	8	1	0	76	7.6	Deficient
32	Rohini	0	34	0	0	0	102	10.2	Fair
33	Sahada	0	1	0	0	0	3	0.3	Deficient
34	Sal	0	68	12	61	5	582	58.2	Excellent
35	Sidha	0	1	0	4	0	23	2.3	Deficient
36	Sunari	0	9	5	3	0	62	6.2	Deficient
37	Telkuruma	0	16	4	0	0	64	6.4	Deficient
38	Tentala	0	0	0	0	0	0	0	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Rupabalia plots taken - 10 Area- 1000 Sq. M , Period - June,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	2	3	0	0	18	1.8	Deficient
2	Anchu	0	4	2	0	0	20	2	Deficient
3	Asan	0	9	4	0	0	43	4.3	Deficient
4	Bahada	0	5	6	0	0	39	3.9	Deficient
5	Bela	0	22	10	3	0	121	12.1	Fair
6	Benta	0	2	0	0	0	6	0.6	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	5	3	2	0	37	3.7	Deficient
9	Bija	0	2	1	0	0	10	1	Deficient
10	Chara	0	22	5	18	0	126	12.6	Fair
11	Chauli	0	1	1	0	0	7	0.7	Deficient
12	Dhaura	0	12	1	6	0	64	6.4	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	2	1	0	0	10	1	Deficient
16	Jamun	0	12	5	1	0	61	6.1	Deficient
17	Kangada	0	0	2	1	0	13	1.3	Deficient
18	Karada	0	18	35	2	0	204	20.4	Moderate
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	55	12	8	0	253	25.3	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	14	7	1	0	75	7.5	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	1	1	1	0	12	1.2	Deficient
25	Kurein	0	86	9	0	0	294	29.4	Moderate
26	Kurum	0	3	1	2	0	23	2.3	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	9	8	10	0	69	6.9	Deficient
29	Mai	0	1	3	2	0	25	2.5	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	19	1	4	0	81	8.1	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	2	0	0	0	6	0.6	Deficient
34	Sal	0	37	8	28	4	303	30.3	Moderate
35	Sidha	0	3	8	0	0	41	4.1	Deficient
36	Sunari	0	4	1	0	0	16	1.6	Deficient
37	Telkuruma	0	19	5	0	0	77	7.7	Deficient
38	Tentala	0	0	0	0	0	0	0	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY. Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Sadangi A **Plots taken - 10 Area- 1000 Sq. M , Period - March ,2013**

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	1	0	1	0	8	0.8	Deficient
4	Bahada	0	1	0	0	0	3	0.3	Deficient
5	Bela	0	10	0	22	0	140	14	Fair
6	Benta	0	1	0	0	0	3	0.3	Deficient
7	Bhalia	0	1	0	0	0	3	0.3	Deficient
8	Bheru	0	2	0	0	0	6	0.6	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	4	3	3	0	39	3.9	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	6	0	0		Deficient
13	Giringa	0	19	5	0	0	77	7.7	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	5	0	0	0	15	1.5	Deficient
17	Kangada	0	1	2	0	0	11	1	Deficient
18	Karada	0	48	2	0	0	152	15.2	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	24	14	0	0	128	12.8	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	1	0	0	0	3	0.3	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	2	0	0	0	6	0.6	Deficient
25	Kurein	0	28	0	0	0	84	8.4	Deficient
26	Kurum	0	2	0	0	0	6	0.6	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	4	2	0	0	20	2	Deficient
29	Mai	0	1	3	0	0	15	1.5	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	33	7	0	0	127	12.7	Fair
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	1	0	0	0	3	0.3	Deficient
34	Sal	0	18	36	5	1	278	27.8	Moderate
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	2	0	0	0	6	0.6	Deficient
37	Telkuruma	0	8	0	0	0	24	2.4	Deficient
38	Tentala	0	0	0	0	0	0	0	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Sadangi

Name of R.F. : Sadangi B **Plots taken -5 Area- 500 Sq. M , Period - March, 2013**

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	5	0	6	50	10	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	26	0	0	0	78	15.6	Fair
6	Benta	0	6	0	0	0	18	3.6	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	3	0	0	0	9	1.8	Deficient
10	Chara	0	0	4	0	0	16	3.2	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	6	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	38	0	0	0	114	22.8	Moderate
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	112	5	0	0	356	71.2	Excellent
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	3	0	0	0	9	1.8	Deficient
23	Kuchila	0	1	0	0	0	3	0.6	Deficient
24	Kumbhi	0	2	0	0	0	6	1.2	Deficient
25	Kurein	0	36	0	0	0	108	21.6	Moderate
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	1	0	0	0	3	0.6	Deficient
28	Mahula	0	34	0	0	0	102	20.4	Moderate
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	1	0	0	0	3	0.6	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	67	0	0	23	316	63.2	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	3	2	0	0	17	3.4	Deficient
37	Telkuruma	0	44	0	0	0	132	26.4	Moderate
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Sadangi									
Name of R.F. : Ramai			**Plots taken - 15**		**Area- 1500 Sq. M , Period - March, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	1	0	0	1	8	0.53	Deficient
3	Asan	0	1	0	0	1	8	0.53	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	101	8	0	0	335	22.33	Moderate
6	Benta	0	12	1	0	2	50	3.33	Deficient
7	Bhalia	0	1	0	0	0	3	0.2	Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	8	7	0	0	52	3.46	Deficient
10	Chara	0	4	2	0	0	20	1.33	Deficient
11	Chauli	0	1	0	0	0	3	0.2	Deficient
12	Dhaura	0	2	1	0	0	10	0.66	Deficient
13	Giringa	0	126	0	0	0	378	25.2	Moderate
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	2	14	0	0	62	4.13	Deficient
16	Jamun	0	9	0	0	0	27	1.8	Deficient
17	Kangada	0	23	2	0	5	102	6.8	Deficient
18	Karada	0	25	53	0	0	287	19.13	Fair
19	Kasi	0	0	1	0	0	4	0.26	Deficient
20	Kendu	0	80	1	0	2	254	16.93	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	54	7	0	0	190	12.66	Fair
23	Kuchila	0	2	0	0	0	6	0.4	Deficient
24	Kumbhi	0	28	0	0	6	114	7.6	Deficient
25	Kurein	0	120	2	0	0	368	24.53	Moderate
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	9	7	0	0	55	3.66	Deficient
29	Mai	0	1	0	0	0	3	0.2	Deficient
30	Mundi	0	5	0	0	0	15	1	Deficient
31	Neem	0	7	2	0	0	29	1.93	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	20	0	0	3	75	5	Deficient
34	Sal	0	26	25	8	8	258	17.2	Fair
35	Sidha	0	4	11	0	0	56	3.73	Deficient
36	Sunari	0	9	3	0	1	44	2.9	Deficient
37	Telkuruma	0	76	0	0	0	228	15.2	Fair
38	Tentala	0	3	0	0	0	9	0.6	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Kamakhya Nagara (East)

Name of R.F. :Birasal plots taken- 5 Area- 500 Sq. M , Period – February, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	2	4	1	33	6.6	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	0	0	0	0	0		Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	1	0	0	4	0.8	Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	0	15	1	0	65	13.00	Fair
11	Chauli	0	0	6	0	0	24	4.6	Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	5	0	0	0	15	3	Deficient
18	Karada	0	14	0	0	0	42	8.4	Deficient
19	Karanja	0	0	0	0	0	0		Deficient
20	Kendu	0	33	1	0	0	103	20.6	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	15	0	0	0	45	9	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	58	0	0	0	174	34.8	Good
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	1	0	0	0	3	0.6	Deficient
28	Mahula	0	23	5	0	0	89	17.8	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	50	25	21	3	370	74	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	1	0	0	0	4	0.8	Deficient
37	Telkuruma	0	0	0	0	0	0		Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Kamakhya Nagara (East)

Name of R.F. :Maulabhanja Plots taken-15 Area- 1500 Sq. M , Period - February ,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	7	13	3	0	86	5.73	Deficient
4	Bahada	0	0	1	0	0	3	0.2	Deficient

5	Bela	0	12	1	0	0	40	2.66	Deficient
6	Benta	0	1	0	0	0	3	0.2	Deficient
7	Bhalia	0	2	0	0	0	6	0.4	Deficient
8	Bheru	0	15	1	0	0	49	3.26	Deficient
9	Bija	0	2	0	0	0	6	0.4	Deficient
10	Chara	0	5	20	0	0	95	6.33	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	1	0	0	0	3	0.2	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	1	0	0	0	3	0.2	Deficient
16	Jamun	0	2	0	0	0	6	0.4	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	43	2	0	0	137	9.13	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	57	26	0	0	275	18.33	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	17	3	0	0	59	3.93	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	54	5	0	0	162	10.8	Fair
26	Kurum	0	2	1	0	0	0		Deficient
27	Kusum	0	1	1	0	0	7	0.46	Deficient
28	Mahula	0	15	11	1	0	99	6.6	Deficient
29	Mai	0	1	0	0	0	3	0.2	Deficient
30	Mundi	0	1	0	0	0	3	.0.20	Deficient
31	Neem	0	3	0	0	0	9	0.6	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	1	0	0	0	3	0.2	Deficient
34	Sal	0	100	21	38	13	639	42.6	Excellent
35	Sidha	0	0	5	0	0	20	1.33	Deficient
36	Sunari	0	5	1	0	0	19	1.26	Deficient
37	Telkuruma	0	10	0	0	0	30	2	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Kamakhya Nagara (East)

Name of R.F. :Jiridamali Plots taken- 10 Area- 1000 Sq. M, Period – February ,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	6	5	2	0	48	4.8	Deficient
4	Bahada	0	2	6	0	0	75	7.5	Deficient
5	Bela	0	14	0	0	0	42	4.2	Deficient

6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	6	0	0	0	18	1.8	Deficient
9	Bija	0	1	1	1	1	17	1.7	Deficient
10	Chara	0	2	3	0	0	18	1.80	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	5	0	0	0	15	1.5	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	1	0	0	0	3	0.3	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	29	0	0	0	87	8.7	Deficient
19	Kasi	0	0	0	1	0	5	0.6	Deficient
20	Kendu	0	57	3	0	0	93	9.3	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	10	1	0	0	34	3.4	Deficient
23	Kuchila	0	5	0	0	0	15	1.5	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	0	115	0	0	460	46	Excellent
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	7	3	0	0	33	3.3	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	1	0	0	0	3	0.2	Deficient
34	Sal	0	192	41	53	8	1045	104.5	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	2	0	0	0	6	0.6	Deficient
37	Telkuruma	0	21	0	0	0	63	6.3	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Kamakhya Nagara (East)

Name of R.F. :Ranjagarh Plots taken-20 Area - 2000 Sq. M,, Period - February ,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	1	0	3	0.15	Deficient
3	Asan	0	1	10	8	0	83	4.15	Deficient
4	Bahada	0	1	1	0	0	7	0.35	Deficient

5	Bela	0	9	5	0	0	47	2.35	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	10	9	0	0	66	3.33	Deficient
9	Bija	0	0	2	1	1	18	0.9	Deficient
10	Chara	0	4	54	1	0	233	11.65	Fair
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	1	0	2	0	13	0.65	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	3	3	1	0	26	1.3	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	40	1	0	0	124	6.2	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	111	15	0	0	393	19.65	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	47	4	0	0	157	7.85	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	123	0	0	0	365	18.25	Fair
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	41	15	4	0	203	10.15	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	2	0	0	0	6	0.3	Deficient
34	Sal	0	175	58	50	20	1107	55.35	Excellent
35	Sidha	0	1	0	0	0	3	0.15	Deficient
36	Sunari	0	0	0	0	0	0		Deficient
37	Telkuruma	0	33	2	0	0	107	5.35	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Bhuban

Name of R.F. :Bhuban Plots taken- 7 Area - 700 Sq. M, Period – February ,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	0	0	0	0		Deficient
4	Bahada	0	18	1	0	0	58	8.28	Deficient
5	Bela	0	1	0	0	0	3	0.42	Deficient
6	Benta	0	0	0	0	0	0		Deficient

7	Bhalia	0	1	1	0	0	7	1	Deficient
8	Bheru	0	3	0	0	0	9	1.28	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	5	0	0	0	15	2.14	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	18	3	0	0	66	8.25	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	15	10	0	0	85	10.62	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	13	0	0	0	39	4.87	Deficient
23	Kuchila	0	2	0	0	0	6	0.75	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	0	0	0	0	0		Deficient
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	16	4	0	0	64	8	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	1	0	0	0	3	0.37	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	33	17	11	0	222	27.75	Moderate
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	3	0	0	0	9	1.12	Deficient
37	Telkuruma	0	58	0	0	0	174	21.75	Moderate
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

Name of the Range : Bhuban

Name of R.F. :Dhalpada Plots taken-5 Area- 500 Sq.M , Period – February ,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	10	5	1	0	55	11	Fair
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	0	0	0	0	0		Deficient

6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	18	7	0	0	82	16.40	Fair
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	1	0	0	0	3	0.6	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	2	0	0	0	6	1.2	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	19	9	0	0	83	16.3	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	0	0	0	0	0		Deficient
23	Kuchila	0	1	0	0	0	3	0.6	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	13	3	0	0	93	18.6	Fair
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	0	0	0	0	0		Deficient
29	Mai	0	1	0	0	0	3	0.6	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	1	0	0	0	3	0.6	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	19	12	5	0	130	26	Moderate
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	3	0	0	0	9	1.12	Deficient
37	Telkuruma	0	3	0	0	0	9	1.8	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Bhuban

Name of R.F. :Tipiloi Plots taken-12 Area - 1200 Sq. M, Period - February ,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	0	1	0	0		Deficient
4	Bahada	0	8	0	0	0	24	2	Deficient
5	Bela	0	0	0	0	0	0		Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	18	0	0	0	54	4.5	Deficient
10	Chara	0	2	0	0	0	6	0.50	Deficient

11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	0	0	0	0	0		Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	19	6	0	0	81	6.75	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	7	0	0	0	21	1.75	Deficient
23	Kuchila	0	25	0	0	0	75	6.25	Deficient
24	Kumbhi	0	17	1	0	0	55	4.58	Deficient
25	Kurein	0	17	2	0	0	59	4.91	Deficient
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	0	0	0	0	0		Deficient
29	Mai	0	27	0	0	0	81	6.75	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	7	0	0	0	21	1.75	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	36	20	14	3	273	22.75	Moderate
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	3	0	0	0	9	1.12	Deficient
37	Telkuruma	0	25	0	0	0	75	6.25	Deficient
38	Tentala	0	2	0	0	0	6	0.5	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Bhuban

Name of R.F. :Sunajhari Plots taken-20 Area- 2000 Sq. M , Period – February ,2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	1	0	0	0	3	0.15	Deficient
3	Asan	0	0	0	1	0	0		Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	38	5	0	0	134	6.7	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	37	3	0	0	123	6.15	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	0	0	0	0	0		Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	4	3	0	0	24	1.2	Deficient
13	Giringa	0	1	0	0	0	3	0.15	Deficient
14	Gohira	0	0	0	0	0	0		Deficient

15	Halda	0	1	0	0	0	3	0.15	Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	33	8	0	0	131	6.55	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	52	32	0	0	284	14.2	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	18	0	0	0	54	2.7	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	45	9	0	0	171	8.55	Deficient
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	2	2	0	0	14	0.7	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	7	0	0	0	21	1.75	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	36	20	14	3	273	22.75	Moderate
35	Sidha	0	31	0	0	0	93	4.65	Deficient
36	Sunari	0	3	0	0	0	9	1.12	Deficient
37	Telkuruma	0	1	0	0	0	3	0.15	Deficient
38	Tentala	0	2	0	0	0	6	0.3	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY. Size of plot- 10mX10m

Name of the Range : Kamakhya Nagara (West)

Name of R.F. Analaberini Plots taken- 5 Area- 500 Sq.M , Period - February, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	1	0	0	0	3	0.6	Deficient
3	Asan	0	2	0	0	0	6	1.2	Deficient
4	Bahada	0	1	0	0	0	3	0.6	Deficient
5	Bela	0	3	3	0	0	21	4.2	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	2	0	0	0	6	1.2	Deficient
9	Bija	0	0	1	0	0	4	0.8	Deficient
10	Chara	0	2	4	0	0	22	4.40	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	1	0	0	4	0.8	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient

16	Jamun	0	1	0	0	0	3	0.6	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	9	0	0	0	27	5.4	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	21	0	0	0	63	12.6	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	2	1	0	0	10	2	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	28	0	0	0	84	16.8	Fair
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	1	0	0	0	3	0.6	Deficient
28	Mahula	0	6	0	0	0	18	3.6	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	2	0	0	0	6	0.3	Deficient
34	Sal	0	30	7	14	16	268	53.6	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	0	0	0	0	0		Deficient
37	Telkuruma	0	14	0	0	0	42	8.4	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Kadalipal Plots taken- 5 Area - 500 Sq. M , Period - February, 2013									
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	1	0	0	4	0.8	Deficient
4	Bahada	0	0	1	0	0	4	0.8	Deficient
5	Bela	0	4	1	0	0	16	3.2	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	0	13	0	0	52	10.40	Fair
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	1	0	0	0	3	0.12	Deficient
16	Jamun	0	0	3	0	0	12	2.4	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	12	0	0	0	36	7.2	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	24	4	0	0	88	17.6	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	9	0	0	0	27	5.4	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	1	1	0	0	7	1.4	Deficient
25	Kurein	0	60	1	0	0	184	36.8	Good
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	14	0	0	0	42	8.4	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	75	24	18	7	446	89.2	Excellent
35	Sidha	0	0	1	0	0	4	0.8	Deficient
36	Sunari	0	0	0	0	0	0		Deficient
37	Telkuruma	0	21	0	0	0	63	12.6	Fair
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Kankili **Plots taken-10 , Area - 1000 Sq. M, Period - May, 2013**									
Longitude: Latitude									
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	1	2	0	0	11	1.1	Deficient
2	Anchu	0	3	2	2	0	27	2.7	Deficient
3	Asan	0	15	9	16	0	161	16.1	Fair
4	Bahada	0	2	6	0	0	30	3	Deficient
5	Bela	0	4	6	3	0	51	5.1	Deficient
6	Benta	0	2	4	0	0	22	2.2	Deficient
7	Bhalia	0	1	2	0	0	11	1.1	Deficient
8	Bheru	0	8	4	1	0	45	4.5	Deficient
9	Bija	0	1	1	0	0	7	0.7	Deficient
10	Chara	0	18	5	9	0	119	11.90	Fair
11	Chauli	0	2	5	0	0	26	2.6	Deficient
12	Dhaura	0	4	3	0	0	24	2.4	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	7	3	0	0	33	3.3	Deficient
16	Jamun	0	7	10	1	0	66	6.6	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	28	16	3	0	103	10.3	Fair
19	Kasi	0	2	0	0	0	6	0.6	Deficient
20	Kendu	0	47	9	4	0	197	19.7	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	3	6	0	0	33	3.3	Deficient
23	Kuchila	0	4	0	0	0	12	1.2	Deficient
24	Kumbhi	0	2	4	0	0	22	2.2	Deficient
25	Kurein	0	42	4	0	0	142	14.2	Fair
26	Kurum	0	7	3	0	0	33	3.3	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	16	9	11	0	119	11.9	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	17	9	0	0	87	8.7	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	107	29	31	0	590	59	Excellent
35	Sidha	0	1	0	0	0	3	0.3	Deficient
36	Sunari	0	4	5	0	0	32	3.2	Deficient
37	Telkuruma	0	57	6	0	0	195	19.5	Fair
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Machhia				**Plots taken- 10**	**Area- 1000 Sq. M, Period - February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	0	0	0	0		Deficient
4	Bahada	0	2	4	0	0	22	4.4	Deficient
5	Bela	0	17	8	0	0	83	16.6	Fair
6	Benta	0	3	0	0	0	9	1.8	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	1	0	0	0	3	0.6	Deficient
10	Chara	0	0	1	0	0	4	0.80	Deficient
11	Chauli	0	1	0	0	0	3	0.6	Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	1	0	0	4	0.8	Deficient
16	Jamun	0	0	1	0	0	4	0.8	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	28	0	0	0	84	16.8	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	36	0	0	0	108	21.6	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	2	0	0	0	6	1.2	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	2	0	0	0	6	1.2	Deficient
25	Kurein	0	92	0	0	0	276	55.2	Excellent
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	17	0	0	0	51	10.2	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	1	0	0	0	3	0.6	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	19	4	27	2	218	43.6	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	1	2	0	0	11	2.2	Deficient
37	Telkuruma	0	1	6	0	0	3	0.6	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Madhi			**Plots taken- 7**		**Area- 700 Sq. M, Period - February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	1	0	0	4	0.57	Deficient
3	Asan	0	0	1	0	0	4	0.57	Deficient
4	Bahada	0	0	4	0	0	16	2.28	Deficient
5	Bela	0	0	8	0	0	32	4.5	Deficient
6	Benta	0	0	0	0	1	5	0.71	Deficient
7	Bhalia	0	1	1	0	0	7	1	Deficient
8	Bheru	0	5	5	0	0	35	5	Deficient
9	Bija	0	1	0	1	0	8	1.14	Deficient
10	Chara	0	3	15	0	0	69	9.85	Deficient
11	Chauli	0	0	0	0	0	3		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	4	0	0	12	1.71	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	23	6	0	0	93	19.28	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	12	7	0	0	64	9.14	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	3	4	0	0	25	3.57	Deficient
23	Kuchila	0	0	1	0	0	4	0.57	Deficient
24	Kumbhi	0	2	0	0	0	6	1.2	Deficient
25	Kurein	0	12	1	0	0	40	5.71	Excellent
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	22	4	0	1	87	12.42	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	1	0	0	0	3	0.42	Deficient
34	Sal	0	62	24	26	5	437	62.42	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	0	0	0	2	10	1.42	Deficient
37	Telkuruma	0	43	3	0	0	141	20.14	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Madhi			**Plots taken- 7**		**Area- 700 Sq. M, Period - February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	1	0	0	4	0.57	Deficient
3	Asan	0	0	1	0	0	4	0.57	Deficient
4	Bahada	0	0	4	0	0	16	2.28	Deficient
5	Bela	0	0	8	0	0	32	4.5	Deficient
6	Benta	0	0	0	0	1	5	0.71	Deficient
7	Bhalia	0	1	1	0	0	7	1	Deficient
8	Bheru	0	5	5	0	0	35	5	Deficient
9	Bija	0	1	0	1	0	8	1.14	Deficient
10	Chara	0	3	15	0	0	69	9.85	Deficient
11	Chauli	0	0	0	0	0	3		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	4	0	0	12	1.71	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	23	6	0	0	93	19.28	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	12	7	0	0	64	9.14	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	3	4	0	0	25	3.57	Deficient
23	Kuchila	0	0	1	0	0	4	0.57	Deficient
24	Kumbhi	0	2	0	0	0	6	1.2	Deficient
25	Kurein	0	12	1	0	0	40	5.71	Excellent
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	22	4	0	1	87	12.42	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	1	0	0	0	3	0.42	Deficient
34	Sal	0	62	24	26	5	437	62.42	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	0	0	0	2	10	1.42	Deficient
37	Telkuruma	0	43	3	0	0	141	20.14	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Madhi			**Plots taken- 7**		**Area- 700 Sq. M, Period - February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	1	0	0	4	0.57	Deficient
3	Asan	0	0	1	0	0	4	0.57	Deficient
4	Bahada	0	0	4	0	0	16	2.28	Deficient
5	Bela	0	0	8	0	0	32	4.5	Deficient
6	Benta	0	0	0	0	1	5	0.71	Deficient
7	Bhalia	0	1	1	0	0	7	1	Deficient
8	Bheru	0	5	5	0	0	35	5	Deficient
9	Bija	0	1	0	1	0	8	1.14	Deficient
10	Chara	0	3	15	0	0	69	9.85	Deficient
11	Chauli	0	0	0	0	0	3		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	0	4	0	0	12	1.71	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	23	6	0	0	93	19.28	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	12	7	0	0	64	9.14	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	3	4	0	0	25	3.57	Deficient
23	Kuchila	0	0	1	0	0	4	0.57	Deficient
24	Kumbhi	0	2	0	0	0	6	1.2	Deficient
25	Kurein	0	12	1	0	0	40	5.71	Excellent
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	22	4	0	1	87	12.42	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	1	0	0	0	3	0.42	Deficient
34	Sal	0	62	24	26	5	437	62.42	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	0	0	0	2	10	1.42	Deficient
37	Telkuruma	0	43	3	0	0	141	20.14	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Nandabir			**Plots taken- 6**		**Area- 600 Sq. M, Period - May ,2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	4	3	0	0	24	4	Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	8	5	2	0	54	9	Deficient
4	Bahada	0	4	1	0	0	16	2.6	Deficient
5	Bela	0	0	0	0	0	0		Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	3	2	0	0	17	2.8	Deficient
9	Bija	0	0	0	0-10	0	0		Deficient
10	Chara	0	13	16	5	0	128	21.30	Moderate
11	Chauli	0	1	1	0	0	7	1.1	Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	1	0	0	0	3	0.5	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	4	2	0	0	20	3.33	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	2	3	0	0	18	3	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	43	14	6	0	215	35.8	Good
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	16	1	0	0	52	8.6	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	1	0	0	0	3	0.5	Deficient
25	Kurein	0	31	4	0	0	109	18.16	Fair
26	Kurum	0	1	2	1	0	16	2.6	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	14	8	6	0	104	17.3	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	9	5	0	0	47	7.8	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	2	1	0	0	10	1.6	Deficient
34	Sal	0	90	18	25	0	467	77.8	Excellent
35	Sidha	0	5	0	0	0	15	2.5	Deficient
36	Sunari	0	3	1	0	0	13	2.1	Deficient
37	Telkuruma	0	18	6	0	0	78	13	Fair
38	Tentala	0	2	0	0	0	6	1	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Siarimalia			**Plots taken- 8**		**Area- 800 Sq. M, Period - February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	7	21	3	0	120	15	Fair
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	2	0	0	0	6	0.74	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	1	0	0	0	3	0.37	Deficient
8	Bheru	0	10	1	0	0	34	4.25	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	0	11	1	0	49	6.12	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	5	1	0	0	19	2.37	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	6	0	0	0	18	2.25	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	91	10	0	0	313	39.1	Good
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	1	0	0	0	3	0.37	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	45	4	0	0	151	18.8	Fair
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	19	29	2	0	183	22.8	Moderate
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	9	5	0	0	47	7.8	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	1	0	0	0	3	0.37	Deficient
34	Sal	0	103	59	39	6	766	95.75	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	1	0	0	0	3	0.37	Deficient
37	Telkuruma	0	23	8	0	0	101	12.62	Fair
38	Tentala	0	2	0	0	0	6	1	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Sundarakhol			**Plots taken- 10**		**Area- 1000 Sq. M, Period - February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	1	0	0	0	3	0.3	Deficient
3	Asan	0	12	11	8	0	120	12	Fair
4	Bahada	0	3	2	0	0	17	1.7	Deficient
5	Bela	0	12	11	0	0	80	8	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	1	1	0	0	7	0.7	Deficient
8	Bheru	0	13	0	0	0	39	3.9	Deficient
9	Bija	0	6	5	0	0	38	3.8	Deficient
10	Chara	0	2	38	0	0	158	15.80	Fair
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	1	0	0	0	3	0.3	Deficient
16	Jamun	0	7	3	0	0	33	3.3	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	26	2	0	0	86	8.6	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	53	1	0	0	163	16.3	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	11	0	0	0	33	3.3	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	50	0	0	0	150	15	Fair
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	1	0	0	0	3	0.3	Deficient
28	Mahula	0	12	11	3	0	95	9.5	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	1	0	0	0	3	0.3	Deficient
34	Sal	0	73	34	26	10	485	48.5	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	4	1	1	0	21	2.1	Deficient
37	Telkuruma	0	36	3	0	0	120	12	Fair
38	Tentala	0	2	0	0	0	6	1	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Kamakhya Nagara (West)									
Name of R.F. Suniamaru			**Plots taken-10**		**Area - 1000 Sq. M, Period - February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	3	2	0	0	17	1.7	Deficient
3	Asan	0	5	6	8	0	39	3.9	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	12	2	0	0	14	1.4	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	15	1	0	0	49	4.9	Deficient
9	Bija	0	0	1	0	0	4	0.4	Deficient
10	Chara	0	2	21	0	0	90	9.00	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	3	0	0	12	1.2	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	11	5	0	0	63	6.3	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	8	1	0	0	28	2.8	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	32	5	0	0	116	11.6	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	1	5	0	0	23	2.3	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	43	0	0	0	129	12.9	Fair
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	13	12	9	0	132	13.2	Fair
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	3	0	0	0	9	0.9	Deficient
34	Sal	0	44	31	27	3	406	40.6	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	0	0	0	0	0		Deficient
37	Telkuruma	0	43	4	0	0	145	14.5	Fair
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY. Size of plot- 10mX10m									
Name of the Range : Mahabirod									
Name of R.F. Barabanka (South) Plots taken- 10 Area - 1000 Sq. M, Period - March, 2013									
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	1	0	0	0	3	0.3	Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	5	2	2	0	33	3.3	Deficient
4	Bahada	0	7	0	0	0	21	2.1	Deficient
5	Bela	0	5	0	0	0	15	1.5	Deficient
6	Benta	0	6	0	0	0	18	1.8	Deficient
7	Bhalia	0	7	2	0	0	29	2.9	Deficient
8	Bheru	0	3	0	0	0	9	0.9	Deficient
9	Bija	0	3	1	0	0	13	1.3	Deficient
10	Chara	0	4	1	0	0	16	1.60	Deficient
11	Chauli	0	5	0	0	0	15	1.5	Deficient
12	Dhaura	0	7	6	0	0	45	4.5	Deficient
13	Giringa	0	2	0	0	0	6	0.6	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	1	0	0	0	3	0.3	Deficient
16	Jamun	0	8	3	0	0	24	2.4	Deficient
17	Kangada	0	1	0	0	0	3	0.3	Deficient
18	Karada	0	10	1	0	0	34	3.4	Deficient
19	Kasi	0	4	0	0	0	12	1.2	Deficient
20	Kendu	0	6	2	0	0	26	2.6	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	12	0	0	0	36	3.6	Deficient
23	Kuchila	0	3	0	0	0	9	0.9	Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	42	0	0	0	126	12.6	Fair
26	Kurum	0	3	0	0	0	9	0.9	Deficient
27	Kusum	0	1	0	0	0	3	0.3	Deficient
28	Mahula	0	18	1	0	0	58	5.8	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	11	3	0	0	45	4.5	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	105	47	22	15	688	68.8	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	2	0	0	0	6	0.6	Deficient
37	Telkuruma	0	1	0	0	0	3	0.3	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Kamakhya Nagara (West)

Name of R.F. Anantapur Plots taken-22 Area - 2200 Sq. M. ,Period - **February, 2013**

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	1	0	0	4	0.18	Deficient
2	Anchu	0	7	7	0	0	49	2.22	Deficient
3	Asan	0	11	14	1	1	99	4.5	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	5	7	0	0	43	1.95	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	4	1	0	0	16	0.72	Deficient
8	Bheru	0	12	3	0	0	48	2.18	Deficient
9	Bija	0	2	4	0	0	22	1	Deficient
10	Chara	0	2	38	0	3	173	7.86	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	7	5	0	2	51	2.31	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	6	4	0	0	34	1.54	Deficient
17	Kangada	0	3	0	0	0	9	0.4	Deficient
18	Karada	0	70	5	0	4	250	11.36	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	177	12	0	3	594	27	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	11	4	0	0	49	2.22	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	2	10	0.45	Deficient
25	Kurein	0	153	0	0	0	459	20.86	Moderate
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	8	0	0	1	29	1.31	Deficient
28	Mahula	0	45	15	0	3	210	9.54	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	0	0	0	0	0		Deficient
32	Rohini	0	12	0	1	0	41	1.86	Deficient
33	Sahada	0	3	0	0	0	9	0.9	Deficient
34	Sal	0	254	52	55	17	1330	60.45	Excellent
35	Sidha	0	5	0	0	0	15	0.68	Deficient
36	Sunari	0	2	5	0	0	26	1.18	Deficient
37	Telkuruma	0	61	5	0	0	203	9.22	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Mahabir rod

Name of R.F. Barabanka (North) **Plots taken-10** **Area _ 1000 Sq. M, Period - March, 2013**

Longitude: Latitude

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	11	0	0	0	33	3.3	Deficient
2	Anchu	0	10	0	0	0	30	3	Deficient
3	Asan	0	16	0	0	0	48	4.8	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	4	0	0	0	12	1.2	Deficient
6	Benta	0	3	0	0	0	9	0.9	Deficient
7	Bhalia	0	3	0	0	0	9	0.9	Deficient
8	Bheru	0	0	0	0	0	0		Deficient
9	Bija	0	8	0	0	0	24	2.4	Deficient
10	Chara	0	11	0	0	0	33	3.30	Deficient
11	Chauli	0	2	0	0	0	6	0.6	Deficient
12	Dhaura	0	3	6	0	0	9	0.9	Deficient
13	Giringa	0	5	0	0	0	15	1.5	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	2	0	0	0	6	0.6	Deficient
16	Jamun	0	3	0	0	0	9	0.9	Deficient
17	Kangada	0	1	0	0	0	3	0.3	Deficient
18	Karada	0	16	0	0	0	48	4.8	Deficient
19	Kasi	0	1	0	0	0	3	0.3	Deficient
20	Kendu	0	77	3	1	0	248	24.8	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	2	0	0	0	6	0.6	Deficient
23	Kuchila	0	3	0	0	0	9	0.9	Deficient
24	Kumbhi	0	10	1	0	0	34	3.4	Deficient
25	Kurein	0	12	0	0	0	36	3.6	Deficient
26	Kurum	0	17	0	0	0	51	5.1	Deficient
27	Kusum	0	15	0	0	0	45	4.5	Deficient
28	Mahula	0	3	0	0	0	9	0.9	Deficient
29	Mai	0	3	0	0	0	9	0.9	Deficient
30	Mundi	0	2	0	0	0	6	0.6	Deficient
31	Neem	0	3	3	0	0	9	0.9	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	144	45	17	9	742	74.2	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	2	0	0	0	6	0.6	Deficient
37	Telkuruma	0	78	0	0	0	234	23.4	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Mahabir rod									
Name of R.F. Dolia			**Plots taken- 10**		**Area-1000 Sq.M Period- May, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	1	0	0	4	0.4	Deficient
2	Anchu	0	1	2	0	0	10	1	Deficient
3	Asan	0	6	10	3	0	73	7.3	Deficient
4	Bahada	0	3	3	0	0	21	2.1	Deficient
5	Bela	0	2	2	1	0	19	1.9	Deficient
6	Benta	0	2	1	0	0	10	1	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	5	3	0	0	27	2.7	Deficient
9	Bija	0	1	1	0	0	7	0.7	Deficient
10	Chara	0	32	15	5	0	181	18.10	Fair
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	1	0	0	0	3	0.3	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	12	7	0	0	64	6.4	Deficient
17	Kangada	0	3	2	0	0	17	1.7	Deficient
18	Karada	0	31	11	4	0	157	15.7	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	33	5	4	0	139	13	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	5	3	0	0	27	2.7	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	84	6	0	0	276	27.6	Deficient
26	Kurum	0	2	2	0	0	14	1.4	Deficient
27	Kusum	0	2	2	0	0	14	1.4	Deficient
28	Mahula	0	17	5	2	0	91	9.1	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	15	5	1	0	70	7	Deficient
32	Rohini	0	10	3	0	0	42	4.2	Deficient
33	Sahada	0	1	0	0	0	3	0.3	Deficient
34	Sal	0	112	39	43	9	752	75.2	Excellent
35	Sidha	0	1	1	0	0	7	0.7	Deficient
36	Sunari	0	3	1	0	0	13	1.3	Deficient
37	Telkuruma	0	50	7	0	0	178	17.8	Fair
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Mahabir rod

Name of R.F. Khalpal **Plots taken- 10** **Area-1000 Sq.M Period- May, 2013**

Longitude: Latitude

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	4	0	0	16	1.6	Deficient
2	Anchu	0	1	0	0	0	3	0.3	Deficient
3	Asan	0	5	9	9	0	96	9.6	Deficient
4	Bahada	0	2	2	0	0	14	1.4	Deficient
5	Bela	0	3	2	0	0	17	1.7	Deficient
6	Benta	0	2	2	0	0	14	1.4	Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	5	4	1	0	41	4.1	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	7	8	1	0	58	5.80	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	0	0	0	0		Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	0	0	0	0	0		Deficient
16	Jamun	0	11	5	1	0	58	5.8	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	16	8	5	0	105	10.5	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	57	10	1	0	216	21.6	Moderate
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	0	0	0	0	0		Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	42	6	0	0	150	15	Fair
26	Kurum	0	2	2	0	0	14	1.4	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	5	1	2	0	29	2.9	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	10	4	1	0	51	5.1	Deficient
32	Rohini	0	10	3	0	0	42	4.2	Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	152	39	59	9	952	95.2	Excellent
35	Sidha	0	1	0	0	0	3	0.3	Deficient
36	Sunari	0	3	3	0	0	21	2.1	Deficient
37	Telkuruma	0	14	7	0	0	70	7	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Mahabir rod									
Name of R.F. Talcher Border Plots taken- 7 Area-700 Sq.M Period- March, 2013									
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	6	1	0	0	0	22	3.14	Deficient
2	Anchu	0	4	7	0	0	40	5.71	Deficient
4	Asan	0	11	11	9	0	77	11	Fair
6	Bahada	0	1	3	0	0	15	2.14	Deficient
9	Bela	0	11	8	0	0	65	9.28	Deficient
10	Benta	0	1	3	0	0	15	2.14	Deficient
12	Bhalia	0	6	1	0	0	22	3.14	Deficient
13	Bheru	0	0	0	0	0	0		Deficient
15	Bija	0	2	6	0	0	30	4.28	Deficient
16	Chara	0	6	6	0	0	42	6.00	Deficient
17	Chauli	0	1	0	0	0	3	0.42	Deficient
20	Dhaura	0	2	0	0	0	6	0.85	Deficient
22	Giringa	0	3	0	0	0	9	1.28	Deficient
24	Gohira	0	0	0	0	0	0		Deficient
25	Halda	0	1	1	0	0	7	1	Deficient
26	Jamun	0	1	7	0	0	31	4.42	Deficient
28	Kangada	0	3	0	0	0	9	1.28	Deficient
29	Karada	0	1	5	0	0	23	3.28	Deficient
31	Kasi	0	0	0	0	0	0		Deficient
32	Kendu	0	20	22	1	0	153	21.85	Moderate
33	Khaira	0	0	0	0	0	0		Deficient
34	Khakada	0	0	0	0	0	0		Deficient
35	Kuchila	0	0	0	0	0	0		Deficient
36	Kumbhi	0	11	0	0	0	33	4.71	Deficient
37	Kurein	0	2	1	0	0	10	1.42	Deficient
38	Kurum	0	7	0	0	0	21	3	Deficient
39	Kusum	0	0	0	0	0	0		Deficient
42	Mahula	0	11	14	0	0	75	10.71	Fair
43	Mai	0	3	0	0	0	9	1.28	Deficient
45	Mundi	0	0	0	0	0	0		Deficient
46	Neem	0	0	0	0	0	0		Deficient
51	Rohini	0	0	0	0	0	0		Deficient
52	Sahada	0	7	10	0	0	61	8.71	Deficient
53	Sal	0	35	31	5	0	245	35	Good
54	Sidha	0	0	0	0	0	0		Deficient
55	Sunari	0	3	0	0	0	9	1.28	Deficient
59	Telkuruma	0	0	0	0	0	0		Deficient
60	Tentala	0	0	0	0	0	0		Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Hindol									
Name of R.F. Ambithi			**Plots taken- 7 Area- 700 Sq.m, Period- February, 2013**						
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	0	0	0	0		Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	0	0	0	0	0		Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	9	0	0	0	27	3.85	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	3	2	0	0	17	2.83	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	2	0	0	0	6	0.85	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	1	0	0	0	3	0.42	Deficient
16	Jamun	0	1	2	0	0	11	1.57	Deficient
17	Kangada	0	10	0	0	0	30	4.26	Deficient
18	Karada	0	19	0	0	0	57	8.14	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	9	8	0	0	59	8.42	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	12	8	0	0	68	9.71	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	48	0	0	0	144	20.57	Moderate
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	1	0	0	0	3	0.42	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	14	3	0	0	54	7.71	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	0	0	0	0	0		Deficient
35	Sidha	0	11	7	0	0	61	8.71	Deficient
36	Sunari	0	1	0	0	0	3	0.42	Deficient
37	Telkuruma	0	0	0	0	0	0		Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Hindol									
Name of R.F. Bompa			**Plots taken- 13**		**Area- 1300 Sq.m Period- February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	13	7	0	0	67	5.1	Deficient
4	Bahada	0	1	2	0	0	11	0.84	Deficient
5	Bela	0	28	11	0	0	128	9.8	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	1	1	0	0	7	0.53	Deficient
8	Bheru	0	3	0	0	0	9	3.85	Deficient
9	Bija	0	7	5	0	0	41	3.15	Deficient
10	Chara	0	5	1	0	0	19	1.46	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	17	14	0	0	107	8.23	Deficient
13	Giringa	0	5	7	0	0	43	3.3	Deficient
14	Gohira	0	5	2	0	0	23	1.76	Deficient
15	Halda	0	4	0	0	0	12	0.92	Deficient
16	Jamun	0	38	19	0	0	190	14.6	Fair
17	Kangada	0	16	8	0	0	80	6.15	Deficient
18	Karada	0	40	13	0	0	172	13.2	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	13	12	0	0	87	6.69	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	24	6	0	0	96	7.38	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	29	21	0	0	171	13.15	Fair
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	1	0	0	0	3	0.23	Deficient
29	Mai	0	0	1	0	0	4	0.3	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	11	5	0	0	53	4.07	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	14	7	0	0	70	5.38	Deficient
34	Sal	0	0	0	0	0	0		Deficient
35	Sidha	0	11	11	0	0	77	5.92	Deficient
36	Sunari	0	1	0	0	0	3	0.23	Deficient
37	Telkuruma	0	0	0	0	0	0		Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Hindol									
Name of R.F. Hitinda			**Plots taken-8**		**Area- 800 sq.m Period-**		**February, 2013**		
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	5	10	1	0	60	7.5	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	1	7	0	0	31	3.87	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	3	0	0	0	9	1.12	Deficient
8	Bheru	0	5	0	0	0	15	1.87	Deficient
9	Bija	0	1	0	0	0	3	0.37	Deficient
10	Chara	0	11	7	0	0	61	7.62	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	7	4	0	0	44	5.5	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	5	2	0	0	23	1.76	Deficient
15	Halda	0	2	0	0	0	6	0.75	Deficient
16	Jamun	0	3	0	0	0	3	1.12	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	2	0	0	0	6	0.75	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	16	7	0	0	76	9.5	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	1	0	0	0	3	0.37	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	2	0	0	0	6	0.75	Deficient
25	Kurein	0	14	0	0	0	42	5.25	Deficient
26	Kurum	0	1	0	0	0	3	0.37	Deficient
27	Kusum	0	1	2	0	0	11	1.37	Deficient
28	Mahula	0	3	0	0	0	9	1.12	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	3	2	0	0	17	2.12	Deficient
32	Rohini	0	9	0	0	0	27	3.37	Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	65	31	15	7	402	50.25	Excellent
35	Sidha	0	5	1	0	0	19	2.37	Deficient
36	Sunari	0	1	0	0	0	3	0.37	Deficient
37	Telkuruma	0	18	0	0	0	54	6.75	Deficient
38	Tentala	0	3	0	0	0	9	1.12	Deficient
39	Misc.	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Hindol									
Name of R.F. -Kai			**Plots taken-15**		**Area-1500 sq.m Period - February, 2013**				
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	1	0	0	4	0.26	Deficient
3	Asan	0	20	5	1	0	80	5.33	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	9	0	0	0	27	1.8	Deficient
6	Benta	0	2	0	0	0	6	0.4	Deficient
7	Bhalia	0	4	1	0	0	16	1.06	Deficient
8	Bheru	0	6	0	0	0	18	1.2	Deficient
9	Bija	0	4	0	0	0	12	0.8	Deficient
10	Chara	0	21	8	2	0	105	7.00	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	7	2	0	0	29	1.93	Deficient
13	Giringa	0	3	0	0	0	9	0.6	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	4	0	0	0	12	0.8	Deficient
16	Jamun	0	6	3	0	0	30	2	Deficient
17	Kangada	0	1	0	0	0	3	0.2	Deficient
18	Karada	0	2	0	0	0	6	0.75	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	16	7	0	0	76	9.5	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	1	0	0	0	3	0.37	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	68	1	0	0	208	13.86	Fair
26	Kurum	0	1	0	0	0	3	0.37	Deficient
27	Kusum	0	1	2	0	0	11	1.37	Deficient
28	Mahula	0	21	13	0	0	115	7.66	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	19	2	0	0	65	4.33	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	370	114	47	20	1903	126.8	Excellent
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	3	0	0	0	9	0.6	Deficient
37	Telkuruma	0	38	0	0	0	114	6.75	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Hindol									
Name of R.F. Kandhra **Plots taken-18 Area- 1800 Sq.m Period- February, 2013**									
Longitude: Latitude									
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	1	0	1	0	3	0.16	Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	61	96	0	0	567	31.5	Good
6	Benta	0	4	0	0	0	12	0.66	Deficient
7	Bhalia	0	7	0	0	0	21	1.16	Deficient
8	Bheru	0	35	0	0	0	105	5.83	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	11	1	0	0	37	2.05	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	8	1	2	0	38	2.11	Deficient
13	Giringa	0	12	0	0	0	36	2	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	4	0	0	1	17	0.94	Deficient
16	Jamun	0	4	0	0	0	12	0.66	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	60	0	0	0	180	10	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	35	19	0	0	181	10.05	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	20	7	0	0	81	4.5	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	1	0	0	1	8	0.44	Deficient
25	Kurein	0	65	1	0	0	199	11.05	Fair
26	Kurum	0	7	0	0	0	21	1.16	Deficient
27	Kusum	0	4	0	0	0	12	0.66	Deficient
28	Mahula	0	2	0	0	0	6	0.33	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	39	26	0	1	226	12.55	Fair
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	3	0	0	0	9	0.5	Deficient
34	Sal	0	8	3	0	0	36	2	Deficient
35	Sidha	0	0	0	0	0	0		Deficient
36	Sunari	0	2	8	1	0	43	2.38	Deficient
37	Telkuruma	0	32	0	0	0	96	5.33	Deficient
38	Tentala	0	26	0	0	0	78	4.33	Deficient
39	Misc	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m									
Name of the Range : Hindol									
Name of R.F. Kansara		**Plots taken- 5**		**Area-500 sqm, Period- February, 2013**					
Longitude:		Latitude							
Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	0	0	1	0	0		Deficient
4	Bahada	0	0	0	0	0	0		Deficient
5	Bela	0	1	0	0	0	3	0.6	Deficient
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	2	0	0	0	6	1.2	Deficient
9	Bija	0	0	0	0	0	0		Deficient
10	Chara	0	1	0	0	0	3	0.60	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	0	3	2	0	12	2.4	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	1	3	0	0	15	3	Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	5	13	0	0	67	13.4	Fair
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	17	8	0	0	83	16.6	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	4	22	0	0	100	20	Fair
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	31	52	0	0	301	60.2	Excellent
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	1	1	0	0	7	1.4	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	5	0	0	0	15	3	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	2	0	0	0	6	1.2	Deficient
35	Sidha	0	6	21	0	0	102	20.4	Deficient
36	Sunari	0	3	8	1	0	9	1.8	Deficient
37	Telkuruma	0	0	0	0	0	0		Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Hindol

Name of R.F. Nandania Plots taken-5 Area-500 Sq.m Period- February, 2013

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient
2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	1	0	0	0	3	0.6	Deficient
4	Bahada	0	1	0	0	0	3	0.6	Deficient
5	Bela	0	12	6	0	0	60	12	Fair
6	Benta	0	0	0	0	0	0		Deficient
7	Bhalia	0	0	0	0	0	0		Deficient
8	Bheru	0	5	0	0	0	15	3	Deficient
9	Bija	0	1	0	0	0	3	0.6	Deficient
10	Chara	0	2	1	0	0	10	2.00	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	2	0	0	0	6	1.2	Deficient
13	Giringa	0	0	0	0	0	0		Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	4	2	0	0	20	4	Deficient
16	Jamun	0	0	0	0	0	0		Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	1	0	0	0	3	0.6	Deficient
19	Kasi	0	11	1	0	0	37	7.4	Deficient
20	Kendu	0	2	1	0	0	10	2	Deficient
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	6	3	0	0	30	6	Deficient
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	13	2	0	0	47	9.4	Deficient
26	Kurum	0	6	6	0	0	42	8.4	Deficient
27	Kusum	0	0	0	0	0	0		Deficient
28	Mahula	0	1	0	0	0	3	0.6	Deficient
29	Mai	0	13	0	0	0	39	7.8	Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	1	0	0	0	3	0.6	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	4	3	2	0	34	6.8	Deficient
35	Sidha	0	8	1	0	0	28	5.6	Deficient
36	Sunari	0	11	0	0	0	33	6.6	Deficient
37	Telkuruma	0	0	0	0	0	0		Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc	0	0	0	0	0	0	0	Deficient

REGENERATION SURVEY . Size of plot- 10mX10m

Name of the Range : Hindol

Name of R.F. Potalo Plots taken- 9 Area- 900 Sq.M Period- February, 2013

Longitude: Latitude

Sl. No	Species	Absent (0)	Un Established (3)	Whippy (4)	Established (less height) (5)	Established (5)	Total	Average	Status
1	Amla	0	0	0	0	0	0		Deficient

2	Anchu	0	0	0	0	0	0		Deficient
3	Asan	0	8	5	0	0	44	4.88	Deficient
4	Bahada	0	4	4	2	0	38	4.22	Deficient
5	Bela	0	20	12	0	0	108	12	Fair
6	Benta	0	3	0	0	0	9	1	Deficient
7	Bhalia	0	9	4	0	0	43	4.77	Deficient
8	Bheru	0	6	1	0	0	22	2.44	Deficient
9	Bija	0	2	0	0	0	6	0.66	Deficient
10	Chara	0	9	1	0	0	31	3.44	Deficient
11	Chauli	0	0	0	0	0	0		Deficient
12	Dhaura	0	17	4	0	0	67	7.44	Deficient
13	Giringa	0	5	3	0	0	27	3	Deficient
14	Gohira	0	0	0	0	0	0		Deficient
15	Halda	0	4	1	0	0	16	1.77	Deficient
16	Jamun	0	9	0	0	0	27	3	Deficient
17	Kangada	0	0	0	0	0	0		Deficient
18	Karada	0	20	4	0	0	76	8.44	Deficient
19	Kasi	0	0	0	0	0	0		Deficient
20	Kendu	0	22	13	0	0	118	13.11	Fair
21	Khaira	0	0	0	0	0	0		Deficient
22	Khakada	0	13	20	0	0	132	14.66	Fair
23	Kuchila	0	0	0	0	0	0		Deficient
24	Kumbhi	0	0	0	0	0	0		Deficient
25	Kurein	0	25	3	0	0	87	9.66	Deficient
26	Kurum	0	0	0	0	0	0		Deficient
27	Kusum	0	1	0	0	0	3	0.33	Deficient
28	Mahula	0	4	3	0	0	24	2.66	Deficient
29	Mai	0	0	0	0	0	0		Deficient
30	Mundi	0	0	0	0	0	0		Deficient
31	Neem	0	12	2	0	0	44	4.88	Deficient
32	Rohini	0	0	0	0	0	0		Deficient
33	Sahada	0	0	0	0	0	0		Deficient
34	Sal	0	0	0	0	0	0		Deficient
35	Sidha	0	3	1	0	0	13	1.44	Deficient
36	Sunari	0	5	5	0	0	35	3.88	Deficient
37	Telkuruma	0	1	0	0	0	3	0.33	Deficient
38	Tentala	0	0	0	0	0	0		Deficient
39	Misc	0	0	0	0	0	0	0	Deficient

Annexure – XV

Result of Floristic-diversity Survey.

DHENKANAL RANGE									
Charkhola R.F.					Saptsajya R.F.				
Sl. No.	Species	S1 to S2	Average	Dominance	Sl. No.	Species	S1 to S3	Average	Dominance
	Trees					**Trees**			
1	Asana	13	6.5	0.0000494	1	Ankula	12	4.0	0.0000584
2	Barabakulia	5	2.5	0.0000073	2	Barabakulia	18	6.0	0.0001314
3	Bheru	3	1.5	0.0000026	3	Bela	136	45.3	0.0075038
4	Bara	1	0.5	0.0000003	4	Bara	6	2.0	0.0000146
5	Jari	3	1.5	0.0000026	5	Chauli	51	17.0	0.0010552
6	Kendu	17	8.5	0.0000845	6	Dhamana	17	5.7	0.0001172
7	Khakada	14	7.0	0.0000573	7	Giringa	74	24.7	0.0022216
8	Kumbhi	2	1.0	0.0000012	8	Halda	15	5.0	0.0000913
9	Kusuma	4	2.0	0.0000047	9	Kalichia	120	40.0	0.0058420
10	Karada	14	7.0	0.0000573	10	Kendu	11	3.7	0.0000491
11	Kurein	15	7.5	0.0000658	11	Khakada	12	4.0	0.0000584
12	Kalchia	10	5.0	0.0000293	12	Kumbhi	18	6.0	0.0001314
13	Mai	3	1.5	0.0000026	13	Kusuma	2	0.7	0.0000016
14	Sal	15	7.5	0.0000658	14	Karada	38	12.7	0.0005858
15	Sidha	7	3.5	0.0000143	15	Kangada	20	6.7	0.0001623
16	Telkuruma	8	4.0	0.0000187	16	Kurein	71	23.7	0.0020451
17	Simili	9	4.5	0.0000237	17	Katak	56	18.7	0.0012723
	Shrub		0.0	0.0000000	18	Karanja	15	5.0	0.0000913
18	Dhatiki	8	4.0	0.0000187	19	Kasi	2	0.7	0.0000016
19	kumuti	50	25.0	0.0007313	20	Mai	40	13.3	0.0006491
20	Potis	12	6.0	0.0000421	21	Phasi	15	5.0	0.0000913
	Herb		0.0	0.0000000	22	Piasal	2	0.7	0.0000016
21	Bhuin neem	36	18.0	0.0003791	23	Patuli	9	3.0	0.0000329
22	Bana piaja	35	17.5	0.0003583	24	Rai	21	7.0	0.0001789
23	Pokasunga	400	200.0	0.0468000	25	Sisoo	21	7.0	0.0001789
24	Talamuli	7	3.5	0.0000143	26	Sunari	12	4.0	0.0000584
	Climber		0.0	0.0000000	27	Sahada	13	4.3	0.0000686
25	Atundi	22	11.0	0.0001416	28	Simili	25	8.3	0.0002536
26	Chermaru	12	6.0	0.0000421	29	Tentela	18	6.0	0.0001314
27	Gopakanhu	9	4.5	0.0000237	30	Teak	120	40.0	0.0058420
28	Pani alu	6	3.0	0.0000105		**Shurb**			
29	Pita alu	10	5.0	0.0000293	31	Baincha	20	6.7	0.0001623
30	Suamalai	42	21.0	0.0005160	32	Dhatiki	10	3.3	0.0000406
31	Satabari	7	3.5	0.0000143	33	Lahalabeli	58	19.3	0.0013648

	Grass		0.0	0.0000000		**Herb**			
32	Baunsuni	300	150.0	0.0263250	34	Sana chakunda	60	20.0	0.0014605
33	Chepti	275	137.5	0.0221203	35	Pokasunga	40	13.3	0.0006491
34	Duba	100	50.0	0.0029250		**Climber**			
35	Mutha	200	100.0	0.0117000	36	Atundi	30	10.0	0.0003651
36	Sinkula	175	87.5	0.0089578	37	Bhadali	65	21.7	0.0017141
	Total	**1849**	**924.5**	**0.1216371**	38	Dantari	36	12.0	0.0005258
	Floristic Diversity Index			**0.8783629**	39	Gilo	5	1.7	0.0000101
Ghantabaja R.F.					40	Kantei koli	5	1.7	0.0000101
SL No.	**Species**	**S1 to S4**	**Average**	**Dominance**	41	Khukundia	10	3.3	0.0000406
	Trees				42	Nagairi	15	5.0	0.0000913
					42	Nagairi	15	5.0	0.0000913
1	Asana	26	6.5	0.0000823	43	Pani alu	100	33.3	0.0040570
2	Bela	6	1.5	0.0000044	44	Pichhuli	9	3.0	0.0000329
3	Bandhan	2	0.5	0.0000005	45	Siali	74	24.7	0.0022216
4	Bahada	1	0.3	0.0000001	46	Suamalai	10	3.3	0.0000406
5	Bara	1	0.3	0.0000001		**Grass**			0.0000000
6	Bheru	7	1.8	0.0000060	47	Chepti	15	5.0	0.0000913
7	Batra	2	0.5	0.0000005	48	Mutha	18	6.0	0.0001314
8	Chara	23	5.8	0.0000644		**Total-**	**1570**	**523.3**	**0.0419303**
9	Dhaura	8	2.0	0.0000078	**Floristic Diversity Index**				**0.9580697**
10	Fasi	2	0.5	0.0000005					
11	Giringa	1	0.3	0.0000001	**Mayuri R.F.**				
12	Halda	5	1.3	0.0000030	**SL No.**	**Species**	**S1 to S2**	**Average**	**Dominance**
13	Jari	1	0.3	0.0000001		**Trees**			
14	jamun	5	1.3	0.0000030	1	Ankula	18	18.0	0.0000889
15	Kendu	11	2.8	0.0000147	2	Bela	10	10.0	0.0000274
16	Khakada	6	1.5	0.0000044	3	Bheru	30	30.0	0.0002470
17	Kumbhi	3	0.8	0.0000011	4	Bandhan	2	2.0	0.0000011
18	Kusuma	6	1.5	0.0000044	5	Bara	1	1.0	0.0000003
19	Kurum	1	0.3	0.0000001	6	Halda	6	6.0	0.0000099
20	Kangada	19	4.8	0.0000439	7	Kendu	78	78.0	0.0016695
21	Kurein	23	5.8	0.0000644	8	Khakada	16	16.0	0.0000702
22	Kuchila	8	2.0	0.0000078	9	Kumbhi	2	2.0	0.0000011
23	Kasi	5	1.3	0.0000030	10	Karada	39	39.0	0.0004174
24	Mahula	4	1.0	0.0000019	11	Kurein	23	23.0	0.0001452
25	Mai	6	1.5	0.0000044	12	Kalchia	2	2.0	0.0000011
26	Patuli	1	0.3	0.0000001	13	Kochila	3	3.0	0.0000025
27	Rai	1	0.3	0.0000001	14	Kataranga	2	2.0	0.0000011
28	Sal	57	14.3	0.0003955	15	Kuruma	7	7.0	0.0000134
29	Sidha	13	3.3	0.0000206	16	Mai	1	1.0	0.0000003
30	Sisoo	4	1.0	0.0000019	17	Neem	7	7.0	0.0000134

31	Sunari	5	1.3	0.0000030	18	Patuli	41	41.0	0.0004613
32	Telkuruma	10	2.5	0.0000122	19	Piasal	3	3.0	0.0000025
33	Tentela	1	0.3	0.0000001	20	Sidha	9	9.0	0.0000222
	Shrub				21	Simili	7	7.0	0.0000134
34	Dhatiki	19	4.8	0.0000439	22	Telkuruma	6	6.0	0.0000099
35	Gayatulasi	35	8.8	0.0001491		**Shrub**			
36	Lahalabeli	23	5.8	0.0000644	23	Dhatiki	15	15.0	0.0000617
37	Putisi	15	3.8	0.0000274	24	Lahalbeli	119	119.0	0.0038858
	Herb					**Herb**			
38	Bhuin neem	45	11.3	0.0002465	25	Bhuin neem	44	44.0	0.0005312
39	Bana piaja	5	1.3	0.0000030	26	Bana piaja	27	27.0	0.0002000
40	Pokasunga	525	131.3	0.0335557	27	Pokasunga	450	450.0	0.0555665
41	Talamuli	6	1.5	0.0000044		**Climber**			
	Climber				28	Atundi	22	22.0	0.0001328
42	Atundi	26	6.5	0.0000823	29	Bichhuati	4	4.0	0.0000044
43	Chermaru	36	9.0	0.0001578	30	Chermaru	20	20.0	0.0001098
44	Gopakanhu	2	0.5	0.0000005	31	Handifuta	13	13.0	0.0000464
45	Pani alu	4	1.0	0.0000019	32	Suamalai	22	22.0	0.0001328
46	Siali	10	2.5	0.0000122		**Grass**			
47	Suamalai	74	18.5	0.0006667	33	Cheka	12	12.0	0.0000395
48	Satabari	12	3.0	0.0000175	34	Chepti	380	380.0	0.0396237
	Grass				35	Duba	80	80.0	0.0017562
49	Baunsuni	200	50.0	0.0048698	36	Fulasara	138	138.0	0.0052257
50	Chepti	350	87.5	0.0149136	37	Mutha	250	250.0	0.0171502
51	Dabachhana	750	187.5	0.0684810		**Total**	**1909**	**1909.0**	**0.1276858**
52	Fula	100	25.0	0.0012174		**Floristic Diversity Index**			**0.8723142**
53	Duba	95	23.8	0.0010987		**Ghantabaja R.F.**			
54	Mutha	80	20.0	0.0007792	**SL No.**	**Species**	**S1 to S4**	**Average**	**Dominance**
55	Sinkula	180	45.0	0.0039445		**Trees**			
	Bamboo				1	Asana	26	6.5	0.0000823
56	Salia bamboo		0.0	0.0000000	2	Bela	6	1.5	0.0000044
	Total	**2866**	**716.5**	**0.1310944**	3	Bandhan	2	0.5	0.0000005
	Floristic Diversity Index			**0.8689056**	4	Bahada	1	0.3	0.0000001
	Nimidha R.F.				5	Bara	1	0.3	0.0000001
SL No.	**Species**	**S1**	**Average**	**Dominance**	6	Bheru	7	1.8	0.0000060
	Trees				7	Batra	2	0.5	0.0000005
1	Barabakulia	2	2.0	0.0000008	8	Chara	23	5.8	0.0000644
2	Bela	7	7.0	0.0000094	9	Dhaura	8	2.0	0.0000078
3	Bheru	3	3.0	0.0000017	10	Fasi	2	0.5	0.0000005
4	Bara	1	1.0	0.0000002	11	Giringa	1	0.3	0.0000001
5	Dhaura	5	5.0	0.0000048	12	Halda	5	1.3	0.0000030
6	Guhira	15	15.0	0.0000433	13	Jari	1	0.3	0.0000001
7	jamun	9	9.0	0.0000156	14	jamun	5	1.3	0.0000030
8	Kendu	4	4.0	0.0000031	15	Kendu	11	2.8	0.0000147

9	Kumbhi	2	2.0	0.0000008	16	Khakada	6	1.5	0.0000044
10	Karada	8	8.0	0.0000123	17	Kumbhi	3	0.8	0.0000011
11	Kurein	12	12.0	0.0000277	18	Kusuma	6	1.5	0.0000044
12	Karanja	1	1.0	0.0000002	19	Kurum	1	0.3	0.0000001
13	Kasi	5	5.0	0.0000048	20	Kangada	19	4.8	0.0000439
14	Kuruma	6	6.0	0.0000069	21	Kurein	23	5.8	0.0000644
15	Mai	3	3.0	0.0000017	22	Kuchila	8	2.0	0.0000078
16	Neem	4	4.0	0.0000031	23	Kasi	5	1.3	0.0000030
17	Rai	1	1.0	0.0000002	24	Mahula	4	1.0	0.0000019
18	Siju	1	1.0	0.0000002	25	Mai	6	1.5	0.0000044
19	Sal	35	35.0	0.0002356	26	Patuli	1	0.3	0.0000001
20	Sidha	5	5.0	0.0000048	27	Rai	1	0.3	0.0000001
21	Simili	1	1.0	0.0000002	28	Sal	57	14.3	0.0003955
22	Telkuruma	5	5.0	0.0000048	29	Sidha	13	3.3	0.0000206
	Shrub				30	Sisoo	4	1.0	0.0000019
23	Dhatiki	7	7.0	0.0000094	31	Sunari	5	1.3	0.0000030
24	Gayatulasi	150	150.0	0.0043283	32	Telkuruma	10	2.5	0.0000122
	Herb				33	Tentela	1	0.3	0.0000001
25	Bhuin neem	50	50.0	0.0004809		**Shrub**			
26	Bana piaja	4	4.0	0.0000031	34	Dhatiki	19	4.8	0.0000439
27	Pokasunga	100	100.0	0.0019237	35	Gayatulasi	35	8.8	0.0001491
	Climber				36	Lahalabeli	23	5.8	0.0000644
28	Atundi	13	13.0	0.0000325	37	Putisi	15	3.8	0.0000274
29	Lajakuri	500	500.0	0.0480917		**Herb**			
30	Pani alu	10	10.0	0.0000192	38	Bhuin neem	45	11.3	0.0002465
31	Pita alu	6	6.0	0.0000069	39	Bana piaja	5	1.3	0.0000030
32	Siali	6	6.0	0.0000069	40	Pokasunga	525	131.3	0.0335557
33	Suamalai	18	18.0	0.0000623	41	Talamuli	6	1.5	0.0000044
34	Satabari	6	6.0	0.0000069		**Climber**			
	Grass				42	Atundi	26	6.5	0.0000823
35	Chepti	100	100.0	0.0019237	43	Chermaru	36	9.0	0.0001578
36	Duba	100	100.0	0.0019237	44	Gopakanhu	2	0.5	0.0000005
37	Mutha	75	75.0	0.0010821	45	Pani alu	4	1.0	0.0000019

38	Sinkula	1000	1000.0	0.1923669	46	Siali	10	2.5	0.0000122
	Total	**2280**	**2280.0**	**0.2526504**	47	Suamalai	74	18.5	0.0006667
	Floristic Diversity Index			**0.7473496**	48	Satabari	12	3.0	0.0000175
Patapuri R.F.						**Grass**			
SL No.	**Species**	**S1**	**Average**	**Dominance**	49	Baunsuni	200	50.0	0.0048698
	Trees				50	Chepti	350	87.5	0.0149136
1	Asana	1	1.0	0.0000025	51	Dabachhana	750	187.5	0.0684810
2	Bela	20	20.0	0.0009983	52	Fula	100	25.0	0.0012174
3	Bheru	5	5.0	0.0000624	53	Duba	95	23.8	0.0010987
4	Baincha	30	30.0	0.0022461	54	Mutha	80	20.0	0.0007792

5	Halda	15	15.0	0.0005615	55	Sinkula	180	45.0	0.0039445
6	Kendu	15	15.0	0.0005615		**Bamboo**			
7	Khakada	12	12.0	0.0003594	56	Salia bamboo		0.0	0.0000000
8	Karada	5	5.0	0.0000624		**Total**	**2866**	**716.5**	**0.1310944**
9	Kalchia	10	10.0	0.0002496		**Floristic Diversity Index**			**0.8689056**
10	Kuruma	8	8.0	0.0001597		**Megha R.F.**			
11	Sidha	4	4.0	0.0000399	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
12	Sunari	4	4.0	0.0000399		**Trees**			
13	Simili	12	12.0	0.0003594	1	Ankula	7	7.0	0.0007084
14	Teak	30	30.0	0.0022461	2	Bela	22	22.0	0.0069974
15	Telkuruma	5	5.0	0.0000624	3	Banta	10	10.0	0.0014457
	Shrub				4	Chara	8	8.0	0.0009253
16	Kukurchhatia	3	3.0	0.0000225	5	jamun	4	4.0	0.0002313
	Herb				6	Kendu	30	30.0	0.0130116
17	Pokasunga	200	200.0	0.0998280	7	Khakada	5	5.0	0.0003614
	Climber				8	Karada	4	4.0	0.0002313
18	Atundi	200	200.0	0.0998280	9	Kurein	12	12.0	0.0020819
19	Dudhi	9	9.0	0.0002022	10	Kalchia	10	10.0	0.0014457
20	Khukudia	10	10.0	0.0002496	11	Kuruma	1	1.0	0.0000145
21	Suamalai	15	15.0	0.0005615	12	Sal	15	15.0	0.0032529
	Grass				13	Tentela	9	9.0	0.0011710
22	Baunsuni	10	10.0	0.0002496	14	Telkuruma	16	16.0	0.0037011
23	Sankhua	10	10.0	0.0002496		**Shrub**			
	Total	**633**	**633.0**	**0.2092021**	15	Ghurudu	5	5.0	0.0003614
	Floristic Diversity Index			**0.7907979**	16	Lahalbeli	3	3.0	0.0001301
Koriean R.F.						**Herb**			
SL No.	**Species**	**S1**	**Average**	**Dominance**		**Climber**			
	Trees				17	Atundi	40	40.0	0.0231317
1	Asana	11	11.0	0.0000866	18	Bhadali	5	5.0	0.0003614
2	Amba	1	1.0	0.0000007	19	Chareigudi	8	8.0	0.0009253
3	Bela	1	1.0	0.0000007	20	Dantari	11	11.0	0.0017493
4	Chara	2	2.0	0.0000029	21	Kanteikoli	11	11.0	0.0017493
5	Dhaura	3	3.0	0.0000064		**Grass**			
6	Halda	1	1.0	0.0000007	22	Baunsuni	27	27.0	0.0105394
7	Kendu	3	3.0	0.0000064		**Total**	**263**	**263.0**	**0.0745276**
8	Kumbhi	3	3.0	0.0000064		**Floristic Diversity Index**			0.9254724
9	Kusuma	1	1.0	0.0000007		**Kankadahada R.F.**			
10	Kurein	4	4.0	0.0000115					
11	Karanja	2	2.0	0.0000029	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
12	Kalchia	3	3.0	0.0000064		**Trees**			

13	Mahula	4	4.0	0.0000115	1	Asana	15	15.0	0.0003219
14	Neem	4	4.0	0.0000115	2	Barabakulia	10	10.0	0.0001431
15	Patuli	3	3.0	0.0000064	3	Bela	16	16.0	0.0003663
16	Sal	140	140.0	0.0140288	4	Bahada	3	3.0	0.0000129
17	Sidha	2	2.0	0.0000029	5	Chara	6	6.0	0.0000515
18	Simili	2	2.0	0.0000029	6	Chakhunda	10	10.0	0.0001431
19	Telkuruma	6	6.0	0.0000258	7	Dhaura	15	15.0	0.0003219
	Shrub		0.0	0.0000000	8	Ghontol	9	9.0	0.0001159
20	kumuti	43	43.0	0.0013234	9	Kendu	8	8.0	0.0000916
	Herb		0.0	0.0000000	10	Karada	20	20.0	0.0005723
21	Bhuin neem	10	10.0	0.0000716	11	Kurum	20	20.0	0.0005723
22	Pokasunga	16	16.0	0.0001832	12	Kangada	60	60.0	0.0051510
	Climber		0.0	0.0000000	13	Karanja	10	10.0	0.0001431
23	Atundi	11	11.0	0.0000866	14	Mahula	10	10.0	0.0001431
24	Chermaru	15	15.0	0.0001610	15	Sal	190	190.0	0.0516529
25	Suamalai	19	19.0	0.0002584	16	Sirisa	15	15.0	0.0003219
26	Satabari	21	21.0	0.0003156		**Shrub**			
	Grass				17	Lahalabeli	7	7.0	0.0000701
27	Chepti	420	420.0	0.1262594		**Herb**			
28	Duba	81	81.0	0.0046961	18	Badiamla	4	4.0	0.0000229
29	Sankhua	350	350.0	0.0876801	19	Bhuin neem	55	55.0	0.0043283
	Total	**1182**	**1182.0**	**0.2352576**	20	Banakulatha	13	13.0	0.0002418
	Floristic Diversity Index			**0.7647424**	21	Bana rasuna	3	3.0	0.0000129
Tamanda R.F.						**Climber**			
					22	Atundi	49	49.0	0.0034354
SL No.	**Species**	**S1**	**Average**	**Dominance**	23	Khukundia	30	30.0	0.0012877
	Trees				24	Palasa	5	5.0	0.0000358
1	Bela	2	2.0	0.0000026		**Grass**			
2	Jamun	13	13.0	0.0001090	25	Baunsuni	40	40.0	0.0022893
3	Kendu	50	50.0	0.0016129	26	Chhana	7	7.0	0.0000701
4	Khakada	17	17.0	0.0001864	27	Chepti	23	23.0	0.0007569
5	Kumbhi	1	1.0	0.0000006	28	Mutha	183	183.0	0.0479170
6	Karada	24	24.0	0.0003716		**Total-**	**836**	**836.0**	**0.1205930**
7	Kurein	62	62.0	0.0024800		**Floristic Diversity Index**			0.8794070
8	Kuchila	26	26.0	0.0004361	**JARIPAL R.F.**				
10	Neem	26	26.0	0.0004361	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
11	Patuli	3	3.0	0.0000058		**Trees**			
12	Sidha	4	4.0	0.0000103	1	Asana	23	23.0	0.0001158

13	Sunari	1	1.0	0.0000006	2	Anchu	10	10.0	0.0000219
14	Telekuruma	8	8.0	0.0000413	3	Barabakulia	10	10.0	0.0000219
	Shrub				4	Bela	1	1.0	0.0000002
15	Baincha	6	6.0	0.0000232	5	Chara	20	20.0	0.0000876
16	Lahalabeli	19	19.0	0.0002329	6	Dhaura	5	5.0	0.0000055
17	Salarakanta	1	1.0	0.0000006	7	Dhamana	3	3.0	0.0000020
	Herb				8	Harida	5	5.0	0.0000055
18	Pana airi	4	4.0	0.0000103	9	Kendu	20	20.0	0.0000876
19	Pokasunga	50	50.0	0.0016129	10	Khakada	20	20.0	0.0000876
20	Talamuli	5	5.0	0.0000161	11	Kumbhi	4	4.0	0.0000035
	Climber				12	Kusuma	5	5.0	0.0000055
21	Atundi	253	253.0	0.0412955	13	Karada	10	10.0	0.0000219
22	Dudhi	17	17.0	0.0001864	14	Kurein	30	30.0	0.0001971
23	Dantari	1	1.0	0.0000006	15	Neem	30	30.0	0.0001971
24	Kantei koli	1	1.0	0.0000006	16	Patamasu	1	1.0	0.0000002
25	Kaincha	2	2.0	0.0000026	17	Sal	485	485.0	0.0515080
26	Muturi	8	8.0	0.0000413	18	Tentela	7	7.0	0.0000107
27	Pani alu	100	100.0	0.0064515	19	Telekuruma	60	60.0	0.0007883
28	Pichhuli	4	4.0	0.0000103		**Shrub**			
29	Palasa	4	4.0	0.0000103	20	Baincha	30	30.0	0.0001971
	Grass				21	Dhatiki	10	10.0	0.0000219
30	Chepti	15	15.0	0.0001452	22	Ghurudu	50	50.0	0.0005474
31	Duba	200	200.0	0.0258060	23	Salarakanta	20	20.0	0.0000876
32	Mutha	300	300.0	0.0580636	24	Bhuin neem	500	500.0	0.0547433
	Total-	**1245**	**1245.0**	**0.1398126**	25	Banakulatha	32	32.0	0.0002242
	Floristic Diversity Index			**0.8601874**	26	Pana airi	10	10.0	0.0000219
Belabania R.F.						**Climber**			
SL No.	**Species**	**S1**	**Average**	**Dominance**	27	Atundi	200	200.0	0.0087589
	Trees				28	Baidanka	35	35.0	0.0002682
1	Asana	4	4.0	0.0000130	29	Dudhi	30	30.0	0.0001971
2	Bela	2	2.0	0.0000033	30	Gopakanhu	3	3.0	0.0000020
3	Bheru	1	1.0	0.0000008	31	Muturi	10	10.0	0.0000219
4	Chauli	6	6.0	0.0000293	32	Suamalai	30	30.0	0.0001971
5	Halda	1	1.0	0.0000008		**Grass**			
6	Kendu	25	25.0	0.0005091	33	Baunsuni	39	39.0	0.0003331
7	Khakada	3	3.0	0.0000073	34	Duba	30	30.0	0.0001971
8	Kumbhi	1	1.0	0.0000008	35	Kanusi	300	300.0	0.0197076
9	Karada	4	4.0	0.0000130	36	Mutha	59	59.0	0.0007622
10	Kasi	3	3.0	0.0000073		**Total-**	**2137**	**2137.0**	**0.1394564**
11	Kuruma	2	2.0	0.0000033		**Floristic Diversity Index**			**0.8605436**

12	Mahula	1	1.0	0.0000008
14	Sisoo	4	4.0	0.0000130
15	Tentela	1	1.0	0.0000008
16	Telkuruma	12	12.0	0.0001173
	Shrub			
17	Lahalbeli	7	7.0	0.0000399
	Herb		0.0	0.0000000
18	Bhuin neem	17	17.0	0.0002354
19	Pokasunga	250	250.0	0.0509097
	Climber			
20	Atundi	4	4.0	0.0000130
21	Chermaru	3	3.0	0.0000073
22	Handifuta	1	1.0	0.0000008
23	Kadua	1	1.0	0.0000008
24	Pani alu	3	3.0	0.0000073
25	Suamalai	5	5.0	0.0000204
26	Tunga	2	2.0	0.0000033
	Grass			
27	Baunsuni	310	310.0	0.0782787
28	Chepti	150	150.0	0.0183275
29	Mutha	100	100.0	0.0081456
30	Sinkula	180	180.0	0.0263916
	Total	**1108**	**1108.0**	**0.1831218**
	Floristic Diversity Index			**0.8168782**

Sulia R.F.

SL No.	Species	S1	Average	Dominance
	Trees			
1	Asana	11	11.0	0.0000836
2	Bela	35	35.0	0.0008465
3	Bhalia	10	10.0	0.0000691
4	Bheru	30	30.0	0.0006219
5	Halda	20	20.0	0.0002764
6	Kendu	15	15.0	0.0001555
7	Khakada	50	50.0	0.0017275
8	Kusuma	3	3.0	0.0000062
9	Karada	300	300.0	0.0621887
10	Kuchila	17	17.0	0.0001997
11	Mahula	7	7.0	0.0000339
12	Sal	200	200.0	0.0276394
	Shrub			
13	Banakhajuri	15	15.0	0.0001555
14	Dhatiki	13	13.0	0.0169000
15	Lahalabeli	17	17.0	0.0001997
	Herb			
16	Bhuin neem	11	11.0	0.0000836
17	Pokasunga	80	80.0	0.0044223
18	Sankhua saga	120	120.0	0.0099502
19	Talamuli	13	13.0	0.0001168
	Climber			
20	Atundi	50	50.0	0.0017275
21	Palasa	2	2.0	0.0000028
22	Suamalai	12	12.0	0.0000995
	Grass			
23	Dabachhana	30	30.0	0.0006219
24	Mutha	100	100.0	0.0069099
	Bamboo			
25	Kanta bamboo	42	42.0	0.0012189
	Total-	**1203**	**1203.0**	**0.1362566**
	Floristic Diversity Index			**0.8637434**

Matiamunda R.F.

SL No.	Species	S1	Average	Dominance
	Trees			
1	Asana	20	20.0	0.0001036
2	Chadeigudi	15	15.0	0.0000583
3	Ghontol	10	10.0	0.0000259
4	Halda	11	11.0	0.0000313
5	jamun	30	30.0	0.0002331
6	Karanja	30	30.0	0.0002331
7	Kalicha	10	10.0	0.0000259
8	Mankadakendu	20	20.0	0.0001036
9	Sal	500	500.0	0.0647463
10	Telekuruma	30	30.0	0.0002331
	Shrub			

Matharagadi R.F.

SL No.	Species	S1	Average	Dominance
	Trees			
1	Amba	1	1.0	0.0000017

11	Banakhajuri	5	5.0	0.0000065	2	Chara	6	6.0	0.0000623
12	Baincha	7	7.0	0.0000127	3	Dhaura	2	2.0	0.0000069
13	Dhatiki	15	15.0	0.0000583	4	Halda	2	2.0	0.0000069
14	Lahalabeli	4	4.0	0.0000041	5	Kendu	20	20.0	0.0006925
	Herb				6	Kumbhi	1	1.0	0.0000017
15	Badiamla	100	100.0	0.0025899	7	Kusuma	2	2.0	0.0000069
16	Pokasunga	30	30.0	0.0002331	8	Kurein	8	8.0	0.0001108
17	Pana airi	10	10.0	0.0000259	9	Karanja	2	2.0	0.0000069
	Climber				10	Kalchia	1	1.0	0.0000017
18	Atundi	35	35.0	0.0003173	11	Mahula	1	1.0	0.0000017
19	Bhadali	5	5.0	0.0000065	12	Neem	2	2.0	0.0000069
20	Handifuta	7	7.0	0.0000127	13	Patuli	1	1.0	0.0000017
21	Muturi	3	3.0	0.0000023	14	Sal	122	122.0	0.0257687
22	Pani alu	10	10.0	0.0000259	15	Sidha	3	3.0	0.0000156
23	Suamalai	8	8.0	0.0000166	16	Simili	1	1.0	0.0000017
	Grass				17	Telkuruma	4	4.0	0.0000277
24	Dabachhana	1000	1000.0	0.2589852		**Shrub**			
25	Mutha	20	20.0	0.0001036	18	kumuti	50	50.0	0.0043283
	Bamboo					**Herb**			
26	Kanta bamboo	30	30.0	0.0002331	19	Bhuin neem	11	11.0	0.0002095
	Total-	1965	1965.0	0.3284276	20	Pokasunga	18	18.0	0.0005609
	Floristic Diversity Index			**0.6715724**		**Climber**		0.0	0.0000000
Kotaberena R.F.					21	Atundi	12	12.0	0.0002493
SL No.	**Species**	**S1**	**Average**	**Dominance**	22	Chermaru	25	25.0	0.0010821
	Trees				23	Suamalai	18	18.0	0.0005609
1	Asana	18	18.0	0.0000128	24	Satabari	22	22.0	0.0008380
2	Bela	9	9.0	0.0000032		**Grass**			
3	Baburi	2	2.0	0.0000002	25	Baunsuni	50	50.0	0.0043283
4	Chara	27	27.0	0.0000288	26	Chepti	75	75.0	0.0097386
5	Dhaura	7	7.0	0.0000019	27	Duba	50	50.0	0.0043283
6	Guhira	11	11.0	0.0000048	28	Sankhua	250	250.0	0.1082064
7	Ghuntala	2	2.0	0.0000002		**Total**	**760**	**760.0**	**0.1611530**
8	Halda	6	6.0	0.0000014		**Floristic Diversity Index**			**0.8388470**
9	jamun	8	8.0	0.0000025					
10	Kendu	100	100.0	0.0003946					
11	Khakada	10	10.0	0.0000039					
12	Kumbhi	3	3.0	0.0000004					
13	Kurein	20	20.0	0.0000158					
14	Kalchia	5	5.0	0.0000010					
15	Mahula	15	15.0	0.0000089					
16	Rohini	4	4.0	0.0000006					
17	Sal	34	34.0	0.0000456					

18	Telkuruma	8	8.0	0.0000025
	Shrub			
19	Dhatiki	13	13.0	0.0000067
	Herb			
20	Bhuin neem	24	24.0	0.0000227
21	Pokasunga	100	100.0	0.0003946
	Climber			
22	Atundi	12	12.0	0.0000057
23	Bhadali	7	7.0	0.0000019
24	Gopakanhu	8	8.0	0.0000025
25	Pani alu	10	10.0	0.0000039
26	Pichhuli	3	3.0	0.0000004
27	Pita alu	6	6.0	0.0000014
28	Suamalai	34	34.0	0.0000456
29	Satabari	3	3.0	0.0000004
	Grass			
30	Baguli	775	775.0	0.0237016
31	Dabachhana	1500	1500.0	0.0887884
32	Duba	2250	2250.0	0.1997738
	Total	**5034**	**5034.0**	**0.3132787**
	Floristic Diversity Index			**0.6867213**

SADANGI RANGE

Sadangi 'A' R.F.					Sadangi 'B' R.F.				
SL No.	**Species**	**S1**	**Average**	**Dominance**	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
	Trees					**Trees**			
1	Asana	10	10.0	0.0001166	1	Asana	10	10.0	0.0006782
2	Anchhu	7	7.0	0.0000571	2	Bela	6	6.0	0.0002441
3	Bela	6	6.0	0.0000420	3	Chara	40	40.0	0.0108507
4	Bheru	17	17.0	0.0003370	4	Dhaura	3	3.0	0.0000610
5	Baincha	11	11.0	0.0001411	5	jamun	24	24.0	0.0039063
6	Chara	40	40.0	0.0018659	6	Kendu	9	9.0	0.0005493
7	Dhaura	3	3.0	0.0000105	7	Kuruma	6	6.0	0.0002441
8	Giringa11	3	3.0	0.0000105		**Shrub**			
9	Gangasiuli	21	21.0	0.0005143	8	Dhatiki	15	15.0	0.0015259
10	Halda	4	4.0	0.0000187		**Herb**			
11	jamun	24	24.0	0.0006717	9	Bhuineem	111	111.0	0.0835571
12	Jaisandha	1	1.0	0.0000012	10	Pokasungha	135	135.0	0.1235962
13	Kendu	9	9.0	0.0000945		**Climber**			
14	Khakada	65	65.0	0.0049273	11	Atundi	12	12.0	0.0009766
15	Kalchia	12	12.0	0.0001679	12	Tankua	13	13.0	0.0011461
16	Kataka	2	2.0	0.0000047		**Grass**			
17	Kuruma	6	6.0	0.0000420	13	Bausuni	35	35.0	0.0083076
18	Mahula	30	30.0	0.0010496	14	Mutha	150	150.0	0.1525879
19	Sal	400	400.0	0.1865941		**Total**	**569**	**384.0**	**0.3882311**
20	Sahada	2	2.0	0.0000047		**Floristic Diversity Index**			**0.6117689**
21	Sidha	18	18.0	0.0003779	**Lahada 'A'R.F.**				
22	Sunari	4	4.0	0.0000187	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
23	Telkuruma	37	37.0	0.0015965		**Trees**			
	Shrub				1	Asana	10	10.0	0.0001176
24	Potua	6	6.0	0.0000420	2	Chara	17	17.0	0.0003400
	Herb		0.0	0.0000000	3	Dhaura	11	11.0	0.0001423
25	Bhuin neem	14	14.0	0.0002286	4	Harida	1	1.0	0.0000012
26	Bisakhapuri	4	4.0	0.0000187	5	jamun	2	2.0	0.0000047
27	Pokasunga	42	42.0	0.0020572	6	Kendu	19	19.0	0.0004247
	Climber				7	Khakada	12	12.0	0.0001694
28	Atundi	22	22.0	0.0005644	8	Kumbhi	1	1.0	0.0000012
29	Bichhuati	16	16.0	0.0002986	9	Kusuma	1	1.0	0.0000012
30	Fukundia	7	7.0	0.0000571	10	Karada	14	14.0	0.0002306
31	Khukundia	45	45.0	0.0023616	11	Kurein	8	8.0	0.0000753
32	Pani alu	12	12.0	0.0001679	12	Kuruma	2	2.0	0.0000047
33	Pichhuli	2	2.0	0.0000047	13	Sal	206	206.0	0.0499198
34	Suamalai	12	12.0	0.0001679	14	Sidha	6	6.0	0.0000423
35	Satabari	12	12.0	0.0001679	15	Telkuruma	4	4.0	0.0000188
	Total	**926**	**926.0**	**0.2048011**		**Shrub**			

	Floristic Diversity Index			**0.7951989**	16	Dhatiki	20	20.0	0.0004705
Lahada 'B'R.F.						**Herb**			
SL No.	**Species**	**S1**	**Average**	**Dominance**	17	Bhuin neem	16	16.0	0.0003011
	Trees				18	Bana piaja	44	44.0	0.0022774
1	Amla	2	2.0	0.0000071	19	Banakolatha	110	110.0	0.0142339
2	Anchhu	2	2.0	0.0000071	20	Pokasunga	80	80.0	0.0075287
3	Bela	30	30.0	0.0016086		**Climber**			
4	Bahada	3	3.0	0.0000161	21	Atundi	8	8.0	0.0000753
5	Chara	5	5.0	0.0000447	22	Dudhi	17	17.0	0.0003400
6	Dhamana	2	2.0	0.0000071	23	Pani alu	5	5.0	0.0000294
7	Giringa	4	4.0	0.0000286	24	Suamalai	13	13.0	0.0001988
8	jamun	1	1.0	0.0000018		**Grass**			
9	Kendu	20	20.0	0.0007149	25	Baunsuni	45	45.0	0.0023821
10	Khakada	15	15.0	0.0004021	26	Chepti	100	100.0	0.0117635
11	Karada	109	109.0	0.0212349	27	Mutha	150	150.0	0.0264680
12	Kurein	54	54.0	0.0052118		**Total**	**922**	**922.0**	**0.1175625**
13	Kangada	19	19.0	0.0006452		**Floristic Diversity Index**			**0.8824375**
14	Mai	3	3.0	0.0000161	**Ashwakhola R.F.**				
16	Neem	1	1.0	0.0000018	**SL No.**	**Species**	**S1 to S6**	**Average**	**Dominance**
17	Sidha	3	3.0	0.0000161		**Trees**			
18	Sunari	10	10.0	0.0001787	1	Asana	22	3.7	0.0000349
19	Telkuruma	4	4.0	0.0000286	2	Anchu	20	3.3	0.0000288
	Shrub				3	Amba	6	1.0	0.0000026
20	Kukurchhatia	18	18.0	0.0005791	4	Ankula	14	2.3	0.0000141
21	Lahalbeli	20	20.0	0.0007149	5	Bela	67	11.2	0.0003237
	Herb				6	Bentha	11	1.8	0.0000087
22	Bhuin neem	30	30.0	0.0016086	7	Bahada	5	0.8	0.0000018
23	Pokasunga	90	90.0	0.0144771	8	Bhalia	2	0.3	0.0000003
	Climber				9	Bara	2	0.3	0.0000003
24	Atundi	25	25.0	0.0011171	10	Bheru	4	0.7	0.0000012
25	Chermaru	20	20.0	0.0007149	11	Bandhan	2	0.3	0.0000003
26	Suamalai	7	7.0	0.0000876	12	Chara	42	7.0	0.0001272
	Grass				13	Chauli	8	1.3	0.0000046
27	Baunsuni	150	150.0	0.0402142	14	Dhaura	18	3.0	0.0000234
28	Chepti	100	100.0	0.0178730	15	Dhamana	10	1.7	0.0000072
	Total	**748**	**748.0**	**0.1075596**	16	Dimiri	1	0.2	0.0000001
	Floristic Diversity Index			**0.8924404**	17	Giringa	38	6.3	0.0001041
Raigoda R.F.					18	Gandha palasa	1	0.2	0.0000001
SL No.	**Species**	**S1**	**Average**	**Dominance**	19	Ghontol	7	1.2	0.0000035
	Trees				20	Gangasiuli	80	13.3	0.0004615

1	Asana	7	7.0	0.0009509	21	Harida	2	0.3	0.0000003
2	Amla	4	4.0	0.0003105	22	Halda	53	8.8	0.0002026
3	Anchhu	2	2.0	0.0000776	23	jamun	5	0.8	0.0000018
4	Bela	2	2.0	0.0005183	24	Kendu	24	4.0	0.0000415
5	Bahada	15	15.0	0.0043665	25	Khakada	57	9.5	0.0002343
6	Chareigudi	12	12.0	0.0027945	26	Kumbhi	20	3.3	0.0000288
7	Dhamana	31	31.0	0.0186497	27	Kusuma	9	1.5	0.0000058
8	Giringa	3	3.0	0.0001747	28	Karada	121	20.2	0.0010557
9	Kendu	2	2.0	0.0000776	29	Kurum	30	5.0	0.0000649
10	Kumbhi	5	5.0	0.0004852	30	Kangada	115	19.2	0.0009536
11	Kusuma	3	3.0	0.0001747	31	Kurein	28	4.7	0.0000565
12	Kurein	18	18.0	0.0062877	32	Katak	9	1.5	0.0000058
13	Kalchia	31	31.0	0.0186497	33	Kuchila	15	2.5	0.0000162
14	Kangada	12	12.0	0.0027945	34	Kasi	8	1.3	0.0000046
15	Kuruma	18	18.0	0.0062877	35	Mahula	11	1.8	0.0000087
16	Mai	8	8.0	0.0012420	36	Mai	26	4.3	0.0000487
17	Neem	7	7.0	0.0009509	37	Phanphana	4	0.7	0.0000012
18	Patuli	7	7.0	0.0009509	38	Patuli	12	2.0	0.0000104
19	Siris	5	5.0	0.0004852	39	Sal	360	60.0	0.0093451
20	Sidha	2	2.0	0.0000776	40	Sidha	9	1.5	0.0000058

21	Sunari	1	1.0	0.0000194	41	Sunari	16	2.7	0.0000185
	Shrub				42	Simili	2	0.3	0.0000003
22	Lahalbeli	10	10.0	0.0019407	43	Tentela	19	3.2	0.0000260
	Herb				44	Telekuruma	48	8.0	0.0001661
	Climber		0.0	0.0000000		**Shrub**			0.0000000
23	Bhadali	2	2.0	0.0000776	45	Baincha	24	4.0	0.0000415
24	Handifuta	3	3.0	0.0001747	46	Dhatiki	4	0.7	0.0000012
25	Siali	12	12.0	0.0027945	47	Dalsinga	7	1.2	0.0000035
26	Suamalai	5	5.0	0.0004852	48	Hadakankali	3	0.5	0.0000006
	Grass		0.0	0.0000000	49	Lahalabeli	37	6.2	0.0000987
	Total	**227**	**227.0**	**0.0717985**	50	Mura	10	1.7	0.0000072
	Floristic Diversity Index			**0.9282015**	51	Mamuri	7	1.2	0.0000035
Gondia R.F.					52	Salarakanta	11	1.8	0.0000087
SL No.	**Species**	**S1**	**Average**	**Dominance**		**Herb**			0.0000000
	Trees				53	Bhuin neem	3	0.5	0.0000006
1	Asana	34	34.0	0.0007100	54	Bana ulua	3	0.5	0.0000006
2	Bela	3	3.0	0.0000055	55	Bana piaja	13	2.2	0.0000122
3	Baincha	3	3.0	0.0000055	56	Bana sorisa	110	18.3	0.0008725
4	Kendu	15	15.0	0.0001382	57	Pokasunga	330	55.0	0.0078525
5	Kurein	32	32.0	0.0006289		**Climber**			

6	Mahula	17	17.0	0.0001775	58	Atundi	201	33.5	0.0029132
7	Sal	350	350.0	0.0752376	59	Bhadali	26	4.3	0.0000487
8	Sunari	3	3.0	0.0000055	60	Bhuinkakharu	2	0.3	0.0000003
9	Telkuruma	47	47.0	0.0013567	61	Handifuta	2	0.3	0.0000003
10	**Shrub**				62	Kantei koli	20	3.3	0.0000288
11	Banakhajuri	6	6.0	0.0000221	63	Khukundia	12	2.0	0.0000104
12	Dhatiki	17	17.0	0.0001775	64	Pani alu	32	5.3	0.0000738
13	Lahalbeli	15	15.0	0.0001382	65	Pichhuli	19	3.2	0.0000260
	Herb				66	Siali	6	1.0	0.0000026
14	Pokasunga	140	140.0	0.0120380	67	Suamalai	69	11.5	0.0003433
	Climber		0.0	0.0000000	68	Tunga	2	0.3	0.0000003
15	Atundi	37	37.0	0.0008408	69	Tankua nai	60	10.0	0.0002596
16	Suamalai	8	8.0	0.0000393		**Grass**			
	Grass				70	Baunsuni	151	25.2	0.0016441
17	Baunsuni	90	90.0	0.0049749	71	Dhanwantari	12	2.0	0.0000104
18	Chepti	4	4.0	0.0000098	72	Duba	30	5.0	0.0000649
19	Mutha	155	155.0	0.0147558	73	Kanusi	137	22.8	0.0013534
20	Sankhua	300	300.0	0.0552766	74	Mutha	1018	169.7	0.0747268
	Total	**1276**	**1276.0**	**0.1665385**		**Total-**	**3724**	**620.7**	**0.1038624**
	Floristic Diversity Index			**0.8334615**		**Floristic Diversity Index**			**0.8961376**

Baliposhi R.F.					**Nischinta R.F.**				
SL No.	**Species**	**S1**	**Average**	**Dominance**	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
	Trees				1	jamun	2	2.0	0.0000048
1	Baincha	3	3.0	0.0000098	2	Kendu	4	4.0	0.0000191
2	Kurein	50	50.0	0.0027297	3	Kurein	9	9.0	0.0000967
3	Kuchila	25	25.0	0.0006824	4	Kochila	7	7.0	0.0000585
4	Neem	1	1.0	0.0000011	5	Neem	5	5.0	0.0000299
5	Palm	3	3.0	0.0000098	6	Sahada	11	11.0	0.0001445
6	Sahada	15	15.0	0.0002457		**Shrub**			
7	Teak	10	10.0	0.0001092	7	Jahngi	40	40.0	0.0066488
	Shrub				8	Nabajada	50	50.0	0.0029861
8	Lanka jada	30	30.0	0.0009827		**Herb**			
	Climber				9	Apamarga	20	20.0	0.0004778
9	Suamalai	20	20.0	0.0004368	10	Banamalli	12	12.0	0.0001720
	Grass				11	Banakolatha		0.0	0.0000000
10	Sinkula	800	800.0	0.6988052	12	Jatajatia	30	30.0	0.0010750
	Total-	957	957.0	0.7040123	13	Pokasunga	100	100.0	0.0119442
	Floristic Diversity Index			**0.2959877**		**Climber**			

Raitola R.F					14	Lajakuri	100	100.0	0.0119442
SL No.	**Species**	**S1**	**Average**	**Dominance**		**Grass**			
	Trees				15	Baunsuni	250	250.0	0.0746514
1	Asana	3	3.0	0.0000046	16	Chepti	150	150.0	0.0268745
2	Ankula	1	1.0	0.0000005	17	Gujgujia	80	80.0	0.0076443
3	Bela	6	6.0	0.0000183	18	Kenasuri	45	45.0	0.0024187
4	Bahada	3	3.0	0.0000046		**Total**	**915**	**915.0**	**0.1471905**
5	Bhalia	1	1.0	0.0000005	**Bega R.F.**				
6	Chara	3	3.0	0.0000046	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
7	Harida	2	2.0	0.0000020		**Trees**			
8	jamun	1	1.0	0.0000005	1	Anchhu	2	2.0	0.0000031
9	Kumbhi	4	4.0	0.0000081	2	Bela	25	25.0	0.0004784
10	Mahula	4	4.0	0.0000081	3	Bhalia	5	5.0	0.0000191
11	Mai	2	2.0	0.0000020	4	Guhira	11	11.0	0.0000926
12	Piasal	1	1.0	0.0000005	5	Giringa	11	11.0	0.0000926
13	Sal	220	220.0	0.0245534	6	Halda	4	4.0	0.0000122
14	Sidha	2	2.0	0.0000020	7	Kendu	8	8.0	0.0000490
	Shrub				8	Kumbhi	2	2.0	0.0000031
15	Fuluri	5	5.0	0.0000127	9	Kurein	7	7.0	0.0000375
16	Gandhiri	3	3.0	0.0000046	10	Kalchia	19	19.0	0.0002763
17	Khukundia	4	4.0	0.0000081	11	Neem	8	8.0	0.0000490
	Herb				12	Sahada	12	12.0	0.0001102
18	Bana piaja	3	3.0	0.0000046	13	Simili	3	3.0	0.0000069
	Climber				14	Telkuruma	45	45.0	0.0015500
18	Atundi	25	25.0	0.0003171		**Shrub**			
20	Pani alu	2	2.0	0.0000020	15	Dhatiki	8	8.0	0.0000490
21	Suamalai	3	3.0	0.0000046		**Herb**			
	Grass				16	Apamarga	15	15.0	0.0001722
22	Duba	30	30.0	0.0004566	17	Bana piaja	9	9.0	0.0000620
23	Mutha	1016	1016.0	0.5236646	18	Pokasunga	70	70.0	0.0037506
24	Tantua	60	60.0	0.0018263	19	Talamuli	22	22.0	0.0003705
	Total-	**1404**	**1404.0**	**0.5509107**		**Climber**			
	Floristic Diversity Index			**0.4490893**	20	Atundi	20	20.0	0.0003062
Rupabalia R.F.					21	Chermaru	50	50.0	0.0019136
					22	Kaincha	10	10.0	0.0000765
SL No.	**Species**	**S1**	**Average**	**Dominance**	23	Suamalai	27	27.0	0.0005580
	Trees					**Grass**		0.0	0.0000000
1	Asana	12	12.0	0.0002981	24	Baunsuni	150	150.0	0.0172223
2	Anchu	6	6.0	0.0000745	25	Chepti	150	150.0	0.0172223

3	Barabakulia	2	2.0	0.0000083
4	Bela	11	11.0	0.0002505
5	Chauli	4	4.0	0.0000331
6	jamun	4	4.0	0.0000331
7	Kendu	15	15.0	0.0004658
8	Khakada	13	13.0	0.0003499
9	Karada	17	17.0	0.0005983
10	Kangada	12	12.0	0.0002981
11	Kurein	9	9.0	0.0001677
12	Mai	4	4.0	0.0000331
13	Neem	12	12.0	0.0002981
14	Sal	150	150.0	0.0465814
15	Sunari	4	4.0	0.0000331
16	Telekuruma	16	16.0	0.0005300
	Shrub			
17	Jajangi	9	9.0	0.0001677
18	Lahalabeli	29	29.0	0.0017411
	Herb			
19	Bhuin neem	100	100.0	0.0207029
20	Pokasunga	116	116.0	0.0278578
21	Sankhua saga	70	70.0	0.0101444
	Climber			
22	Atundi	20	20.0	0.0008281
23	Bhadali	20	20.0	0.0008281
24	Kantei koli	21	21.0	0.0009130
25	Pani alu	8	8.0	0.0001325
26	Siali	5	5.0	0.0000518
27	Suamalai	6	6.0	0.0000745
	Total-	**695**	**695.0**	**0.1134952**
	Floristic Diversity Index			**0.8865048**

KAPILAIS RANGE

Ramei R.F.

SL No.	Species	S1 to S4	Average	Dominance
	Trees			
1	Asana	139	34.8	0.0064333
2	Anchu	16	4.0	0.0000852
3	Amla	9	2.3	0.0000270
4	Bela	23	5.8	0.0001761
5	Bahada	10	2.5	0.0000333
26	Fulafuti	200	200.0	0.0306173
27	Sinkula	250	250.0	0.0478396
	Total	1143	1143.0	0.1229401
	Floristic Diversity Index			**0.8770599**

Khankira R.F.

SL No.	Species	S1	Average	Dominance
	Trees			
1	Bela	2	2.0	0.0000063
2	Kalichia	11	11.0	0.0001919
3	Khakada	12	12.0	0.0002284
4	Kumbhi	1	1.0	0.0000016
5	Karada	13	13.0	0.0002681
6	Kurein	74	74.0	0.0086861
7	Sunari	7	7.0	0.0000777
	Shrub			
8	Baincha	18	18.0	0.0005139
9	Kukurchatia	40	40.0	0.0025379
10	Lahalabeli	46	46.0	0.0033564
11	Salarakanta	2	2.0	0.0000063
	Herb			
12	Bhuineem	50	50.0	0.0039655
13	Dhatiki	24	24.0	0.0009137
14	Pokasungha	113	113.0	0.0202542
	Climber			
15	Atundi	82	82.0	0.0106656
16	Gilo	17	17.0	0.0004584
17	Kantei koli	3	3.0	0.0000143
18	Pani alu	10	10.0	0.0001586
19	Suamalai	13	13.0	0.0002681
	Grass			
20	Baunsuani	56	56.0	0.0049743
21	Mutha	200	200.0	0.0634482
	Total-	**794**	**794.0**	**0.1209956**
	Floristic Diversity Index			**0.8790044**

6	Bara	2	0.5	0.0000013
7	Bheru	21	5.3	0.0001468
8	Chara	63	15.8	0.0013216
9	Dhaura	33	8.3	0.0003626
10	Harida	5	1.3	0.0000083
11	Halda	18	4.5	0.0001079
12	Jaisandha		0.0	0.0000000
13	jamun	23	5.8	0.0001761
14	Kendu	59	14.8	0.0011591
15	Khakada	48	12.0	0.0007672
16	Kumbhi	3	0.8	0.0000030
17	Kusuma	10	2.5	0.0000333
18	Kurum	8	2.0	0.0000213
19	Kangada	48	12.0	0.0007672
20	Kurein	46	11.5	0.0007046
21	Mahula	62	15.5	0.0012799
22	Mundi		0.0	0.0000000
23	Mai	6	1.5	0.0000120
24	Piasal	12	3.0	0.0000479
25	Rohini	18	4.5	0.0001079
26	Sal	630	157.5	0.1321551
27	Sidha	60	15.0	0.0011987
28	Tentela	48	12.0	0.0007672
29	Telekuruma	57	14.3	0.0010818
	Shurb			
30	Ghurudu	27	6.8	0.0002427
31	Mamuri	7	1.8	0.0000163
	Herb			
32	Pokasunga	11	2.8	0.0000403
33	Bhuin neem	11	2.8	0.0000403
	Climber			
34	Atundi	42	10.5	0.0005874
35	Kantei koli	2	0.5	0.0000013
36	Pani alu	35	8.8	0.0004079
37	Suamalai	21	5.3	0.0001468
	Grass			
38	Dabachhana	100	25.0	0.0033297
	Total-	**1733**	**433.3**	**0.1537984**
	Floristic Diversity Index			**0.8462016**

K.NAGARA (WEST) RANGE

Sunajhari R.F.					Anlabereni R.F.				
SL No.	**Species**	**S1 to S5**	**Average**	**Dominance**	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
	Trees					**Trees**			
2	Ankula	2	0.4	0.0000003	1	Asana	4	4.0	0.0000114
3	Barabakulia	2	0.4	0.0000003	2	Ankula	7	7.0	0.0000348
4	Bela	11	2.2	0.0000089	3	Bela	2	2.0	0.0000028
5	Bahada	6	1.2	0.0000026	4	Bahada	1	1.0	0.0000007
6	Bhalia	1	0.2	0.0000001	5	Bheru	3	3.0	0.0000064
7	Bheru	17	3.4	0.0000212	6	Baincha	8	8.0	0.0000454
8	Banta	10	2.0	0.0000073	7	Dhaura	6	6.0	0.0000256
9	Chara	27	5.4	0.0000536	8	Harida	1	1.0	0.0000007
10	Dhaura	21	4.2	0.0000324	9	Kendu	5	5.0	0.0000177
11	Damaghurudu	5	1.0	0.0000018	10	Khakada	5	5.0	0.0000177
12	Fasi	1	0.2	0.0000001	11	Mahula	7	7.0	0.0000348
13	Gambhar	2	0.4	0.0000003	12	Sal	50	50.0	0.0017743
14	Halda	9	1.8	0.0000060	13	Telkuruma	7	7.0	0.0000348
15	jamun	9	1.8	0.0000060		**Shrub**			
16	Kendu	32	6.4	0.0000752	14	Dhatiki	5	5.0	0.0000177
17	Khakada	3	0.6	0.0000007	15	Ghurudu	7	7.0	0.0000348
18	Kumbhi	6	1.2	0.0000026	16	Lahalbeli	21	21.0	0.0003130
19	Kusuma	6	1.2	0.0000026	17	Salarakanta	10	10.0	0.0000710
20	Karada	46	9.2	0.0001555		**Herb**			
21	Kurein	33	6.6	0.0000800	18	Bhuin neem	22	22.0	0.0003435
22	Karanja	1	0.2	0.0000001	19	Bana piaja	17	17.0	0.0002051
23	Kuchila	8	1.6	0.0000047	20	Banakolatha	12	12.0	0.0001022
24	Kasi	11	2.2	0.0000089	21	Pokasunga	200	200.0	0.0283896
25	Kantasira	2	0.4	0.0000003	22	Talamuli	3	3.0	0.0000064
26	Kataranga	1	0.2	0.0000001		**Climber**			
27	Mahula	5	1.0	0.0000018	23	Atundi	5	5.0	0.0000177
28	Mai	8	1.6	0.0000047	24	Bichhuati	2	2.0	0.0000028
29	Makarakenda	2	0.4	0.0000003	25	Chermaru	14	14.0	0.0001391
30	Neem	1	0.2	0.0000001	26	Handifuta	3	3.0	0.0000064
31	Piasal	2	0.4	0.0000003	27	Pani alu	16	16.0	0.0001817
32	Rai	2	0.4	0.0000003	28	Pita alu	11	11.0	0.0000859
33	Sal	409	81.8	0.0122922	29	Suamalai	8	8.0	0.0000454
34	Sidha	18	3.6	0.0000238	30	Satabari	5	5.0	0.0000177
35	Sisoo	3	0.6	0.0000007		**Grass**		0.0	0.0000000
36	Sunari	1	0.2	0.0000001	31	Baunsuni	110	110.0	0.0085878
37	Simili	5	1.0	0.0000018	32	Chepti	230	230.0	0.0375452
38	Telkuruma	24	4.8	0.0000423	33	Duba	80	80.0	0.0045423
39	Tentela	5	1.0	0.0000018	34	Mutha	100	100.0	0.0070974
	Shrub				35	Sinkula	200	200.0	0.0283896
40	Banakhajuri	2	0.4	0.0000003		Total	1187	1187.0	0.1181495

41	Dhatiki	19	3.8	0.0000265		**Floristic Diversity Index**			**0.8818505**
42	Ghurudu	13	2.6	0.0000124		**Kadalipal R.F.**			
44	Lahalbeli	55	11.0	0.0002223	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
45	Salarakanta	5	1.0	0.0000018		**Trees**			
	Herb				1	Bela	4	4.0	0.0002623
46	Bhuin neem	77	15.4	0.0004357	2	Chara	1	1.0	0.0000164
47	Bana piaja	2	0.4	0.0000003	3	Khakada	5	5.0	0.0004098

48	Pokasunga	625	125.0	0.0287040	4	Kusuma	8	8.0	0.0010490
49	Talamuli	8	1.6	0.0000047	5	Mai	1	1.0	0.0000164
	Climber				6	Palasa	1	1.0	0.0000164
50	Atundi	55	11.0	0.0002223	7	Sal	70	70.0	0.0803160
51	Chermaru	18	3.6	0.0000238	8	Telekuruma	6	6.0	0.0005901
52	Gopakanhu	6	1.2	0.0000026		**Shrub**			
53	Muturi	12	2.4	0.0000106	9	Dhatiki	5	5.0	0.0004098
54	Pani alu	25	5.0	0.0000459	10	Urguna	10	10.0	0.0016391
55	Palasa	2	0.4	0.0000003		**Climber**			
56	Pita alu	2	0.4	0.0000003	11	Atundi	10	10.0	0.0016391
57	Siali	4	0.8	0.0000012	12	Kaincha	1	1.0	0.0000164
58	Suamalai	86	17.2	0.0005435	13	Pani alu	15	15.0	0.0036880
59	Satabari	21	4.2	0.0000324	14	Suamalai	10	10.0	0.0016391
	Grass					**Grass**			
60	Chepti	370	74.0	0.0100597	15	Mutha	100	100.0	0.1639102
61	Dabachhana	400	80.0	0.0117572		**Total-**	**247**	**247.0**	**0.2556180**
62	Duba	380	76.0	0.0106108		**Floristic Diversity Index**			**0.7443820**
63	Mutha	145	29.0	0.0015450		**Machhia R.F.**			
64	Sinkula	550	110.0	0.0222284	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
	Total	**3689**	**737.8**	**0.0995176**		**Trees**			
	Floristic Diversity Index			**0.9004824**	1	Asana	11	11.0	0.0000786
	Kankili R.F.				2	Barabakulia	5	5.0	0.0000162
					3	Bela	3	3.0	0.0000058
SL No.	**Species**	**S1 to S2**	**Average**	**Dominance**	4	Bahada	4	4.0	0.0000104
	Trees				5	Bheru	2	2.0	0.0000026
1	Asana	40	20.0	0.0008234	6	Baincha	4	4.0	0.0000104
2	Anchu	4	2.0	0.0000082	7	Chara	14	14.0	0.0001273
3	Acacia	20	10.0	0.0002058	8	Dhaura	8	8.0	0.0000416
4	Bheru	10	5.0	0.0000515	9	Halda	6	6.0	0.0000234
5	Chara	66	33.0	0.0022416	10	Harida	1	1.0	0.0000006
6	Dhaura	18	9.0	0.0001667	11	jamun	4	4.0	0.0000104

7	Guhira	17	8.5	0.0001487	12	Kendu	22	22.0	0.0003143
8	jamun	18	9.0	0.0001667	13	Khakada	10	10.0	0.0000649
9	Kendu	68	34.0	0.0023795	14	Kumbhi	2	2.0	0.0000026
10	Khaira	16	8.0	0.0001317	15	Kusuma	1	1.0	0.0000006
11	Kurum	4	2.0	0.0000082	16	Kurein	16	16.0	0.0001662
12	Kurein	23	11.5	0.0002722	17	Kalchia	5	5.0	0.0000162
13	Mahula	38	19.0	0.0007431	18	Mai	3	3.0	0.0000058
14	Mai	7	3.5	0.0000252	19	Sal	50	50.0	0.0016233
15	Neem	1	0.5	0.0000005	20	Sunari	4	4.0	0.0000104
16	Sal	313	156.5	0.0504154	21	Simili	2	2.0	0.0000026
17	Sisoo	1	0.5	0.0000005	22	Teak	30	30.0	0.0005844
18	Teak	8	4.0	0.0000329	23	Telkuruma	6	6.0	0.0000234
19	Telekuruma	174	87.0	0.0155802		**Shrub**			
	Shrub				24	Dhatiki	8	8.0	0.0000416
20	Banakhajuri	107	53.5	0.0058917	25	Gayatulasi	35	35.0	0.0007954
21	Dhatiki	81	40.5	0.0033763	26	Lahalbeli	12	12.0	0.0000935
22	Ghurudu	33	16.5	0.0005604	27	Salarakanta	4	4.0	0.0000104
	Herb				28	Urguna	4	4.0	0.0000104
23	Pokasunga	180	90.0	0.0166732		**Herb**			

	Climber				29	Banakolatha	10	10.0	0.0000649
24	Suamalai	23	11.5	0.0002722	30	Pokasunga	250	250.0	0.0405823
	Grass					**Climber**			
25	Dabachhana	124	62.0	0.0079126	31	Atundi	10	10.0	0.0000649
	Total-	**1394**	**697.0**	**0.1080888**	32	Bichhuati	8	8.0	0.0000416
	Biodiversity Index			**0.8919112**	33	Bhadali	2	2.0	0.0000026
Madhi R.F.					34	Chermaru	22	22.0	0.0003143
SL No.	**Species**	**S1**	**Average**	**Dominance**	35	Gopakanhu	3	3.0	0.0000058
	Trees				36	Handifuta	8	8.0	0.0000416
1	Asana	1	1.0	0.0000108	37	Muturi	15	15.0	0.0001461
2	Amla	7	7.0	0.0000243	38	Pani alu	7	7.0	0.0000318
3	Anchhu	4	4.0	0.0000079	39	Pita alu	4	4.0	0.0000104
4	Bela	16	16.0	0.0001271	40	Suamalai	20	20.0	0.0002597
5	Bahada	3	3.0	0.0000045	41	Satabari	6	6.0	0.0000234
6	Bhalia	12	12.0	0.0000715		**Grass**			
7	Bheru	24	24.0	0.0002861	42	Baunsuni	120	120.0	0.0093502
8	Chara	11	11.0	0.0000601	43	Chepti	180	180.0	0.0210379
9	Dhaura	8	8.0	0.0000318	44	Duba	50	50.0	0.0016233
10	Guhira	3	3.0	0.0000045	45	Mutha	100	100.0	0.0064932
11	Gambhar	2	2.0	0.0000020	46	Sinkula	150	150.0	0.0146096
12	Halda	2	2.0	0.0000020		**Total**	**1241**	**1241.0**	**0.0987968**
13	Harida	1	1.0	0.0000005		**Floristic Diversity Index**			**0.9012032**

14	jamun	6	6.0	0.0000179	**Anantapur R.F.**				
15	Kendu	19	19.0	0.0001793	**SL No.**	**Species**	**S1 to S 67**	**Average**	**Dominance**
16	Kumbhi	3	3.0	0.0000045		**Trees**			
17	Karada	17	17.0	0.0001435	1	Asana	3384	50.5	0.0012891
18	Kurein	47	47.0	0.0010971	2	Amba	7	0.1	0.0000000
19	Mahula	29	29.0	0.0004177	3	Ambeda	17	0.3	0.0000000
20	Mai	15	15.0	0.0001117	4	Amla	194	2.9	0.0000042
21	Neem	5	5.0	0.0000124	5	Arjuna	5	0.1	0.0000000
22	Piasal	2	2.0	0.0000020	6	Anchhu	133	2.0	0.0000020
23	Rohini	18	18.0	0.0001609	7	Barabakulia	440	6.6	0.0000218
24	Rai	3	3.0	0.0000045	8	Bela	123	1.8	0.0000017
25	Sidha	11	11.0	0.0000601	9	Bahada	116	1.7	0.0000015
26	Sisoo	3	3.0	0.0000045	10	Bhalia	37	0.6	0.0000002
27	Sunari	6	6.0	0.0000179	11	Bheru	214	3.2	0.0000052
28	Teak	2	2.0	0.0000020	12	Baincha	196	2.9	0.0000043
29	Tentela	7	7.0	0.0000243	13	Bandhan	9	0.1	0.0000000
30	Telkuruma	21	21.0	0.0002190	14	Banta	13	0.2	0.0000000
	Shrub				15	Chara	1825	27.2	0.0003749
31	Bajramuli	8	8.0	0.0000318	16	Chauli	11	0.2	0.0000000
32	Dhatiki	8	8.0	0.0000318	17	Chadeigudi	18	0.3	0.0000000
33	Ghurudu	13	13.0	0.0000839	18	Chhatian	1	0.0	0.0000000
34	Salarakanta		0.0	0.0000000	19	Dhaura	1357	20.3	0.0002073
35	Urguna	2	2.0	0.0000387	20	Dhamana	116	1.7	0.0000015
	Herb				21	Damaghurudu	124	1.9	0.0000017
36	Bhuin neem	118	118.0	0.0069151	22	Guhira	34	0.5	0.0000001
37	Banasuris	11	11.0	0.0000601	23	Ghuntala	21	0.3	0.0000000
38	Banakolatha	211	211.0	0.0221106	24	Giringa	1	0.0	0.0000000
39	Gharapudia	35	35.0	0.0006084	25	Gambhar	3	0.0	0.0000000
40	Pokasunga	210	210.0	0.0219015	26	Gangasiuli	184	2.7	0.0000038
41	Talamuli	92	92.0	0.0042035	27	Halda	363	5.4	0.0000148
	Climber				28	Harida	50	0.7	0.0000003
42	Atundi	43	43.0	0.0009183	29	jamun	591	8.8	0.0000393
43	Dantari	27	27.0	0.0003620	30	Kamalagundi	17	0.3	0.0000000
44	Gila	12	12.0	0.0000715	31	Kathasundura	50	0.7	0.0000003
45	Kanteikoli	11	11.0	0.0000601	32	Kendu	5753	85.9	0.0037257
46	Lajakuri	39	39.0	0.0007554	33	Khakada	552	8.2	0.0000343
47	Muturi	14	14.0	0.0000973	34	Kumbhi	111	1.7	0.0000014
48	Nirmuli	11	11.0	0.0000601	35	Kusuma	213	3.2	0.0000051
49	Pani alu	12	12.0	0.0000715	36	Karada	2332	34.8	0.0006122
50	Siali	1	1.0	0.0000005	37	Kangada	536	8.0	0.0000323
51	Suamalai	38	38.0	0.0007171	38	Kurein	1092	16.3	0.0001342
52	Satabari	13	13.0	0.0000839	39	Karanja	6	0.1	0.0000000
	Grass				40	Kalachua	130	1.9	0.0000019
53	Chadeigudi	5	5.0	0.0000124	41	Khaira	145	2.2	0.0000024

54	Chepti	35	35.0	0.0006084	42	Kasi	64	1.0	0.0000005
55	Ghuda	19	19.0	0.0001793	43	Kantasira	33	0.5	0.0000001
56	Mutha	111	111.0	0.0061190	44	Kataranga		0.0	0.0000000
57	Sinkula	12	12.0	0.0000715	45	Kuruma	333	5.0	0.0000125
	Total	**1419**	**1419.0**	**0.0692861**	46	Mahula	1856	27.7	0.0003878
	Floristic Diversity Index			**0.9307139**	47	Mai	261	3.9	0.0000077
					48	Mundi	105	1.6	0.0000012
Nandabir R.F.					49	Murha	37	0.6	0.0000002
SL No.	**Species**	**S1**	**Average**	**Dominance**	50	Murmuri	62	0.9	0.0000004
	Trees				51	Neem	45	0.7	0.0005807
1	Asana	30	30.0	0.0014494	52	Patuli	58	0.9	0.0000004
2	Bela	2	2.0	0.0000064	53	Paladhua	1	0.0	0.0000000
3	Bheru	2	2.0	0.0000064	54	Patamasu	184	2.7	0.0000038
4	Barada	2	2.0	0.0000064	55	Piasal	268	4.0	0.0000081
5	Chara	12	12.0	0.0002319	56	Rohini	550	8.2	0.0000341
6	Kendu	4	4.0	0.0000258	57	Rai	168	2.5	0.0000032
7	Khakada	21	21.0	0.0007102	58	Siju	3	0.0	0.0000000
8	Karada	29	29.0	0.0013544	59	Sal	17393	259.6	0.0340540
9	Patuli	12	12.0	0.0002319	60	Sidha	789	11.8	0.0000701
10	Sal	40	40.0	0.0025767	61	Sisoo	21	0.3	0.0000000
11	Sunari	9	9.0	0.0001304	62	Sunari	151	2.3	0.0000026
	Shrub				63	Simili	65	1.0	0.0000005
12	Lahalbeli	35	35.0	0.0019728	64	Teak	69	1.0	0.0000005
	Herb				65	Tentela	133	2.0	0.0000020
13	Bhuin neem	60	60.0	0.0057976		**Shrub**			
14	Pokasunga	150	150.0	0.0362352	66	Banakhajuri	220	3.3	0.0000054
15	Sankhua saga	350	350.0	0.1972803	67	Dhatiki	514	7.7	0.0000297
	Climber				68	Dhanualanka	8	0.1	0.0000000
16	Atundi	2	2.0	0.0000064	69	Ghurudu	621	9.3	0.0000434
17	Handifuta	2	2.0	0.0000064	70	Khirakoli	30	0.4	0.0000001
	Grass				71	Lahalbeli	31	0.5	0.0000001
18	Baunsuni	15	15.0	0.0003624	72	Mahasindhu	150	2.2	0.0000025
19	Mutha	11	11.0	0.0001949	73	Rani	1236	18.4	0.0001720
	Total-	**788**	**788.0**	**0.2485860**	74	Salarakanta	176	2.6	0.0000035
	Biodiversity Index			**0.7514140**	75	Sahasravedi	250	3.7	0.0000070
Siarimalia R.F.					76	Telkuruma	2216	33.1	0.0005528
SL No.	**Species**	**S1**	**Average**	**Dominance**	77	Urguna	203	3.0	0.0000046
	Trees					**Herb**			

1	Asana	20	20.0	0.0005073	78	Ankaranti	200	3.0	0.0000045
2	Bela	2	2.0	0.0000051	79	Agnijhal	18	0.3	0.0000000
3	Bheru	3	3.0	0.0000114	80	Bhuin neem	1612	24.1	0.0002925
4	Barada	2	2.0	0.0000051	81	Bana sorisa	3542	52.9	0.0014123
5	Chara	21	21.0	0.0005593	82	Bana piaja	48	0.7	0.0000003
6	Dhaura	18	18.0	0.0004109	83	Bana haldi	142	2.1	0.0000023
7	Katak	2	2.0	0.0000051	84	Bana olua	6	0.1	0.0000000
8	Kathasundura	25	25.0	0.0007926	85	Banakolatha	3000	44.8	0.0010131
9	Kendu	12	12.0	0.0001826	86	Bajramuli	187	2.8	0.0000039
10	Khakada	21	21.0	0.0005593	87	Badiamla	23	0.3	0.0000001
11	Kusuma	2	2.0	0.0000051	88	Gharapudia	65	1.0	0.0000005
12	Karada	30	30.0	0.0011413	89	Indrajala	31	0.5	0.0000001
13	Mahula	4	4.0	0.0000203	90	Lajakuri	108	1.6	0.0000013
14	Patuli	12	12.0	0.0001826	91	Mayurachulia	28	0.4	0.0000001
15	Sal	90	90.0	0.0102721	92	Pokasunga	2289	34.2	0.0005898
16	Sunari	2	2.0	0.0000051	93	Sankhua saga	5590	83.4	0.0035176
	Shurb				94	Salapani	138	2.1	0.0000021
	Dhatiki	13	13.0	0.0002143	95	Talamuli	963	14.4	0.0001044
	Herb					**Climber**			
18	Pokasunga	115	115.0	0.0167714	96	Atundi	1659	24.8	0.0003098
	Climber				97	Akanabindhi	5	0.1	0.0000000
19	Atundi	2	2.0	0.0000051	98	Bichhuati	29	0.4	0.0000001
20	Gopakanhu	5	5.0	0.0000317	99	Buduli	9	0.1	0.0000000
21	Handifuta	7	7.0	0.0000621	100	Dantari	35	0.5	0.0000001
22	Pani alu	7	7.0	0.0000621	101	Dudhi	40	0.6	0.0000002
23	Suamalai	13	13.0	0.0002143	102	Gila	29	0.4	0.0000001
24	Tankualai	10	10.0	0.0001268	103	Gopakanhu	1	0.0	0.0000000
	Grass				104	Handifuta	16	0.2	0.0000000
25	Mutha	210	210.0	0.0559259	105	Kanteikoli	275	4.1	0.0000085
25	Bansuani	40	40.0	0.0020291	106	Muturi	109	1.6	0.0000013
26	Dabachana	200	200.0	0.0507264	107	Nirmuli	102	1.5	0.0000012
	Total-	**888**	**888.0**	**0.1408342**	108	Pana airi	64	1.0	0.0000005
	Floristic Diversity Index			**0.8591658**	109	Pani alu	300	4.5	0.0000101
Sundarakhol R.F.					110	Palasa	118	1.8	0.0000016
SL No.	**Species**	**S1 to S6**	**Average**	**Dominance**	112	Pita alu	232	3.5	0.0000061
	Trees				113	Pingu	23	0.3	0.0000001
1	Asana	102	17.0	0.0002949	114	Siali	233	3.5	0.0000061
2	Anchu	5	0.8	0.0000007	115	Suamalai	1059	15.8	0.0001262
3	Amla	2	0.3	0.0000001	116	Satabari	149	2.2	0.0000025
4	Barabakulia	3	0.5	0.0000003		**Grass**			
5	Bela	34	5.7	0.0000328	117	Baunsuni	3	0.0	0.0000000
6	Bahada	19	3.2	0.0000102	118	Chepti	764	11.4	0.0000657

7	Chara	169	28.2	0.0008095	119	Dabachhana	4895	73.1	0.0026973
8	Chauli	2	0.3	0.0000001	120	Duba	4051	60.5	0.0018473
9	Dhaura	14	2.3	0.0000056	121	Ghoda	22	0.3	0.0000001
10	Ghontol	7	1.2	0.0000014	122	Mutha	7885	117.7	0.0069988
11	Harida	18	3.0	0.0000092	123	Sinkula	5324	79.5	0.0031908
12	Halda	3	0.5	0.0000003		**Total-**	**94252**	**1406.7**	**0.0647345**
13	jamun	7	1.2	0.0000014		**Floristic Diversity Index**			**0.9352655**
14	Kalichia	3	0.5	0.0000003	**Suniamaru R.F.**				
16	Khakada	99	16.5	0.0002778	**SL No.**	**Species**	**S1 to S2**	**Average**	**Dominance**
17	Kumbhi	8	1.3	0.0000018		**Trees**			
18	Kusuma	3	0.5	0.0000003	1	Asana	16	8.0	0.0000065
19	Karada	30	5.0	0.0000255	2	Anchu	2	1.0	0.0000001
20	Kurum	7	1.2	0.0000014	3	Amla	1	0.5	0.0000000
21	Kurein	6	1.0	0.0000010	4	Ambada	1	0.5	0.0000000
22	Katak	15	2.5	0.0000064	5	Barabakulia	3	1.5	0.0000002
23	Kasi	2	0.3	0.0000001	6	Barada	2	1.0	0.0000001
24	Mahula	42	7.0	0.0000500	7	Bela	34	17.0	0.0000296
25	Mai	5	0.8	0.0000007	8	Bentha	1	0.5	0.0000000
26	Piasal	4	0.7	0.0000005	9	Bahada	12	6.0	0.0000037
27	Sal	2942	490.3	0.2453084	10	Bheru	24	12.0	0.0000147
28	Sidha	14	2.3	0.0000056	11	Chara	92	46.0	0.0002165
29	Telekuruma	186	31.0	0.0009805	12	Chauli	21	10.5	0.0000113
	Shrub				13	Dhaura	4	2.0	0.0000004
30	Baincha	33	5.5	0.0000309	14	Damaghurudu	2	1.0	0.0000001
31	Dhatiki	18	3.0	0.0000092	15	Kendu	197	98.5	0.0009929
32	Ghurudu	14	2.3	0.0000056	16	Khakada	44	22.0	0.0000495
33	Mura	18	3.0	0.0000092	17	Kumbhi	10	5.0	0.0000026
34	Mamuri	1	0.2	0.0000000	18	Kusuma	6	3.0	0.0000009
35	Salarakanta	5	0.8	0.0000007	19	Karada	12	6.0	0.0000037
36	Urguna	11	1.8	0.0000034	20	Kurein	58	29.0	0.0000861
	Herb				21	Kasi	1	0.5	0.0000000
37	Bhuin neem	195	32.5	0.0010777	22	Mahula	159	79.5	0.0006468
38	Banakulatha	42	7.0	0.0000500	23	Neem	1	0.5	0.0000000
39	Indrajal	10	1.7	0.0000028	24	Piasal	4	2.0	0.0000004
40	Pana airi	32	5.3	0.0000290	25	Sal	2524	1262.0	0.1629824
41	Talamuli	3	0.5	0.0000003	26	Sidha	5	2.5	0.0000006
	Climber				27	Sisoo	2	1.0	0.0000001
42	Atundi	272	45.3	0.0020968	28	Sunari	5	2.5	0.0000006
43	Bhadali	6	1.0	0.0000010	29	Tentela	3	1.5	0.0000002
44	Dudhi	35	5.8	0.0000347	30	Telekuruma	322	161.0	0.0026526
45	Gilo	3	0.5	0.0000003		**Shrub**			

46	Handifuta	100	16.7	0.0002834	31	Baincha	1	0.5	0.0000000
47	Kantei koli	3	0.5	0.0000003	32	Dhatiki	6	3.0	0.0000009
48	Kaincha	3	0.5	0.0000003	33	Ghurudu	18	9.0	0.0000083
49	Muturi	9	1.5	0.0000023	34	Salarakanta	25	12.5	0.0000160
50	Pani alu	189	31.5	0.0010124		**Herb**			
51	Pichhuli	1	0.2	0.0000000	35	Badiamla	1	0.5	0.0000000
52	Pita alu	140	23.3	0.0005555	36	Bhuin neem	20	10.0	0.0000102
53	Palasa	5	0.8	0.0000007	37	Banakolatha	5	2.5	0.0000006
54	Suamalai	50	8.3	0.0000709	38	Indrajal	3	1.5	0.0000002
55	Satabari	17	2.8	0.0000082	39	Pana airi	2	1.0	0.0000001
	Grass				40	Talamuli	8	4.0	0.0000016
56	Baunsuni		47.0	0.0022539		**Climber**			
57	Mutha		100.0	0.0102030	41	Akandabindhu	2	1.0	0.0000001
	Total-	**5058**	**990.0**	**0.2658087**	42	Atundi	53	26.5	0.0000719
	Floristic Diversity Index			**0.7341913**	43	Bhadali	2	1.0	0.0000001
					44	Dudhi	70	35.0	0.0001254
					45	Kantei koli	9	4.5	0.0000021
					46	Muturi	2228	1114.0	0.1269967
					47	Pani alu	11	5.5	0.0000031
					48	Suamalai	52	26.0	0.0000692
					49	Tankua	3	1.5	0.0000002
						Grass			
					50	Chepti	10	5.0	0.0000026
					51	Duba	52	26.0	0.0000692
					52	Mutha	103	51.5	0.0002714
						Total-	**6252**	**3126.0**	**0.2953529**
						Floristic Diversity Index			**0.7046471**

BHUBAN RANGE

Balibo R.F.					Bhairpur R.F.				
SL No.	**Species**	**S1**	**Average**	**Dominance**	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
	Trees					**Trees**			
1	Ankula	3	3.0	0.0000123	1	Bahada	1	1.0	0.0000002
2	Bheru	8	8.0	0.0000875	2	Chara	10	10.0	0.0000206
3	Chara	7	7.0	0.0000670	3	jamun	7	7.0	0.0000101
4	Halda	4	4.0	0.0000219	4	Kendu	8	8.0	0.0000132
5	jamun	1	1.0	0.0000014	5	Khakada	6	6.0	0.0000074
6	Khakada	16	16.0	0.0003502	6	Karada	2	2.0	0.0000008
7	Kurein	12	12.0	0.0001970	7	Kangada	3	3.0	0.0000019
8	Kalchia	2	2.0	0.0000055	8	Mahula	6	6.0	0.0000074
9	Sal	138	138.0	0.0260511	9	Mai	1	1.0	0.0000002
10	Sidha	15	15.0	0.0003078	10	Piasal	1	1.0	0.0000002
11	Telkuruma	4	4.0	0.0000219	11	Sal	90	90.0	0.0016720
	Shrub				12	Telkuruma	28	28.0	0.0001618
12	Dhatiki	6	6.0	0.0000492		**Shrub**			
	Herb				13	Dhatiki	6	6.0	0.0000074
13	Bana piaja	5	5.0	0.0000342		**Herb**			
14	Pokasunga	50	50.0	0.0034199	14	Bhuin neem	10	10.0	0.0000206
15	Talamuli	9	9.0	0.0001108	15	Bana piaja	1	1.0	0.0000002
	Climber				16	Pokasunga	200	200.0	0.0082570
16	Atundi	30	30.0	0.0012311		**Climber**			
17	Chermaru	18	18.0	0.0004432	17	Atundi	4	4.0	0.0000033
18	Handifuta	12	12.0	0.0001970	18	Kirikinchi	9	9.0	0.0000167
	Grass				19	Pani alu	3	3.0	0.0000019
19	Chepti	300	300.0	0.1231148	20	Siali	2	2.0	0.0000008
20	Duba	200	200.0	0.0547177	21	Suamalai	3	3.0	0.0000019
21	Fulasara	15	15.0	0.0003078		**Grass**			
	Total	**855**	**855.0**	**0.2107493**	22	Bena	140	140.0	0.0040459
	Floristic Diversity Index			**0.7892507**	23	Duba	670	670.0	0.0926637
Bhuban R.F.					24	Mutha	990	990.0	0.2023160
SL No.	**Species**	**S1**	**Average**	**Dominance**		**Total**	**2201**	**2201.0**	**0.3092314**
	Trees					**Floristic Diversity Index**			**0.6907686**
1	Asana	2	2.0	0.0000039	**Dholapada R.F.**				
2	Bahada	4	4.0	0.0000156	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
3	Bheru	3	3.0	0.0000088		**Trees**			
4	Chara	7	7.0	0.0000478	1	Asana	3	3.0	0.0000106
5	Halda	14	14.0	0.0001914	2	Arjuna	3	3.0	0.0000106
6	jamun	2	2.0	0.0000039	3	Bahada	3	3.0	0.0000106
7	Kendu	5	5.0	0.0000244	4	Harida	1	1.0	0.0000012
8	Kumbharachikini	6	6.0	0.0000352	5	jamun	40	40.0	0.0018822
9	Kumbhi	2	2.0	0.0000039	6	Kendu	7	7.0	0.0000576

10	Kurein	8	8.0	0.0000625	7	Khakada	2	2.0	0.0000047
11	Kalchia	2	2.0	0.0000039	8	Kurein	22	22.0	0.0005694
12	Sal	155	155.0	0.0234586	9	Mahula	9	9.0	0.0000953
13	Sidha	4	4.0	0.0000156	10	Piasal	2	2.0	0.0000047
14	Telkuruma	4	4.0	0.0000156	11	Sal	140	140.0	0.0230565
	Shrub				12	Simili	1	1.0	0.0000012
15	Potis	150	150.0	0.0219696		**Shrub**			
	Herb				13	Ghurudu	7	7.0	0.0000576
16	Bhuin neem	17	17.0	0.0002822		**Herb**			

17	Bana piaja	15	15.0	0.0002197	14	Bhuin neem	2	2.0	0.0000047
18	Pokasunga	200	200.0	0.0390570	15	Bana piaja	14	14.0	0.0002306
	Climber				16	Pokasunga	100	100.0	0.0117635
19	Atundi	7	7.0	0.0000478		**Climber**			
20	Chermaru	25	25.0	0.0006103	17	Atundi	11	11.0	0.0001423
21	Pani alu	18	18.0	0.0003164	18	Suamalai	4	4.0	0.0000188
22	Pita alu	6	6.0	0.0000352	19	Satabari	1	1.0	0.0000012
23	Satabari	6	6.0	0.0000352		**Grass**			
	Grass				20	Duba	150	150.0	0.0264680
24	Chepti	250	250.0	0.0610266	21	Guguchi	300	300.0	0.1058719
25	Sinkula	100	100.0	0.0097643	22	Mutha	100	100.0	0.0117635
	Total	**1012**	**1012.0**	**0.1572552**		**Total**	**922**	**922.0**	**0.1820267**
	Floristic Diversity Index			**0.8427448**		**Floristic Diversity Index**			**0.8179733**

Tipiloi R.F.

SL No.	Species	S1	Average	Dominance
	Trees			
1	Asana	2	2.0	0.0000001
2	Bela	1	1.0	0.0000000
3	Bheru	3	3.0	0.0000003
4	Chara	8	8.0	0.0000022
5	Gangasiuli	2	2.0	0.0000001
6	Kendu	8	8.0	0.0000022
7	Khakada	4	4.0	0.0000006
8	Karada	6	6.0	0.0000012
9	Mahula	5	5.0	0.0000009
10	Rohini	3	3.0	0.0000003
11	Sal	130	130.0	0.0005852
12	Telkuruma	4	4.0	0.0000006
	Shrub			
13	Banakhajuri	2	2.0	0.0000001
14	Ghurudu	8	8.0	0.0000022
	Herb			
15	Bhuin neem	1	1.0	0.0000000
16	Bana piaja	11	11.0	0.0000042

	Climber		0.0	0.0000000
17	Atundi	4	4.0	0.0000006
18	Suamalai	2	2.0	0.0000001
	Grass			
19	Bena	700	700.0	0.0169668
20	Guguchi	1240	1240.0	0.0532412
21	Mutha	1840	1840.0	0.1172304
22	Tantua	1390	1390.0	0.0669013
	Total	**5374**	**5374.0**	**0.2549408**
	Floristic Diversity Index			**0.7450592**

K.NAGARA (EAST) RANGE									
Ranjagarh R.F.					**Birasal**				
SL No.	**Species**	**S1 to S 68**	**Average**	**Dominance**	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
	Trees					**Trees**			
1	Asana	3666	53.9	0.0007424	1	Asana	10	10.0	0.0003968
2	Anchu	163	2.4	0.0000015	2	Dhaura	6	6.0	0.0001429
3	Amla	52	0.8	0.0000001	3	Halda	5	5.0	0.0000992
4	Ankula	1	0.0	0.0000000	4	jamun	1	1.0	0.0000040
5	Amba	2	0.0	0.0000000	5	Kendu	14	14.0	0.0007778
6	Ambda	1	0.0	0.0000000	6	Kumbhi	2	2.0	0.0000293
7	Aswatha	1	0.0	0.0000000	7	Kusuma	2	2.0	0.0000159
8	Angarua	27	0.4	0.0000000	8	Kurein	4	4.0	0.0000635
9	Barabakulia	548	8.1	0.0000166	9	Mahula	8	8.0	0.0002540
10	Bela	59	0.9	0.0000002	10	Mai	8	8.0	0.0002540
11	Bentha	4	0.1	0.0000000	11	Sidha	60	60.0	0.0142855
12	Banabadhiala	212	3.1	0.0000025	12	Telkuruma	14	14.0	0.0007778
13	Bandhan	5	0.1	0.0000000		**Shrub**			
14	Bahada	140	2.1	0.0000011	13	Dhatiki	6	6.0	0.0001429
15	Bhalia	141	2.1	0.0000011		**Herb**			
16	Bara	7	0.1	0.0000000	14	Banakolatha	18	18.0	0.0012857
17	Bheru	113	1.7	0.0000007	15	Pokasunga	70	70.0	0.0194441
18	Chara	2094	30.8	0.0002422		**Climber**			
19	Chauli	18	0.3	0.0000000	16	Atundi	9	9.0	0.0003214
20	Dhaura	986	14.5	0.0000537	17	Chermaru	15	15.0	0.0008928
21	Dimbiri	1	0.0	0.0000000		**Grass**			
22	Damaghurudu	32	0.5	0.0000001	18	Chepti	150	150.0	0.0892843
23	Dhamana	2	0.0	0.0000000	19	Duba	100	100.0	0.0396819
24	Fanfania	4	0.1	0.0000000		**Total**	**502**	**502.0**	**0.1681536**
25	Gambhar	1	0.0	0.0000000		**Floristic Diversity Index**			**0.8318464**
26	Giringa	12	0.2	0.0000000	**Maulabhanja R.F.**				

28	Gangasiuli	137	2.0	0.0000010	**SL No.**	**Species**	**S 1**	**Average**	**Dominance**
29	Harida	79	1.2	0.0000003		**Trees**			
30	Halda	108	1.6	0.0000006	1	Asana	5	5.0	0.0000140
31	Jari	1	0.0	0.0000000	2	Bela	13	13.0	0.0000944
32	jamun	249	3.7	0.0000034	3	Bahada	5	5.0	0.0000140
33	Kendu	4391	64.6	0.0010650	4	Chara	70	70.0	0.0027371
34	Khakada	1210	17.8	0.0000809	5	Harida	56	56.0	0.0017517
35	Kumbhi	105	1.5	0.0000006	6	Kalichia	63	63.0	0.0022170
36	Kusuma	213	3.1	0.0000025	7	Kendu	42	42.0	0.0009853
37	Karada	364	5.4	0.0000073	8	Kumbhi	30	30.0	0.0005027
38	Kurum	122	1.8	0.0000008	9	Karada	63	63.0	0.0022170
39	Kangada	1965	28.9	0.0002133	10	Kurein	23	23.0	0.0002955
40	Kansa	25	0.4	0.0000000	11	Kasi	56	56.0	0.0017517
41	Kurein	2750	40.4	0.0004177	12	Mahula	122	122.0	0.0083140
42	Katak	60	0.9	0.0000002	13	Neem	1	1.0	0.0000006
43	Karanja	9	0.1	0.0000000	14	Piasal	3	3.0	0.0000050
44	Kuchila	196	2.9	0.0000021	15	Sal	258	258.0	0.0371815
45	Kasi	44	0.6	0.0000001		**Shrub**			
46	Mahula	1193	17.5	0.0000786	16	Ghurudu	43	43.0	0.0010328
47	Mundi	29	0.4	0.0000000	17	Urguna	2	2.0	0.0000022
48	Mai	176	2.6	0.0000017		**Herb**			
49	Neem	12	0.2	0.0000000	18	Bhuin neem	40	40.0	0.0008937
50	Piasal	396	5.8	0.0000087	19	Banakulatha	5	5.0	0.0000140
51	Patamasu	178	2.6	0.0000018	20	Banahaldi	25	25.0	0.0003491
52	Patuli	31	0.5	0.0000001	21	Pokasunga	56	56.0	0.0017517
53	Rohini	47	0.7	0.0000001	22	Sankhua saga	30	30.0	0.0005027
54	Rai	59	0.9	0.0000002		**Climber**			
55	Sal	18698	275.0	0.0193121	23	Atundi	70	70.0	0.0027371
56	Sidha	461	6.8	0.0000117	24	Dudhi	74	74.0	0.0030588
57	Sisoo	28	0.4	0.0000000	25	Dantari	1	1.0	0.0000006
58	Sunari	108	1.6	0.0000006	26	Muturi	31	31.0	0.0005368
59	Sirisa	1	0.0	0.0000000	27	Nirmuli	1	1.0	0.0000006
60	Simili	14	0.2	0.0000000	28	Pani alu	22	22.0	0.0002704
61	Tentela	194	2.9	0.0000021	29	Pita alu	47	47.0	0.0012339
62	Tangarachampa	130	1.9	0.0000009	30	Palasa	1	1.0	0.0000006
63	Telekuruma	1154	17.0	0.0000736	31	Satabari	12	12.0	0.0000804
64	Tentuli	2	0.0	0.0000000		**Grass**			
	Shrub				32	Baunsuni	33	33.0	0.0006083
65	Banakhajuri	91	1.3	0.0000005	33	Duba	30	30.0	0.0005027
66	Baincha	104	1.5	0.0000006	34	Mutha	5	5.0	0.0000140
67	Dhatiki	174	2.6	0.0000017		**Total-**	**1338**	**1338.0**	**0.0716718**
68	Ghurudu	460	6.8	0.0000117		**Floristic Diversity Index**			**0.9283282**
69	Kalei kanta	2	0.0	0.0000000	**Jiridamali R.F.**				

70	Kumut	502	7.4	0.0000139		**No of Sample plots - 1**			
71	Mamuri	93	1.4	0.0000005	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
72	Murha	120	1.8	0.0000008		**Trees**			
73	Narguni	2	0.0	0.0000000	1	Asana	10	10.0	0.0000809
74	Patua kanta	30	0.4	0.0000000	2	Bhalia	5	5.0	0.0000202
75	Rani	721	10.6	0.0000287	3	Damaghurudu	1	1.0	0.0000008
76	Salarakanta	518	7.6	0.0000148	4	Kendu	28	28.0	0.0006340
77	Urguna	21	0.3	0.0000000	5	Kumbhi	8	8.0	0.0000518
	Herb				6	Kangada	19	19.0	0.0002919
78	Agnijhal	84	1.2	0.0000004	7	Kurein	1	1.0	0.0000008
79	Bhuin neem	1101	16.2	0.0000670	8	Kasi	1	1.0	0.0000008
80	Banakulatha	132	1.9	0.0000010	9	Mahula	8	8.0	0.0000518
81	Banahaldi	706	10.4	0.0000275	10	Mai	1	1.0	0.0000008
82	Bana olua	5	0.1	0.0000000	11	Sal	797	797.0	0.5136970
83	Banasaru	20	0.3	0.0000000	12	Tentela	8	8.0	0.0000518
84	Bajramuli	30	0.4	0.0000000	13	Telekuruma	13	13.0	0.0001367
85	Banasurisa	198	2.9	0.0000022		**Shrub**			
86	Badiamla	111	1.6	0.0000007	14	Ghurudu	5	5.0	0.0000202
87	Banakadali	7	0.1	0.0000000	15	Urguna	3	3.0	0.0000073
88	Bana piaja	793	11.7	0.0000347		**Herb**			
89	Indrajal	255	3.8	0.0000036	16	Bhuin neem	17	17.0	0.0002337
90	Lajakuri	1	0.0	0.0000000	17	Pana airi	13	13.0	0.0001367
91	Lahanga	6	0.1	0.0000000	18	Talamuli	6	6.0	0.0000291
92	Pokasunga	2203	32.4	0.0002681		**Climber**			
93	Sahashravedi	512	7.5	0.0000145	19	Atundi	63	63.0	0.0032098
94	Sankhua saga	5829	85.7	0.0018768	20	Dudhi	15	15.0	0.0001820
95	Talamuli	2236	32.9	0.0002762	21	Kantei koli	2	2.0	0.0000032
	Climber				22	Muturi	5	5.0	0.0000202
96	Akandabindhi	43	0.6	0.0000001	23	Suamalai	10	10.0	0.0000809
97	Atundi	1110	16.3	0.0000681		**Grass**			
98	Arkala	40	0.6	0.0000001	24	Chepiti	13	13.0	0.0001367
99	Bhadali	131	1.9	0.0000009	25	Mutha	27	27.0	0.0005895
100	Bichhuati	168	2.5	0.0000016	26	Duba	33	33.0	0.0008807
101	Chermaru	318	4.7	0.0000056		**Total-**	**1112**	**1112.0**	**0.5205492**
102	Dudhi	2124	31.2	0.0002492		**Floristic Diversity Index**			**0.4794508**
103	Dantari	22	0.3	0.0000004					
104	Fandi	29	0.4	0.0000000					
105	Gulchi	2	0.0	0.0000000					
106	Gila	2	0.0	0.0000000					
107	Gopakanhu	165	2.4	0.0000015					
108	Handifuta	32	0.5	0.0000001					
109	Kantei koli	38	0.6	0.0000001					
110	Muturi	462	6.8	0.0000118					

111	Pani alu	1614	23.7	0.0001439
112	Pingu	8	0.1	0.0000000
113	Pita alu	1276	18.8	0.0000899
114	Siali	97	1.4	0.0000005
115	Suamalai	605	8.9	0.0000202
116	Satabari	303	4.5	0.0000051
117	Tunga	20	0.3	0.0000000
118	Tankua lai	528	7.8	0.0000154
	Grass		0.0	
119	Baunsuni	4168	61.3	0.0009596
120	Chepti	19666	289.2	0.0213634
121	Dabachhana	11217	165.0	0.0069501
122	Duba	4577	67.3	0.0011572
123	Karata	8	0.1	0.0000000
124	Kusha	300	4.4	0.0000050
125	Mutha	16355	240.5	0.0147754
126	Pinchha	85	1.3	0.0000004
127	Panasi	2632	38.7	0.0003827
128	Sagadadandia	55	0.8	0.0000002
129	Sinkula	6000	88.2	0.0019886
	Bamboo			
130	Salia bamboo	1	0.0	0.0000000
	Total	**134549**	**1978.7**	**0.0731936**
	Floristic Diversity Index			**0.9268064**

MOHABIROD RANGE									
Barbanka (S) R.F.					**Barbank (N) R.F.**				
SL No.	**Species**	**S1**	**Average**	**Dominance**	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
	Trees					**Trees**			
					1	Asana	3	3.0	0.0000032
1	Asana	58	58.0	0.0007027	2	Chara	4	4.0	0.0000056
2	Arjuna	59	59.0	0.0007271	3	Kendu	5	5.0	0.0000088
3	Baincha	4	4.0	0.0000033	4	Kurein	30	30.0	0.0003174
4	jamun	200	200.0	0.0083554	5	Sal	1000	1000.0	0.3526272
5	Kurein	27	27.0	0.0001523	6	Telkuruma	3	3.0	0.0000032
6	Kalichia	30	30.0	0.0001880		**Shrub**			
7	Mahula	22	22.0	0.0001011	7	Banakhajuri	3	3.0	0.0000032
8	Mamuri	100	100.0	0.0020888	8	Kamalagundi	50	50.0	0.0008816
9	Telekuruma	200	200.0	0.0083554		**Herb**			
	Shrub				9	Pokasunga	50	50.0	0.0008816
10	Dhatiki	16	16.0	0.0000535		**Climber**			
	Herb				10	Atundi	5	5.0	0.0000088
11	Sankhua saga	500	500.0	0.0522210	11	Fandi	3	3.0	0.0000032

	Climber				12	Palasa	3	3.0	0.0000032
12	Atundi	80	80.0	0.0013369		**Grass**			
13	Asadhua	3	3.0	0.0000019	13	Mutha	175	175.0	0.0107992
14	Bhadali	45	45.0	0.0004230	14	Dabachhana	350	350.0	0.0431968
15	Dantari	4	4.0	0.0000033		**Total**	**1684**	**1684.0**	**0.3547469**
16	Gilo	500	500.0	0.0522210		**Floristic Diversity Index**			**0.6452531**
17	Muturi	9	9.0	0.0000169		**Khalpal R.F.**			
18	Pingu	10	10.0	0.0000209	**SL No.**	**Species**	**S1**	**Average**	**Dominance**
	Grass					**Trees**			
19	Dabachhana	185.0	185.0	0.0071491	1	Asana	20	20.0	0.0017361
20	Mutha	66.0	66.0	0.0009099	2	Barada	18	18.0	0.0014063
21	Sinkula	70.0	70.0	0.0010235	3	Chara	25	25.0	0.0027127
	Total-	2188	2188.0	0.1360550	4	Dhaura	4	4.0	0.0000694
	Floristic Diversity Index			**0.8639450**	5	jamun	8	8.0	0.0002778
Talcherborder R.F.					6	Kendu	14	14.0	0.0008507
SL No.	**Species**	**S1**	**Average**	**Dominance**	7	Khakada	6	6.0	0.0001563
	Trees				8	Kurein	12	12.0	0.0006250
1	Asana	65	65.0	0.0032340	9	Mahula	6	6.0	0.0001563
2	Amla	4	4.0	0.0000122	10	Mai	2	2.0	0.0000174
3	Anchhu	32	32.0	0.0007838	11	Neem	1	1.0	0.0000043
4	Baincha	32	32.0	0.0007838	12	Sal	111	111.0	0.0534766
5	Chara	75	75.0	0.0043056	13	Telkuruma	12	12.0	0.0006250
6	Dhaura	43	43.0	0.0014153		**Shrub**		0.0	0.0000000
7	Gangasiuli	48	48.0	0.0017636	14	Banakhajuri	4	4.0	0.0000694
8	jamun	24	24.0	0.0004409	15	Dhatiki	17	17.0	0.0012543
9	Kendu	30	30.0	0.0006889		**Herb**			
10	Khakada	26	26.0	0.0005174	16	Pokasungha	160	160.0	0.1111111
11	Kusuma	23	23.0	0.0004049		**Climber**			
12	Kurein	100	100.0	0.0076543	17	Siali	3	3.0	0.0000391
13	Kasi	15	15.0	0.0001722	18	Duba	44	44.0	0.0084028
14	Mahula	35	35.0	0.0009377	19	Mutha	13	13.0	0.0007335
15	Mai	20	20.0	0.0003062		**Total**	**480**	**480.0**	**0.1837240**
16	Piasal	4	4.0	0.0000122		**Floristic Diversity Index**			**0.8162760**
17	Sal	333	333.0	0.0848782		**Dolia R.F.**			
18	Sidha	55	55.0	0.0023154					
19	Telkuruma	48	48.0	0.0017636	**SL No.**	**Species**	**Total**	**Average**	**Dominance**
	Shrub					**Trees**			
20	Dhatiki	53	53.0	0.0021501	1	Asana	85	42.5	0.0024795
	Herb				2	Bahada	8	4.0	0.0000220
21	Bhuineem	33	33.0	0.0008336	3	Chara	50	25.0	0.0008580
	Climber				4	Dhaura	66	33.0	0.0014949
22	Palasa	20	20.0	0.0003062	5	jamun	38	19.0	0.0004956

23	**Grass**			
24	Baunsuni	11	11.0	0.0000926
25	Mutha	14	14.0	0.0001500
	Total	**1143**	**1143.0**	**0.1159226**
	Floristic Diversity Index			**0.8840774**

6	Kendu	65	32.5	0.0014500
7	Khakada	18	9.0	0.0001112
8	Karada	21	10.5	0.0001513
9	Kurein	40	20.0	0.0005491
10	Mahula	45	22.5	0.0006950
11	Mai	5	2.5	0.0000086
12	Rohini	21	10.5	0.0001513
13	Sal	600	300.0	0.1235479
14	Telekuruma	25	12.5	0.0002145
	Shrub			
15	Banakhajuri	35	17.5	0.0004204
16	Ghurudu	58	29.0	0.0011545
	Herb			
17	Bana sorisa	30	15.0	0.0003089
18	Pokasunga	135	67.5	0.0062546
19	Sankhua saga	120	60.0	0.0049419
	Climber			
20	Suamalai	17	8.5	0.0000992
	Grass			
21	Baunsuni	35	17.5	0.0004204
22	Dabachhana	100	50.0	0.0034319
23	Mutha	90	45.0	0.0027798
	Total-	**1707**	**853.5**	**0.1520405**
	Floristic Diversity Index			**0.8479595**

HINDOL RANGE

Kandhara R.F.					Patalo R.F.				
SL No.	**Species**	**S1 to S39**	**Average**	**Dominance**	**SL No.**	**Species**	**Total**	**Average**	**Dominance**
	Trees								
1	Asana	630	16.2	0.0002659		**Trees**			
2	Anchu	4	0.1	0.0000000	1	Asana	8	4.0	0.0001612
3	Amla	18	0.5	0.0000002	2	Anchu	3	1.5	0.0000227
4	Ankula	30	0.8	0.0000006	3	Ankula	4	2.0	0.0000403
5	Arjuna	2	0.1	0.0000000	4	Barabakulia	2	1.0	0.0000101
6	Barabakulia	93	2.4	0.0000058	5	Bela	19	9.5	0.0009095
7	Bela	317	8.1	0.0000673	6	Bahada	1	0.5	0.0000025
8	Bentha	92	2.4	0.0000057	7	Bara	2	1.0	0.0000101
9	Bahada	52	1.3	0.0000018	8	Chara	15	7.5	0.0005669
10	Bhalia	33	0.8	0.0000007	9	Dhaura	30	15.0	0.0022676
11	Bara	7	0.2	0.0000000	10	Damaghurudu	2	1.0	0.0000101
12	Bheru	43	1.1	0.0000012	11	Halda	16	8.0	0.0006450
13	Chara	246	6.3	0.0000405	12	Jaisandha	3	1.5	0.0000227
14	Chakhunda	3	0.1	0.0000000	13	jamun	12	6.0	0.0003628
15	Chhatiana	3	0.1	0.0000000	14	Kendu	19	9.5	0.0009095
16	Chauli	2	0.1	0.0000000	15	Khakada	9	4.5	0.0002041
17	Dhaura	312	8.0	0.0000652	16	Kumbhi	4	2.0	0.0000403
18	Dhuranja	1	0.0	0.0000000	17	Kusuma	14	7.0	0.0004938
19	Damaghurudu	50	1.3	0.0000017	18	Karada		0.0	0.0000000
20	Dhamana	1	0.0	0.0000000	19	Kurum	2	1.0	0.0000101
21	Guhira	2	0.1	0.0000000	20	Kurein	17	8.5	0.0007281
22	Giringa	627	16.1	0.0002634	21	Kasi	1	0.5	0.0000025
23	Gandha palasa	9	0.2	0.0000001	22	Lembarumai	64	32.0	0.0103200
24	Ghontol	3	0.1	0.0000000	23	Patamasu	13	6.5	0.0004258
25	Gangasiuli	8	0.2	0.0000000	24	Sal	65	32.5	0.0106450
26	Guhali	6	0.2	0.0000000	25	Sidha	14	7.0	0.0004938
27	Harida	11	0.3	0.0000001	26	Sunari	3	1.5	0.0000227
28	Halda	127	3.3	0.0000108	27	Sirisa	12	6.0	0.0003628
29	Jaisandha	11	0.3	0.0000001		**Shrub**			
30	jamun	191	4.9	0.0000244	28	Lahalabeli	13	6.5	0.0004258
31	Kendu	701	18.0	0.0003293	29	Tiribidi	19	9.5	0.0009095
32	Khakada	302	7.7	0.0000611	30	Banakulatha	150	75.0	0.0566893
33	Kumbhi	91	2.3	0.0000055		**Herb**			
34	Kusuma	41	1.1	0.0000011	31	Pokasunga	20	10.0	0.0010078
35	Karada	363	9.3	0.0000883		**Climber**			
36	Kurum	54	1.4	0.0000020	32	Akandabindhi	4	2.0	0.0000403
37	Kangada	1462	37.5	0.0014322	33	Atundi	30	15.0	0.0022676
38	Kurein	237	6.1	0.0000376	34	Kantei koli	11	5.5	0.0003049

39	Katak	29	0.7	0.0000006	35	Siali	8	4.0	0.0001612
40	Karanja	66	1.7	0.0000029	36	Suamalai	17	8.5	0.0007281
41	Kuchila	239	6.1	0.0000383	37	Satabari	4	2.0	0.0000403
42	Kasi	12	0.3	0.0000001		**Total-**	**630**	**315.0**	**0.0922651**
43	Kadamba	1	0.0	0.0000000		**Floristic Diversity Index**			**0.9077349**
44	Katha sundara	23	0.6	0.0000004	**Bompa R.F.**				
45	Kaitha	1	0.0	0.0000000	**SL No.**	**Species**	**S1 to S5**	**Average**	**Dominance**
46	Lembarumai	1	0.0	0.0000000		**Trees**			
47	Mahula	176	4.5	0.0000208	1	Asana	19	3.8	0.0000700
48	Mundi	57	1.5	0.0000022	2	Bela	5	1.0	0.0000048
49	Mamuri	7	0.2	0.0000000	3	Bahada	4	0.8	0.0000031
50	Mai	38	1.0	0.0000010	4	Bheru	3	0.6	0.0000017
51	Neem	9	0.2	0.0000001	5	Dhaura	36	7.2	0.0002513
52	Piasal	15	0.4	0.0000002	6	Halda	10	2.0	0.0000194
53	Patamasu	98	2.5	0.0000064	7	Harida	2	0.4	0.0000008
54	Patuli	7	0.2	0.0000000	8	jamun	5	1.0	0.0000048
55	Rohini	17	0.4	0.0000002	9	Kendu	52	10.4	0.0005243
56	Rai	6	0.2	0.0000000	10	Kumbhi	4	0.8	0.0000031
57	Sal	2767	70.9	0.0051301	11	Kusuma	7	1.4	0.0000095
58	Sidha	120	3.1	0.0000096	12	Karada	20	4.0	0.0000776
59	Sisoo	12	0.3	0.0000001	13	Kurein	20	4.0	0.0000776
60	Sunari	53	1.4	0.0000019	14	Kuchila	10	2.0	0.0000194
61	Sahada	2	0.1	0.0000000	15	Kasi	6	1.2	0.0000070
62	Sirisa	2	0.1	0.0000000	16	Kuruma	6	1.2	0.0000070
63	Samarakhai	3	0.1	0.0000000	17	Mai	9	1.8	0.0000157
64	Simili	11	0.3	0.0000001	18	Mundi	1	0.2	0.0000002
65	Tentela	8	0.2	0.0000000	19	Murha	1	0.2	0.0000002
66	Telkuruma	630	16.2	0.0002659	20	Neem	2	0.4	0.0000008
67	Tamala	5	0.1	0.0000000	21	Rai	3	0.6	0.0000017
68	Barada	2	0.1	0.0000000	22	Sal	222	44.4	0.0095559
	Shrub				23	Sidha	37	7.4	0.0002654
69	Banakhajuri	197	5.1	0.0000260	24	Sisoo	4	0.8	0.0000031
70	Baincha	74	1.9	0.0000037	25	Simili	5	1.0	0.0000048
71	Dhatiki	122	3.1	0.0000100	26	Telkuruma	12	2.4	0.0000279
72	Hadakankali	4	0.1	0.0000000		**Shrub**			
73	Kumuti	823	21.1	0.0004538	27	Dhatiki	36	7.2	0.0002513
74	Karadhakanta	2	0.1	0.0000000	28	Ghurudu	3	0.6	0.0000017
75	Lahalabeli	61	1.6	0.0000025		**Herb**			
76	Patua kanta	4	0.1	0.0000000	29	Bhuin neem	74	14.8	0.0010618
77	Rani	1004	25.7	0.0006754	30	Bana piaja	25	5.0	0.0001212
78	Salarakanta	186	4.8	0.0000232	31	Pokasunga	725	145.0	0.1019159
79	Sunaragadi	20	0.5	0.0000003		**Climber**			
80	Tiribidi	160	4.1	0.0000172	32	Atundi	55	11.0	0.0005865
81	Urguna	11	0.3	0.0000001	33	Chermaru	8	1.6	0.0000124

	Herb				34	Gopakanhu	3	0.6	0.0000017
82	Agnijwala	3	0.1	0.0000000	35	Muturi	23	4.6	0.0001026
83	Bhuin neem	778	19.9	0.0004056	36	Pani alu	11	2.2	0.0000235
84	Banakulatha	122	3.1	0.0000100	37	Palasa	2	0.4	0.0000008
85	Banahaldi	17	0.4	0.0000002	38	Suamalai	42	8.4	0.0003420
86	Bana piaja	77	2.0	0.0000040	39	Satabari	12	2.4	0.0000279
87	Bana olua	10	0.3	0.0000001		**Grass**			
88	Bana rasuna	4	0.1	0.0000000	40	Chepti	405	81.0	0.0318036
89	Hilsaru	330	8.5	0.0000730	41	Dabachhana	200	40.0	0.0077558
90	Indrajal	32	0.8	0.0000007	42	Mutha	62	12.4	0.0007453
91	Pana airi	125	3.2	0.0000105	43	Sinkula	80	16.0	0.0012409
92	Pokasunga	2178	55.8	0.0031785		**Total**	**2271**	**454.2**	**0.1569521**
93	Sahashravedi	11	0.3	0.0000001		**Floristic Diversity Index**			**0.8430479**
94	Sankhua saga	927	23.8	0.0005758	**Nandania R.F.**				
95	Talamuli	285	7.3	0.0000544					
	Climber				**SL No.**	**Species**	**Total**	**Average**	**Dominance**
96	Akandabindu	447	11.5	0.0001339		**Trees**			
97	Atundi	910	23.3	0.0005549	1	Anchu	1	1.0	0.0000062
98	Bhadali	30	0.8	0.0000006	2	Barabakulia	30	30.0	0.0055692
99	Bichhuati	3	0.1	0.0000000	3	Bela	6	6.0	0.0002228
100	Bhurkundi	78	2.0	0.0000041	4	Bentha	5	5.0	0.0001547
101	Banasimba	7	0.2	0.0000000	5	Chadeigudi	130	130.0	0.1045766
102	Dudhi	159	4.1	0.0000169	6	Dhaura	2	2.0	0.0000248
103	Dantari	202	5.2	0.0000273	7	Giringa	2	2.0	0.0000248
104	Gopakanhu	3	0.1	0.0000000	8	Ghantol	5	5.0	0.0001547
105	Gila	5	0.1	0.0000000	9	Kendu	1	1.0	0.0000062
106	Handifuta	100	2.6	0.0000067	10	Kurum	4	4.0	0.0000990
107	Kantei koli	180	4.6	0.0000217	11	Kangada	3	3.0	0.0000557
108	Muturi	29	0.7	0.0000006	12	Kurein	9	9.0	0.0005012
109	Pani alu	382	9.8	0.0000978	13	Lembarumai	13	13.0	0.0010458
110	Pingu	22	0.6	0.0000003	14	Piasal	1	1.0	0.0000062
111	Pichhuli	300	7.7	0.0000603	15	Patuli	1	1.0	0.0000062
112	Pita alu	31	0.8	0.0000006	16	Sunari	7	7.0	0.0003032
113	Palasa	85	2.2	0.0000048		**Shrub**			
114	Suamalai	1104	28.3	0.0008167	17	Baincha	11	11.0	0.0007487
115	Satabari	84	2.2	0.0000047		**Herb**			
116	Tankua lai	4	0.1	0.0000000	18	Indrajal	10	10.0	0.0006188
117	Baunsuni	990	25.4	0.0006567	19	Pokasunga	30	30.0	0.0055692
118	Chhana	40	1.0	0.0000011	20	Sahashravedi	50	50.0	0.0154699
119	Chepti	1158	29.7	0.0008985		**Climber**			
120	Dabachhana	3885	99.6	0.0101132	21	Atundi	28	28.0	0.0048514
121	Duba	1270	32.6	0.0010807	22	Dudhi	17	17.0	0.0017883

122	Karata	500	12.8	0.0001675	23	Dantari	20	20.0	0.0024752
123	Kudua	2	0.1	0.0000000	24	Kantei koli	6	6.0	0.0002228
124	Mutha	1547	39.7	0.0016036		**Grass**			
125	Panasi	100	2.6	0.0000067	25	Baunsuni	10	10.0	0.0006188
126	Sinkula	5600	143.6	0.0210127		**Total-**	**402**	**402.0**	**0.1451202**
127	Tandi	20	0.5	0.0000003		**Floristic Diversity Index**			**0.8548798**
	Bamboo				**Kai R.F.**				
128	Kanta bamboo	1166	29.9	0.0009110					
129	Salia bamboo	20	0.5	0.0000003	**SL No.**	**Species**	**S1 to S2**	**Average**	**Dominance**
	Total	**38632**	**990.6**	**0.0519228**		**Trees**			
	Floristic Diversity Index			**0.9480772**	1	Asana	10	5.0	0.0000387
Hitinda R.F.					2	Ambthi	1	0.5	0.0000004
					3	Acacia	3	1.5	0.0000035
SL No.	**Species**	**S1 to S2**	**Average**	**Dominance**	4	Barabakulia	12	6.0	0.0000557
	Trees				5	Bela	8	4.0	0.0000248
1	Asana	60	30.0	0.0007774	6	Bentha	1	0.5	0.0000004
2	Barabakulia	10	5.0	0.0000216	7	Bahada	2	1.0	0.0000015
3	Bela	50	25.0	0.0005398	8	Bheru	1	0.5	0.0000004
4	Bentha	50	25.0	0.0005398	9	Chara	30	15.0	0.0003481
5	Chara	25	12.5	0.0001350	10	Gangasiuli	1	0.5	0.0000004
6	Dhaura	65	32.5	0.0009123	11	Halda	9	4.5	0.0000313
7	Harida	10	5.0	0.0000216	12	jamun	5	2.5	0.0000097
8	jamun	10	5.0	0.0000216	13	Kendu	42	21.0	0.0006822
9	Kendu	45	22.5	0.0004373	14	Khakada	18	9.0	0.0001253
10	Khakada	15	7.5	0.0000486	15	Kusuma	7	3.5	0.0000190
11	Kusuma	10	5.0	0.0000216	16	Karada	91	45.5	0.0032027
12	Karada	40	20.0	0.0003455	17	Kurum	1	0.5	0.0000004
13	Mahula	65	32.5	0.0009123	18	Kurein	22	11.0	0.0001872
14	Mundi	15	7.5	0.0000486	19	Karanja	1	0.5	0.0000004
15	Patamasu	20	10.0	0.0000864	20	Mahula	30	15.0	0.0003481
16	Sal	350	175.0	0.0264516	21	Mai	3	1.5	0.0000035
17	Sisoo	20	10.0	0.0000864	22	Neem	4	2.0	0.0000062
18	Sirisa	2	1.0	0.0000009	23	Sal	700	350.0	0.1895064
	Shrub				24	Sidha	1	0.5	0.0000004
19	Banakhajuri	50	25.0	0.0005398	25	Sunari	1	0.5	0.0000004
	Climber				26	Telekuruma	218	109.0	0.0183798
20	Akandabindhi	60	30.0	0.0007774		**Shrub**			
21	Atundi	120	60.0	0.0031094	27	Banakhajuri	35	17.5	0.0004738
22	Bhadali	10	5.0	0.0000216	28	Bhaincha	11	5.5	0.0000468
23	Kantei koli	20	10.0	0.0000864	29	Dalsingha	3	1.5	0.0000035

24	Muturi	30	15.0	0.0001943	30	Dhatiki	40	20.0	0.0006188
25	Pani alu	100	50.0	0.0021593	31	Guakoli	8	4.0	0.0000248
26	Pichhuli	30	15.0	0.0001943	32	Lahalabeli	22	11.0	0.0001872
27	Palasa	70	35.0	0.0010581		**Herb**			
28	Suamalai	100	50.0	0.0021593	33	Banakulatha	18	9.0	0.0001253
29	Satabari	50	25.0	0.0005398	34	Pana airi	3	1.5	0.0000035
	Grass					**Climber**			
30	Baunsuni	150	75.0	0.0048585	35	Akandabindhu	3	1.5	0.0000035
31	Dabachhana	200	100.0	0.0086372	36	Atundi	102	51.0	0.0040237
32	Duba	100	50.0	0.0021593	37	Bhadali	2	1.0	0.0000015
	Bamboo				38	Gilo	2	1.0	0.0000015
33	Kanta bamboo	200	100.0	0.0086372	39	Kantei koli	12	6.0	0.0000557
	Total-	**2152**	**1076.0**	**0.0665401**	40	Nirmuli	10	5.0	0.0000387
	Floristic Diversity Index			**0.9334599**	41	Pani alu	7	3.5	0.0000190
Kansara R.F.					42	Pita alu	4	2.0	0.0000062
SL No.	**Species**	**S1**	**Average**	**Dominance**	43	Palasa	2	1.0	0.0000015
	Trees				44	Suamalai	64	32.0	0.0015841
1	Asana	3	3.0	0.0000064	45	Satabari	26	13.0	0.0002614
2	Ankula	7	7.0	0.0000348		**Grass**			
3	Bela	6	6.0	0.0000256	46	Chepti	12	6.0	0.0000557
4	Bahada	1	1.0	0.0000007		**Total-**	**1608**	**804.0**	**0.2205128**
5	Bheru	5	5.0	0.0000177		**Floristic Diversity Index**			**0.7794872**
6	Baincha	11	11.0	0.0169896	**Ambthi R.F.**				
7	Dhaura	3	3.0	0.0000064	**SL No.**	**Species**	**S1**	**Average**	
8	Gangasiuli	4	4.0	0.0000114		**Trees**			
9	Halda	12	12.0	0.0001022	1	Asana	5	5.0	0.0000199
10	Khakada	9	9.0	0.0000575	2	Akasia	20	20.0	0.0003189
11	Karada	27	27.0	0.0005174	3	Chakunda	5	5.0	0.0000199
12	Kalchia	4	4.0	0.0000114	4	Guhira	12	12.0	0.0001148
13	Mai	2	2.0	0.0000028	5	Halda	2	2.0	0.0000032
14	Sidha	6	6.0	0.0000256	6	jamun	7	7.0	0.0000391
15	Sunari	3	3.0	0.0000064	7	Kendu	21	21.0	0.0003516
16	Teak	100	100.0	0.0070974	8	Kurein	17	17.0	0.0002304
	Shrub				9	Khaira	5	5.0	0.0000199
17	Gayatulasi	35	35.0	0.0008694	10	Kasi	3	3.0	0.0000072

18	Lahalbeli	16	16.0	0.0001817	11	Neem	2	2.0	0.0000032
19	Potis	7	7.0	0.0000348	12	Sal	47	47.0	0.0017610
20	Salarakanta	5	5.0	0.0000177	13	Sami	1	1.0	0.0000008
	Herb					**Shrub**			
21	Bhuin neem	14	14.0	0.0001391	14	Guakoli	20	20.0	0.0003189
22	Bana piaja	18	18.0	0.0002300	15	Salarakanta	18	18.0	0.0002583
23	Banakolatha	5	5.0	0.0000177		**Herb**		0.0	0.0000000
24	Pokasunga	200	200.0	0.0283896	16	Bhuin neem	12	12.0	0.0001148
25	Talamuli	12	12.0	0.0001022	17	Bana piaja	8	8.0	0.0000510
	Climber				18	Banakolatha	6	6.0	0.0000287
26	Atundi	20	20.0	0.0002839	19	Talamuli	14	14.0	0.0001563
27	Bichhuati	8	8.0	0.0000454		**Climber**			
28	Bhadali	4	4.0	0.0000114	20	Atundi	7	7.0	0.0000391
29	Chermaru	27	27.0	0.0005174	21	Bichhuati	4	4.0	0.0000128
30	Gopakanhu	3	3.0	0.0000064	22	Chermaru	27	27.0	0.0005812
31	Handifuta	1	1.0	0.0000007	23	Gopakanhu	6	6.0	0.0000287
32	Pani alu	13	13.0	0.0001199	24	Muturi	2	2.0	0.0000032
33	Pita alu	7	7.0	0.0000348	25	Pani alu	10	10.0	0.0000797
34	Suamalai	9	9.0	0.0000575	26	Pita alu	5	5.0	0.0000199
35	Satabari	4	4.0	0.0000114		**Grass**			
	Grass				27	Baunsuni	65	65.0	0.0033681
36	Baunsuni	45	45.0	0.0014372	28	Chepti	230	230.0	0.0421716
37	Chepti	275	275.0	0.0536740	29	Duba	87	87.0	0.0060340
38	Duba	150	150.0	0.0159691	30	Lahanga	122	122.0	0.0118654
39	Sinkula	100	100.0	0.0070974	31	Mutha	180	180.0	0.0258291
	Bamboo				32	Sinkula	150	150.0	0.0179369
40	Salia	6	6.0	0.0000256					0.1072050
	Total	**1187**	**1187**	**0.1341874**		**Total**	**1120**	**1120.0**	**0.1117873**
	Floristic Diversity Index			**0.8658126**		**Floristic Diversity Index**			**0.8882127**

N:B :- S1 ,S2, S3 - - - - - - - - = No. of Sample Plots
D (Dominance) = (n/N) (n/N)
Where, n = Indivisual Species Average
& N = Total Average
Floristic Diversity of the R.F = 1- D

ANNXURE-XVI

IMPROTANT MEDICINAL PLANTS OF DHENKANAL DIVISION					
Sl. No.	**Local Name**	**Botanical Name**	Family	**Parts Used**	Medicinal Properties
1.	Agasti	*Sesbania grandiflora*	Fabaceae	Root, bark, leaves, flowers and fruits	Febrifuge. Useful for nasal catarrh. stomatalgia, anaemia, emaciation.
2.	Agnisikha	*Gloriosa superba*	Liliaceae	Rhizomes	Thermogenic, intensely poisonous. Antipyretic and rejuvenating. Useful in skin diseases, leprosy and also in promoting labour pain and expulsion of the placenta.
3.	Amba	*Mangifera indica*	Anacardiaceae	Roots, bark, seed and kernel	Useful for syphilis, wounds, ulcers, diphtheria, rheumatism.
4.	Ambada	*Spondias pinnata*	Anacardiaceae	Roots, barks, Fruits and Seeds	Thermogenic, appetizer and aphrodisiac. Useful in muscular rheumatism.
5.	Anantamula	*Hemidesmus indicus*	Asclepiadaceae	Roots, leaves and stems	Aphrodisiac, demulcent, febrifuge, Useful in asthma, bronchitis, leucoderma, leprosy, epileptic fits.
6.	Anchhu	*Morinda tinctoria*	Rubiaceae	Roots and leaves	Useful in gastropathy, diarrhoea and hernia.
7.	Ankaranti	*Solanum surattense*	Solanoceae	Whole plant	Digestive, febrifuge, stimulant, rejuvenating, skin diseases. Hypertension, cough and asthma, epilepsy, cardiac disorder.
8.	Anla	*Emblica officinalis*	Euphorbiaceae	Root, bark, leaves and fruits	Aphrodisiac, antipyretic, digestive. Useful for tridosa, diabetes, Asthma, peptic ulcers, anaemia and emaciation.
9.	Apama-ranga	*Achyranthes aspera*	Amaranthaceae	Whole plant	Useful in cough, asthma, bronchitis, colic and cardiac disorder.
10.	Aparajita	*Clitoria ternatea*	Fabaceae	Roots, leaves and seeds	Intellect promoting and useful in ophthalmopathy, leprosy and leucoderma treatment.
11.	Arakha	*Calotropis gigantea*	Asclepiadaceae	Whole plant	Febrifuge and laxative, promotes gastric secretions. Useful for asthma, paralysis and catarrh.
12.	Arjun	*Terminalia arjuna*	Coabretaceae	Bark	Cardio tonic. It is useful in fractures, ulcers, diabetes, internal and external haemorrhages
13.	Asan	*Terminalia tomentosa*	Combretaceae	Bark	Cardio tonic, wounds, ulcers, diarrhoea and dysentery.
14.	Ashoka	*Saraca asoca*	Caesalpiniaceae	Bark, leaves, flowers and seeds	Febrifuge and demulcent. Flowers used in uterine tonic, scabies and pimples. diabetes and bone fractures.
15.	Aswasthha	*Ficus religiosa*	Moraceae	Bark, shoots, fruits and seeds	Aphrodisiac, antibacterial and purgative.

16.	Babul	*Acaccia nilotica*	Mimosaceae	Bark, gum	Haemostatic, antipyretic, *Vata* and *pitta*, asthma, diarrhoea
17.	Bahada	*Terminalia bellirica*	Combretaceae	Bark and fruits	Useful in anaemia, leucoderma, narcotic, digestive, antipyretic. Mature fruit is constipating and is useful in diarrhoea/dysentery.
18.	Baidanka	*Mucuna pruriens*	Fabaceae	Roots, leaves, seeds and hair	Thermogenic, stimulant, purgative. Leaves are aphrodisiac. They are useful in gonorrhoea and sterility.
19.	Bana haladi	*Curcuma aromatica*	Zingiberaceae	Rhizomes	Useful in the treatment of bruises, sprains, bronchitis, cough leucoderma and skin eruptions.
20.	Banakhajuri	*Phoenix sylvestris*	Arecaceae	Fruits	Cardio tonic and aphrodisiac. Useful in seminal weakness and general debility.
21.	Banatulasi	*Ocimum americanum*	Lamiaceae	Leaves and seeds	Useful in Parasitic and poisonous afflictions, malarial fever.
22.	Bandhan	*Ougeinia oojeinensis*	Febaceae	Bark	Stimulant and rejuvenating. Useful in diabetes. Gonorrhoea, anaemia and general debility/
23.	Bara	*Ficus bengalensis*	Moraceae	Root, bark, leaves, buds and latex	Useful in the treatment of diarrhoea, dysentery, diabetes, ulcers, skin diseases, gonorrhoea, rheumatism
24.	Barakoli	*Ziziphus mauritiana*	Rhamnaceae	Whole plant	Useful in the treatment of Boils, Wounds, syphilitis, ulcers, typhoid fever, aphrodisiac and invigorating.
25.	Baula	*Mimusops elengi*	Sapotaceae	Bark, flowers, fruits and seeds	Flowers are used as brain tonic. Unripe fruits to fix loose teeth.
26.	Begunia	*Vitex negundo*	Verbenaceae	Whole plant	Antiseptic, antipyretic, ophthalmic, general debility, sprains and cardiac disorder.
27.	Bela	*Aegle marmelos*	Rutaceae	Roots, leaves & fruits	Useful in diarrhoea and dysentery, seminal weakness, uropathy, gastric, diabetes and asthmatic complaints
28.	Bhalia	*Semecarpus anacardium*	Anocordiaceae	Fruits	Digestive, purgative, liver tonic stimulant, antiseptic, uterine stimulant. useful in Beri beri, cancer, diabetes and tumours.
29.	Bhersunga	*Murraya koenigii*	Rutaceae	Roots, bark and leaves	Demulcent, febrifuge, appetising. Useful in skin diseases, leucoderma, leprosy and foul ulcers.
30.	Bhuin anla	*Phyllanthus niruri*	Euphorbiaceae	Whole plant	Febrifuge and antiseptic. Useful in Jaundice and diseases of the urino-genital

					system.
31.	Bhuinnimba	*Andrographis paniculata*	Acanthaceae	Whole plant	Wounds, ulcers, chronic fever, malaria, skin diseases, and intestinal worms.
32.	Bichhuati	*Tradia involucrate*	Euphorbiaceae	Roots and leaves	Venereal diseases, diabetes, blood impurities, giddiness.
33.	Brahmi	*Bacopa monnieri*	Scrophulariaceae	Whole plant	Intellect promoting, anticonvulsant, cardio tonic, useful in epilepsy and insanity.
34.	Chakunda	*Cassia tora*	Caesalpiniaceae	Leaves and seeds	Thermogenic, laxative, liver tonic, cardio tonic.
35.	Champa	*Michelia champaca*	Magnoliaceae	Whole plant	Useful in chronic gastritis and cardiac debility and malarial fever.
36.	Chandan	Santatum album	Santalaceae	Heartwood and roots	Intellect promoting, cardio-tonic. naemostatic, aphrodisiac. Useful in psychopathy, cardiac debility, gastric irritability and hyper acidity.
37.	Char	*Buchnania lanzan*	Anacardiaceae	Roots and fruits	Skin diseases, seminal weakness, cardio tonic, nervous debility and cardiac debility
38.	Chhatiana	*Alstonia scholaris*	Apocynaceae	Barks and leaves	Useful in preparation of cardio-tonic and abdominal disorder, diarrhoea, dysentery and cardiopathy.
39.	Chhatu	*Agarocis campestris*	Agaricaceae	Whole plant	Used in paralysis, constipation, seminal weakness, and general debility
40.	Chireta	*Swertia chireyita*	Gentanaceae	Whole plant	Useful in all types of fevers and skin diseases.
41.	Debadaru	*Polyalthia longifolia*	Annonaceae	Bark	Useful for skin diseases, diabetes and hypertension.
42.	Dhanan-twari	*Cymbopogon citratus*	Poaceae	Whole plant	Useful in the treatment of gastric irritation, poisonous bites, epilepsy, cholera, skin diseases, fever and sprains.
43.	Dhatki	*Woodfordia fruticosa*	Lythraceae	Flowers	Stimulant, antibacterial corrective of urinary pigments, and diabetes.
44.	Dhaura	*Anogeissus latifolia*	Combretaceae	Roots, bark, leaves and seeds	Haemostatic and rejuvenating, useful in *kapha* and *vata*, skin diseases, diarrhoea and dysentery.
45.	Dimiri	*Ficus hispida*	Moraceae	Bark and fruit	Anti-dysenteric, anti-inflammatory. Useful in ulcers, leucoderma, anaemia jaundice
46.	Duba ghassa	*Cynodon dactylon*	Poaceae	Whole plant	Haemostatic, useful in the treatment of skin diseases, vomiting, diarrhoea, dysentery and abortion.
47.	Dudura	*Datura metel*	Solanaceae	Whole plant	Narcotic, antispasmodic, intoxicant. Useful in asthma, fever, ulcers and skin diseases. Also used to

					treat rabid dog bite and cure insanity.
48.	Gambhari	*Gmelina arborea*	Verbenaceae	Whole plant	Useful in fever, dyspepsia skin diseases and promoting the growth of hair.
49.	Gangasiuli	*Nyctanthes arbortristis*	Oleaceae	Leaves, flowers and seeds	Thermogenic, Antibacterial and febrifuge. Useful in malaria, chronic fever and grayness of hair and baldness.
50.	Ganghauda	*Argemone mexicana*	Papaveraceae	Whole plant	Antipyretic, sedative, aphrodisiac used in asthma, skin diseases, wounds and ulcers, latex is used in jaundice and malaria fever.
51.	Gayasha	*Leucas aspera*	Lamiaceae	Leaves, flowers	Thermogenic, antipyretic. leaf juice is used as eye drop and nasal drop.
52.	Ghikuanari	*Aloe vera*	Liliaceae	Leaf juice	Used in dyspepsia, burns, colic, abdominal tumours.
53.	Ghurudu	*Gardenia gummifera*	Rubiaceae	Resin	Thermogenic, antispasmodic, cardio-tonic. Useful in intestinal worms specially roundworms.
54.	Gohira	*Acacia leucophloea*	Mimosaceae	Barks	Thermogenic, constipating, antipyretic, used in cough, bronchitis, leprosy, vomiting and ulcers
55.	Gudmari	*Gymnema sylvestre*	Asclepiadaceae	Whole plant	Thermogenic, digestive, liver tonic, cardio tonic and antipyretic. Fresh leaves when chewed have the remarkable property of paralyzing the sweet and bitter taste for sometime.
56.	Guluchi	Tinospora cordifolia	Menispermaceae	Stem	Antispasmodic, antipyretic, cardio tonic. Useful in chronic fevers, cardiac debility, jaundice, seminal weakness
57.	Hadabh-anga	*Cissus quadrangularis*	Vitaceae	Whole plant	Used in treatment of fractures, swellings, powdered roots and stem paste are used in specifically for bone fractures.
58.	Harida	*Terminalia chebula*	Combretaceae	Fruits	Purgative, Digestive, Cordio tonic. Useful in tridosa neuropathy and general debility.
59.	Hinjala	*Barringtonia acutangula*	Barringtoniaceae	Roots, leaves, and fruits	It is similar to cinchona in action when administered in malarial fever, also useful; in syphilis, nasal catarrh
60.	Jamu	*Syzygium cumini*	Myrtaceae	Bark, leaves and fruits	Useful in Diabetes and strengthening the teeth, gums, ring worms.
61.	Jari	*Ficus microcarpa*	Moraceae	Roots, bark and leaves	Useful in the treatment of wounds, ulcers, bruises, diarrhoea, dysentery and diabetes.

62.	Kadamba	*Anthocephalus cadamba*	Rubiaceae	Bark, leaves and fruits	Febrifuge, and digestive. Decoction of leaves good for ulcers and wounds. Fruits are useful in gastric irritability.
63.	Kaincha	*Abrus precatorius*	Fabaceae	Roots, leaves and seeds.	*Pitta* and *Vata*, leucoderma, skin diseases asthma and fever.
64.	Kainthha	*Limonia feronia*	Rutaceae	Bark, fruits and gums	Useful in gastropathy, diarrhoea, vomiting, bronchitis. It is also cardio tonic.
65.	Kamala-gundi	*Mallotus philippensis*	Euphorbiaceae	Glandular hairs of the fruit	Thernogenic, purgative and digestive. Useful for scabies, ringworms and parasitic skin affections.
66.	Kanchana	*Bauhinia variegata*	Caesalpinaceae	Roots and bark.	Useful in skin diseases, leprosy, intestinal worms, wounds and ulcers.
67.	Kanta baunsa	*Bambusa arundianacea*	Bambusaceae	Roots, leaves, sprouts and grains	Skin diseases, ringworm, diarrhoea, gonorrhoea. It is also an abortive.
68.	Kantamaris	*Amaranthus spinasus*	Amaranthaceae	Whole plant	Antipyretic and febrifuge, useful in cure of leprosy, eczema, and bronchitis.
69.	Kanteikuli	*Flacourtia indica*	Flacourtiaceae	Roots, leaves and fruits	Useful in the treatment of *pitta* and *vata*, poisonous bites, skin diseases. Fruits are appetizer and digestive.
70.	Karamanga	*Averrhoa carambola*	Oxalidaceae	Leaves and fruits	Antipyretic and febrifuge useful in diarrhoea, vomiting scabies and general debility.
71.	Karanja	*Pongamia pinnata*	Fabaceae	Whole plant	Useful in cleaning foul ulcers, teeth, gonorrhoea, Beriberi, vaginopathy.
72.	Kathha-champa	*Plumeria rubra*	Apocynaceae	Root, leaves and latex	Thermogenic, laxative. Useful in gastropathy and rheumatism.
73.	Khair	*Acacia catechu*	Mimosceae	Bark and heart wood	Anti-dysentric, haemostatic, *kapha* and *pitta*, leprosy, leucoderma.
74.	Kochila	*Strychnos nuxvomica*	Loganiaceae	Bark, leaves and seeds	Useful in Chronic wounds and Ulcers, leaf decoction is useful in Paralytic comp0-laints. Diabetes, Malarial fevers and weakness of limbs.
75.	Koilekha	*Hygrophilla auriculata*	Acanthaceae	Roots & leaves	Useful in jaundice, rheumatism, promoting sexual vigour and strength, arresting in abortion.
76.	Kumbhi	*Careya arborea*	Barriangtoniaceae	Bark, leaves and fruits	Thermogenic and antipyretic. Useful for tumours. colic, intestinal worms, epileptic fits and healing of vaginal ruptures.
77.	Kunkuma	*Bixa orellana*	Bixaceae	Roots, bark and seeds	Antipyretic and astringent. Useful in gonorrhea and fevers. A mosquito repellent and nontoxic dye.

78.	Kurein	*Holarrhena antidysenterica*	Apocynaceae	Bark, seeds and leaves	Aphrodisac, digestive and febrifuge. Useful in amoebic dysentery, diarrhoea, asthma, skin diseases and chronic bronchitis.
79.	Kusum	*Schleichera oleasa*	Sapindaceae	Bark and oil	Bark used for Malaria, ripening boils seed oil used for burns and ulcers.
80.	Lajkuli	*Mimosa pudica*	Mimosaceae	Roots and leaves	Antispasmodic, Febrifuge, Useful in leucoderma, Vaginopathy, Jaundice, Asthma, Small pox and tumour of the uterus.
81.	Lalkaniar	*Nerium oleander*	Apocynaceae	Roots and leaves	Thermogenic, Aphrodisiac and febrifuge. A powerful repellant for ring worm and scabies.
82.	Lantana (Naga Airi)	*Lantana camara*	Verbenaceae	Whole plant	Antispasmodic. Useful in malaria, epilepsy and gastopathy.
83.	Lodha	*Sycmplacus cohinchinensis*	Symplocaceae	Bark	Useful in *Pitta* and *Kafa*, Tumours, Ulcers, Skin diseases.
84.	Mai	*Lannea coromondelica*	Anacardiaceae	Bark and leaves	Useful in treatment of cuts, wounds, bruises, ulcers and sprains.
85.	Manjuati	*Lawsonia inermis*	Lythraceae	Roots, leaves, flowers and seeds	Useful in leprosy, leucoderma, scabies, boils, anaemia. Falling of hair, jaundice, intellect promoting and cardio tonic.
86.	Mayur-shikha	*Actiniopteris dichotoma*	Polypodiaceae	Whole plant	Useful in *kapha* and *pitta*, diarrhoea, dysentery, diabetes and fever.
87.	Mohakal	*Trichosanthes tricuspidota*	Cucurbitaceae	Roots and fruits	Abortifacient and Purgative. Good for gonorrhoea. Recommended for asthma, ophthalmia Epilepsy and Leprosy.
88.	Mohalimba	*Melia azedirachta*	Meliaceae	Whole plant	Asthma, diabetes, fevers, after delivery, hysteria, cardiac diseases and typhoid fever
89.	Mohul	*Madhuca indica*	Sapotaceae	Bark, fruits and seeds	Useful for epilepsy, sprains and Rheumatism.
90.	Mudmudi	*Helicteres isora*	Sterculiaceae	Roots, bark and fruit	Lactifuge, demulcent. Useful in colic, scabies, diabetes and gastropathy.
91.	Mundi	*Mitragyna parvifolia*	Rubiaceae	Roots, barks and leaves	Useful for Colic and fever.
92.	Mutha	*Cyperus rotundus*	Cyperaceae	Tubers	Anti-inflammatory, nervine tonic, intellect promoting, febrifuge, and useful in the treatment of leprosy, scabies, epilepsy.
93.	Nageswar	*Mesua ferrea*	Clusiaceae	Flowers and oil	Aphrodisiac, Febrifuge and cardio tonic. Useful to improve impotency.
94.	Neem	*Azadirachta indica*	Meliaceae	Bark, leaves, seeds and oil	Useful in the cure of *pitta*, skin diseases, eczema, leucoderma, malarial fever, bronchitis and diabetes.

95.	Nil	*Indigofera cassioides*	Fasaceae	Whole plant	Thermogenic, laxative. Useful for promoting the growth of hair, cordiopathy and neuropathy.
96.	Nirmuli	*Cuscupta reflexa*	Convolvulaceae	Whole plant	Useful in jaundice, cough, bronchitis and paralysis.
97.	Palas	*Butea monosperma*	Fabaceae	Bark, seeds and gums	Aphrodisiac, appetizer, digestive. Also useful in cure of intestinal worms, bone fractures and rectal diseases. Efficacious in birth control.
98.	Panasa	*Artocarpus heterophyllus*	Moraceae	Roots, leaves, fruits and seeds	Useful in *kapha* and *vata* and *pitta*, aphrodisiac and sedative.
99.	Patal garuda	*Rauvolfia serpentina*	Apocynaceae	Roots and leaves	Useful for hypertension, insomnia, epilepsy.
100.	Phanaphana	*Oroxylum indicum*	Bignoniaceae	Roots, leaves, fruits and seeds	Useful for asthma, bronchitis, colic, diarrhoea, dysentery, cardiac disorder and gastropathy.
101.	Piasal	*Pterocarpus marsupium*	Fabaceae	Heartwood and gum	Rejuvenating and union promoter. Useful in fractures, bruises, skin diseases, leucoderma, diabetes. gum is used as liver tonic.
102.	Pitamoi	*Garuga pinnata*	Burseraceae	Roots, stem, leaves and fruits	Useful for asthma, roundworms and gastropathy.
103.	Poksungha	*Ageratum conyzoides*	Asteraceae	Roots and leaves	Used in *kapha* and *vata*, wounds and sores and preparation of eye lotion.
104.	Polango	*Calophyllum inophyllum*	Clusiaceae	Bark, leaves and seeds	Skin diseases, internal haemorrhages, scabies and intra-muscular pain in leprosy.
105.	Rakta chandan	*Pterocarpus santalinus*	Febaceae	Heartwood and fruits	Febrifuge, ophthalmic, aphrodisiac and tonic. Useful in mental aberrations.
106.	Raktachita	*Plumbago rosea*	Plumbaginaceae	Roots	Abortifacient Narcotic, digestive, Nervous stimulant and rejuvenating. Useful in leucoderma, ringworm and scabies.
107.	Rithha	*Sapindus laurifolia*	Sapindaceae	Roots, bark and fruits	Bark decoction is useful for cattle suffering from Ulcers, Abortifacient and tonic.
108.	Saguan	*Tectona grandis*	Verbenaceae	Whole plant	Useful in hyper acidity, diabetes, leprosy, skin diseases.
109.	Sahada	Streblus asper	Moraceae	Roots, Bark, leaves and latex	Useful in vitiated condition of cough, ulcers, bronchitis, convulsions sores heal and chapped hands.
110.	Sal	*Shorea robusta*	Dipterocarpaceae	Bark, fruits and resin.	Useful in *Kapha* and *Pitta*, bacterial afflictions. Tubercular, ulcers, Seminal weakness and burning of eyes

111.	Salai	*Boswellia serrata*	Burseraceae	Bark, gum and resin	Antipyretic and anti-dysentric. Also useful in syphilitic diseases and jaundice.
112.	Salaparni	*Desmodium gangeticum*	Fabaceae	Roots	Febrifuge, thermogenic, nervine tonic, cardio tonic.
113.	Satabari	*Asparagus racemosus*	Liliaceae	Tuberous roots	Useful in nervous disorder, diarrhoea, dysentery, throat infections, tuberculosis and epilepsy, cardiac debility hypertension and abortion.
114.	Semul	*Bombax ceiba*	Bombacaceae	Roots, gum, bark and fruit.	Paste is good for skin eruptions, fruits useful in ulceration of bladder and kidney.
115.	Siju	*Euphorbia antiquorum*	Euphorbiaceae	Roots juice	Thermogenic and digestive. Useful in colic, constipation, wounds and ulcers, rheumatism, neuropathy.
116.	Siris	*Albizia lebbek*	Mimosaceae	Bark, flowers and seeds	Used in *pitta* and *kapha*, catarrh, asthma, leprosy, leucoderma, sprain, wounds and ulcers.
117.	Sissoo	*Dalbergia sissoo*	Fabaceae	Roots, leaves, bark and heart wood	Thermogenic, aphrodisiac and antipyretic. Useful in the treatment of skin diseases, leucoderma, scabies, ulcers, syphilis, gastropathy and ophthalmopathy.
118.	Soyamlai	*Ichnocarpus frutescens*	Apocynaceae	Roots	Seminal weakness, fever, skin diseases and diabetes.
119.	Sunari	*Cassia fistula*	Caesalpiniaceae	Whole plant	Useful in skin diseases, tuberculosis glands, syphilis, diabetes, leprosy, ring worm, and cardiopathy.
120.	Sunsunia	*Marsilea quadrifolia*	Marsileaceae	Whole plant	Hypnotic, ophthalmic, aphrodisiac. Useful in dyspepsia and insomnia.
121.	Sweta simli	*Ceiba pentandra*	Bombacaceae	Root and bark	Useful in treatment of gonorrhoea fevers, abdominal complaints and tumours.
122.	Tentuli	*Tamarindus indica*	Caesalpiniaceae	Roots, fruits and seeds	Thermogenic, anti-fungal, jaundice, scabies, ringworm, small pox, Alcoholic intoxication, vaginopathy and diabetes.
123.	Thalkudi/ Brahmi	*Centella asiatica*	Apiaceae	Whole plant	Useful in treatment of cardiac debility, epilepsy abdominal disorders and leprosy. Intellect promoting.
124.	Urguna	*Cycas circionalis*	Cycadaceae	Bark and tender leaves	Useful for treatment sores and swellings.
125.	Uturudi	*Pergularia daemia*	Asclepiadaceae	Whole plant	Useful in *vata* and *kapha*. Plant extract useful in uterine and menstrual disorder.

ANNEXURE - XVII
Notification of Kapilas Sanctuary
GOVERNMENT OF ORISSA
FOREST & ENVIRONMENT DEPARTMENT.
NOTIFICATION

No8F(WL)-25/11 – 5937 / F & E, Whereas the State Government consider that the area, the limits of which have been specified in Schedule – 'A' and the boundary mentioned in Schedule –'B' below situated in Dhenkanal Sadar, Gondia Police stations of Dhenkanal District and Chaudwar, Gurudijhatia PS of Cuttack District lying between 85˚-40' and 85˚-56' east longitude and between 20˚-35' and 20˚-46' North Latitude covering an area of about 12559 ha. or 125.5 Sq.Kms (The actual area is subject to change depending on regularization of Pre-1980 encroachment of Forests by Government of India) is of adequate ecological, faunal, floral geomorphological, natural and zoological significance for the purpose of protecting propagating and developing wild life.

Now therefore in pursuance of sec-26 A(1)(b) of the Wild Life Protection Act, 1972 (53 of 1972), the State Government do hereby declare that the aforesaid area to be a Sanctuary called the KAPILASH WILD LIFE SANCTUARY with effect from the date of publication of this notification in the Orissa Gazettee.

SCHEDULE 'A'

Boundary Description

The boundary line of Kapilash Wildlife Sanctuary starts from pillar No.63 of Kapilash R.F. near Mini Zoo. The boundary line runs along the right side of the Kapilash Temple Road in South direction till beginning of the steps to temple then turns east direction along the right side of the steps reaches the temple on Kapilash hill and runs along the boundary of Kapilash Temple area. Then returns back along the other side of the steps on West direction to the foot hill. Then runs along the other side of the Temple Road towards North direction till the starting point of the Ghat Road. Then it runs along the right side of the Ghat Road towards South-East direction in Zigzag manner till reaches the temple area and cross the Ghat Road then returns back on the other side of the Ghat Road towards North direction in a zigzag manner till starting point of Ghat Road. Then turns towards north direction till touches the Kapilash R.F. boundary line near Mini Zoo and then runs in North-Eastern direction inside the Kapilash Mini Zoo along the RF boundary line and then crossing the zoo boundary runs in the same direction till touches Deogaon Tangi Road at pillar No.78 of Kapilash R.F. Then it turns towards East and runs along the Kapilash RF boundary line till it reaches Pillar lNo. 93 & village boundary of Bania from where it turns towards South and follows the Kapilash RF boundary

line for a certain distance, then turns towards East at Pillar No.97 and then to North at Pillar No.104 following the boundary line of Kapilash RF as well as the village boundary of bania and touches the Deogaon-Tangi road again from where it turns towards East from pillar No.109 along the Kapilash RF boundary till it reaches the village boundary of Sorisiapada (Bhanaragoda).

Then turns towards South-East direction from Pillar No.118 along the Kapilash RF boundary line, then turns towards North-East direction from Pillar No.121 touches Deogaon-Tangi Road and then runs in Eastern direction from pillar No.122 parallel to a certain distance along the Kapilash RF boundary line, then turns towards North-East from pillar No.123 along the Kapilash RF boundary line till reaches the boundary pillar No.157 of Kapilash RF. Then runs in North-East direction along the common boundary line of Kapilash RF and Lahada RF till it reaches the boundary pillar No.181 of Kapilash RF. Then it runs along the boundary line of Kapilash RF in South direction, then East direction from pillar No.184 till touches the pillar No.191 of Kapilash RF, then runs along the common boundary line of Kapilash RF and Kapilash RF in South direction till ti tourches pillar No.213 of Kapilash RF, then runs in South, then to East direction from Pillar No.214, then to South from pillar No.238 till touches Deogaon- Tangi Road near village Chatighar at Pillar No.243 and turns towards West following the boundary line of Kapilash RF as well as the village boundary line of Chatighar village and touches the Deogaon- Tangi Road again and runs along the road in West direction cross at the junction of Kolha Road and runs in South-East direction along west side of the Kachha Morum approach road till it touches the village boundary of Kolha and runs along the village boundary line and returns on the other side of the approach road from Kolha and touches the deogaon- Tangi Road and runs in East direction along the Road and touches the Kapilash RF line near Chatighar. Then runs towards East along the Kapilash RF. Boundary line and touches the Dhenkanal-Cuttack inter-district boundary line. Then it runs towards South and then Western direction following the inter-district boundary line of Cuttack and Dhenkanal coinsiding with the Kapilash RF boundary line till it touches the trijunction of Kapilash RF, Daliojoda RF and Baniabandha RF at pillar No.271 of Kapilash RF. Then it runs in West and South direction following the inter-district boundary line of Cuttack and Dhenkanal District as well as the Kapilash RF boundary line and crosses the East coast Railway line till it touches the junction pillar No.384 of Kapilash RF and Godabolua RF. Then it turns towards North. North-East direction following the common boundary of Godabolua R.F. and Kapilash RF boundary line after crossing Railway line till it rouches the junction of Patapuri RF and pillar No.420 of Kapilash RF near village Khajuria. Then it follows the common boundary of Patapuri RF and Kapilash RF till it touches the pillar No.426 of Kapilash RF. Then it runs North-West, North-East direction along the Kapilash RF boundary line till reaches the Kadua-Tapobana forest road.

Then it runs along one side of the Kadua-Tapobana forest road in East direction till Tapobana Ashram follows the Ashram boundary and returns in West direction on the other side of Kadua- Tapobana forest road touches the boundary line of Kapilash RF near village Kadua.

From there the Kapilash Wildlife Sanctuary boundary line turns in North direction and touches Dhenkanal- Kapilash PWD Road near Datatraiya Ashram at pillar No.55 of Kapilash RF. Then turns towards North-East direction along the Kapilash RF boundary till reaches Pillar no.63 of Kapilash RF at the starting point.

SCHEDULE –B

BOUNDARY DESCRIPTION

North : Ramei RF and Lahada (B) RF

East : Khakira RF, Satiundi RF village boundary of Khankira-Kantamila Ghoraghori of Dhenkanal Division, Haripur village of Cuttack District, Karanji RFs of Cuttack Division.

South : Baniabandha RF, Ranibania RF of Athagarh Division, Dalijoda RF and Ambllijhari of Cuttack Division and part of Godabolua RF of Dhenkanal Division.

West : Part of Godabolua RF., Patapuri RF of Dhenkanal Division and village boundary of Kurumtangar, Totasahi, Khajuria, Banasagoth, Mahulpara, Sankhua, Achhanda, Harekrishnapur, Lochapali, Chhanabolua, Biradia, Kadua, Ambanali, Nagiaposi, Deogaon and Biswanathpur.

By order of Governor
Sd/- Aurobindo Behera
Principal Secretary to Government.

ANNEXURE-XVIII

Enumeration Results of compartments of Ranjagarh,Anantapur & Kandhara R.Fs.

Name of the Range :- K. Nager West.					Method :- 1% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 1					Area of enumeration :-4.3141 ha.			
Total Area :- 431.41 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	1	6	6	5	1	0	19
2	AMLA	0	0	1	0	0	0	1
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	0	0	0	0	0	0	0
7	GAMBHAR	0	0	0	0	0	0	0
8	DHAURA	0	0	0	0	0	0	0
9	HARIDA	0	0	0	0	0	0	0
10	JAMUN	0	0	0	0	0	0	0
11	KASI	0	0	0	0	0	0	0
12	KURUM	0	0	1	0	1	0	2
13	KENDU	0	0	1	0	0	0	1
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	0	0	0	0	0	0	0
17	MUNDI	0	0	0	0	0	0	0
18	MAI	13	18	3	1	0	0	35
19	MISC	0	0	0	0	0	0	0
20	PIASAL	25	45	14	3	1	0	88
21	SAL	1855	919	33	15	3	1	2826
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	2	0	0	0	0	0	2
25	TEAK	0	0	0	0	0	0	0
	Total	1896	988	59	24	6	1	2974

Name of the Range :- K. Nager West.					Method :- 1% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 2					Area of enumeration :-2.9342 ha.			
Total Area :- 293.417ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	18	14	4	0	0	0	36
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	1	0	0	0	0	1
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	40	4	0	0	0	0	44
7	GAMBHAR	0	0	0	0	0	0	0
8	DHAURA	2	2	0	0	0	0	4
9	HARIDA	0	0	0	0	0	0	0
10	JAMUN	5	1	1	0	0	0	7
11	KASI	1	0	0	0	0	0	1
12	KURUM	1	2	0	0	1	0	4
13	KENDU	21	8	1	0	0	0	30
14	KANGADA	5	1	1	0	0	0	7
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	5	3	3	0	0	0	11
17	MUNDI	1	1	1	0	0	0	3
18	MAI	5	5	4	0	0	0	14
19	MISC	29	13	2	2	0	0	46
20	PIASAL	7	8	0	0	0	0	15
21	SAL	422	231	63	6	2	0	724
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	1	0	0	0	0	1
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	Total	562	295	80	8	3	0	948

Range:Kamakhya Nagar East								
Block-Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-3				Period of Enumeration -May-2014				
Area(In Ha.) - 425.74				Area of Enumeration (In Ha.) -21.28				
SL No.	Species	30 to 59	60 to 89	90 to119	120to 149	15to 179	180 above	Total
1	ASAN	68	27	16	15	0	1	127
2	AMLA	21	14	4	5	0	0	44
3	BELA	34	21	8	6	1	0	70
4	BANDHAN	31	6	6	1	0	0	44
5	BAHADA	21	29	10	5	1	0	66
6	CHARA	72	23	1	5	0	0	101
7	DHAURA	118	76	53	43	22	21	333
8	GAMBHARI	19	14	6	1	3	0	43
9	HARIDA	17	20	11	3	2	1	54
10	JAMUN	28	22	14	16	4	6	90
11	KASI	48	20	15	3	3	4	93
12	KURUM	53	29	19	16	8	24	149
13	KENDU	107	31	31	20	7	7	203
14	KANGADA	90	51	42	36	15	4	238
15	KARADA	54	18	7	0	0	0	79
16	MAHULA	42	26	69	54	22	46	259
17	MUNDI	15	18	6	0	0	1	40
18	MAI	64	41	31	20	9	1	166
19	MISC	563	191	121	54	38	69	1036
20	PIASAL	33	21	14	18	35	49	170
21	SAL	403	188	253	315	297	536	1992
22	SISOO	50	26	3	2	0	0	81
23	SIDHA	36	10	4	2	0	0	52
24	SIMILI	24	9	8	2	0	0	43
25	TEAK	0	0	0	0	0	0	0
	TOTAL	2011	931	752	642	467	770	5573

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No. - 4				Period of Enumeration - Nov-2014				
Area(In Ha.)- 500.61				Area of Enumeration (In Ha.)-25.04				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	106	40	34	33	11	4	228
2	AMLA	4	0	0	0	0	0	4
3	BELA	14	23	4	0	0	0	41
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	30	25	13	5	0	1	74
6	CHARA	328	61	20	4	0	0	413
7	DHAURA	57	90	90	45	15	3	300
8	GAMBHARI	7	1	1	0	0	0	9
9	HARIDA	4	11	6	0	0	0	21
10	JAMUN	16	13	4	10	0	1	44
11	KASI	21	25	16	4	0	0	66
12	KURUM	13	14	2	0	0	0	29
13	KENDU	100	48	25	13	3	1	190
14	KANGADA	119	63	67	40	7	3	299
15	KARADA	20	2	1	0	0	0	23
16	MAHULA	64	29	53	50	21	23	240
17	MUNDI	15	39	13	1	0	1	69
18	MAI	39	27	31	21	4	-	122
19	MISC	311	156	113	52	17	24	673
20	PIASAL	11	2	0	0	0	0	13
21	SAL	578	199	276	239	67	47	1406
22	SISOO	6	4	0	0	0	0	10
23	SIDHA	39	9	6	3	2	2	61
24	SIMILI	7	5	9	2	1	0	24
25	TEAK	0	0	0	0	0	0	0
	TOTAL	1909	886	784	522	148	110	4359

Name of the Range:Kamakhya Nagar East								
Block-Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-5				Period of Enumeration-Nov-2014				
Area(In Ha.)-539.47 ha				Area of Enumeration (In Ha.)-26.973				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	109	56	49	57	10	21	302
2	AMLA	4	2	0	0	0	0	6
3	BELA	47	23	21	2	2	0	95
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	24	20	15	7	3	0	69
6	CHARA	112	32	16	3	2	1	166
7	DHAURA	63	25	38	36	6	12	180
8	GAMBHARI	9	7	2	2	0	0	20
9	HARIDA	2	3	7	2	1	1	16
10	JAMUN	13	14	9	10	7	16	69
11	KASI	23	17	12	8	3	7	70
12	KURUM	42	13	27	16	4	10	112
13	KENDU	21	21	21	11	3	3	80
14	KANGADA	220	122	135	91	47	21	636
15	KARADA	74	21	5	3	0	0	103
16	MAHULA	38	17	21	11	3	18	108
17	MUNDI	27	12	3	2	1	0	45
18	MAI	32	16	28	19	3	7	105
19	MISC	591	296	229	123	67	82	1388
20	PIASAL	18	7	3	1	0	0	29
21	SAL	430	192	184	162	92	144	1204
22	SISOO	10	6	1	0	0	0	17
23	SIDHA	39	11	15	9	5	3	82
24	SIMILI	6	1	4	5	0	2	18
25	TEAK	0	0	0	0	0	0	0
	TOTAL	1954	934	845	580	259	348	4920

Name of the Range:Kamakhya Nagar East								
Block-Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-6				Period of Enumeration-Nov-2014				
Area(In Ha.)-352.9				Area of Enumeration (In Ha.)-17.68				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	65	26	10	13	8	3	125
2	AMLA	0	0	0	0	0	0	0
3	BELA	7	3	3	0	0	0	13
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	4	0	2	1	0	0	7
6	CHARA	91	13	2	0	0	0	106
7	DHAURA	54	22	25	7	6	5	119
8	GAMBHARI	2	0	0	0	0	0	2
9	HARIDA	4	1	0	0	1	1	7
10	JAMUN	11	7	5	0	2	2	27
11	KASI	3	0	0	0	0	0	3
12	KURUM	4	3	0	0	0	0	7
13	KENDU	28	9	10	8	15	9	79
14	KANGADA	31	19	15	12	6	2	85
15	KARADA	118	22	8	0	0	0	148
16	MAHULA	31	11	24	21	25	42	154
17	MUNDI	1	0	1	0	2	7	11
18	MAI	34	25	19	4	0	2	84
19	MISC	268	100	56	23	12	14	473
20	PIASAL	2	5	0	0	1	1	9
21	SAL	142	30	12	16	30	37	267
22	SISOO	0	0	1	0	0	0	1
23	SIDHA	48	31	7	5	6	1	98
24	SIMILI	5	0	2	0	0	0	7
25	TEAK	0	0	1	0	2	0	3
	TOTAL	953	327	203	110	116	126	1835

Name of the Range:- Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-7				Period of Enumeration - May-2014				
Area(In Ha.) - 425.74				Area of Enumeration (In Ha.)-21.28				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	619	229	32	28	6	10	924
2	AMLA	12	3	0	0	0	0	15
3	BELA	49	10	2	0	0	0	61
4	BANDHAN	2	0	0	0	0	0	2
5	BAHADA	16	1	1	3	1	1	23
6	CHARA	436	44	6	0	1	0	487
7	DHAURA	327	119	62	25	5	3	541
8	GAMBHARI	0	0	0	0	1	0	1
9	HARIDA	1	4	1	0	0	0	6
10	JAMUN	37	20	12	10	2	7	88
11	KASI	2	0	0	0	0	0	2
12	KURUM	14	10	2	1	1	1	29
13	KENDU	50	28	32	15	3	7	135
14	KANGADA	173	66	47	19	6	3	314
15	KARADA	454	93	11	2	2	2	564
16	MAHULA	136	91	109	88	29	34	487
17	MUNDI	0	0	0	0	0	0	0
18	MAI	163	88	27	7	2	1	288
19	MISC	908	373	171	62	10	50	1574
20	PIASAL	97	33	11	1	-	-	142
21	SAL	592	129	118	76	62	49	1026
22	SISOO	2	0	0	0	0	0	2
23	SIDHA	98	22	14	2	0	2	138
24	SIMILI	12	2	0	0	0	0	14
25	TEAK	5	3	1	2	0	2	13
	TOTAL	4205	1368	659	341	131	172	6876

Range: Kamakhya Nagar(East)								
Block-Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-8				Period of Enumeration -May-2014				
Area(In Ha.)-320.92				Area of Enumeration (In Ha.)- 16.04				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	320	77	27	18	5	6	453
2	AMLA	7	1	0	0	0	0	8
3	BELA	44	26	0	0	1	0	71
4	BANDHAN	0	1	0	0	0	0	1
5	BAHADA	3	2	1	2	0	0	8
6	CHARA	438	42	3	0	0	0	483
7	DHAURA	139	71	55	17	5	1	288
8	GAMBHARI	3	0	0	0	0	0	3
9	HARIDA	0	1	0	0	0	0	1
10	JAMUN	60	17	11	0	2	2	92
11	KASI	0	0	0	0	0	0	0
12	KURUM	2	2	1	0	1	0	6
13	KENDU	74	59	42	20	8	4	207
14	KANGADA	173	102	91	30	3	1	400
15	KARADA	444	136	21	0	0	0	601
16	MAHULA	40	20	23	23	5	12	123
17	MUNDI	0	0	0	0	0	0	0
18	MAI	95	59	25	8	0	2	189
19	MISC	1142	373	147	106	15	21	1804
20	PIASAL	49	14	3	0	1	0	67
21	SAL	358	218	225	120	47	20	988
22	SISOO	7	1	1	0	0	0	9
23	SIDHA	89	16	19	2	3	0	129
24	SIMILI	11	2	2	0	0	0	15
25	TEAK	0	0	0	0	0	0	0

Name of the Range:-Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No. -9				Period of Enumeration -May -2014				
Area(In Ha.)- 245.24				Area of Enumeration (In Ha.) -12.24				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	152	38	11	5	1	3	210
2	AMLA	1	0	0	0	0	0	1
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	11	0	3	2	0	0	16
6	CHARA	371	23	2	0	0	0	396
7	DHAURA	59	8	3	6	1	2	79
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	7	0	0	1	0	0	8
10	JAMUN	18	5	5	1	0	1	30
11	KASI	0	0	0	0	0	0	0
12	KURUM	1	2	1	1	0	0	5
13	KENDU	71	26	29	11	2	3	142
14	KANGADA	1	2	3	9	0	2	17
15	KARADA	4	0	0	0	0	1	5
16	MAHULA	100	44	46	66	21	28	305
17	MUNDI	0	0	0	0	0	0	0
18	MAI	98	20	3	3	0	0	124
19	MISC	188	46	17	31	4	22	308
20	PIASAL	45	2	1	0	0	0	48
21	SAL	519	138	165	253	94	107	1276
22	SISOO	10	2	0	0	0	1	13
23	SIDHA	100	13	2	0	0	0	115
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	1173	39	1	-	0	-	1213
	TOTAL	2929	408	292	389	123	170	4311

Name of the Range:Kamakhya Nagar East								
Block- Ranjaharh R.F				Method: 5 % strip sampling				
Comp. No.-10				Period of Enumeration -June-2014				
Area(In Ha.)-425.33				Area of Enumeration (In Ha.)-21.28				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	434	102	33	15	4	4	592
2	AMLA	1	0	0	0	0	0	1
3	BELA	4	1	0	0	0	0	5
4	BANDHAN	0	3	1	0	0	0	4
5	BAHADA	25	19	4	0	0	1	49
6	CHARA	718	83	12	0	0	0	813
7	DHAURA	68	26	19	8	0	4	125
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	5	3	1	0	0	0	9
10	JAMUN	1	3	0	0	0	0	4
11	KASI	0	1	0	0	0	0	1
12	KURUM	1	0	2	0	0	0	3
13	KENDU	330	243	147	53	12	2	787
14	KANGADA	54	16	13	1	0	1	85
15	KARADA	91	12	7	1	0	0	111
16	MAHULA	243	107	76	32	11	30	499
17	MUNDI	0	0	0	0	0	0	0
18	MAI	64	29	12	3	1	2	111
19	MISC	409	154	79	26	9	23	700
20	PIASAL	20	21	14	0	0	0	55
21	SAL	2295	836	549	286	121	75	4162
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	41	11	11	1	0	0	64
24	SIMILI	1	0	0	0	0	0	1
25	TEAK	0	0	0	0	0	0	0
	TOTAL	4805	1670	980	426	158	142	8181

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-11				Period of Enumeration Jun-2014				
Area (In Ha.)-452.46				Area of Enumeration (In Ha.) - 22.64				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	453	93	34	10	4	3	597
2	AMLA	3	0	0	0	0	0	3
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	24	15	2	0	0	2	43
6	CHARA	358	71	10	0	0	0	439
7	DHAURA	30	5	8	7	1	0	51
8	GAMBHARI	1	1	2	1	0	0	5
9	HARIDA	12	7	5	1	0	0	25
10	JAMUN	40	29	41	10	2	7	129
11	KASI	14	8	3	1	0	0	26
12	KURUM	5	3	1	2	0	0	11
13	KENDU	150	70	34	8	4	2	268
14	KANGADA	9	2	1	2	1	1	16
15	KARADA	17	1	2	0	0	0	20
16	MAHULA	157	118	106	63	18	23	485
17	MUNDI	0	0	0	0	0	0	0
18	MAI	67	55	18	4	2	0	146
19	MISC	251	88	64	22	6	8	439
20	PIASAL	69	85	53	7	0	2	216
21	SAL	1197	351	150	83	50	30	1861
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	42	10	0	1	0	0	53
24	SIMILI	2	1	1	1	0	0	5
25	TEAK	0	0	0	0	0	0	0
	TOTAL	2901	1013	535	223	88	78	4838

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-12				Period of Enumeration December-2014				
Area (In Ha.)-433.43				Area of Enumeration (In Ha.) - 21.68				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	644	183	66	17	3	3	916
2	AMLA	8	0	0	0	0	0	8
3	BELA	11	4	3	0	0	0	18
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	19	3	0	0	0	1	23
6	CHARA	478	55	8	0	0	0	541
7	DHAURA	230	24	17	13	0	1	285
8	GAMBHARI	0	1	0	0	0	0	1
9	HARIDA	35	8	4	2	0	0	49
10	JAMUN	75	16	7	4	0	0	102
11	KASI	16	14	7	7	3	0	47
12	KURUM	18	16	6	7	1	2	50
13	KENDU	155	45	38	19	7	1	265
14	KANGADA	56	40	21	18	7	3	145
15	KARADA	165	17	3	0	0	0	185
16	MAHULA	175	60	28	20	11	7	301
17	MUNDI	2	1	1	0	0	0	4
18	MAI	94	68	27	9	1	0	199
19	MISC	706	211	114	60	24	17	1132
20	PIASAL	48	33	18	1	1	0	101
21	SAL	1231	523	284	148	68	24	2278
22	SISOO	6	4	1	0	0	0	11
23	SIDHA	136	33	12	1	1	0	183
24	SIMILI	7	10	7	2	0	0	26
25	TEAK	0	0	0	0	0	0	0
	TOTAL	4315	1369	672	328	127	59	6870

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-13				Period of Enumeration Dec-2014				
Area (In Ha.)-261.43				Area of Enumeration (In Ha.) - 2.64				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	259	60	13	2	1	0	335
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	5	2	0	0	0	0	7
6	CHARA	99	4	0	0	0	0	103
7	DHAURA	36	1	3	0	1	0	41
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	3	3	1	0	0	0	7
10	JAMUN	19	7	4	5	2	1	38
11	KASI	1	2	0	0	0	0	3
12	KURUM	1	0	0	0	0	0	1
13	KENDU	21	10	13	6	0	0	50
14	KANGADA	11	2	1	3	0	0	17
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	6	3	7	4	2	0	22
17	MUNDI	0	0	0	0	0	0	0
18	MAI	7	5	1	0	0	0	13
19	MISC	59	18	17	8	1	0	103
20	PIASAL	6	9	3	0	0	0	18
21	SAL	242	80	35	28	9	3	397
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	7	4	1	0	0	0	12
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	TOTAL	782	210	99	56	16	4	1167

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 1% strip sampling				
Comp. No.-14				Period of Enumeration Jan-2015				
Area (In Ha.)-401.06				Area of Enumeration (In Ha.) - 4.10				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	69	28	10	3	2	5	117
2	AMLA	0	0	0	0	0	0	0
3	BELA	9	4	0	0	0	0	13
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	7	1	2	2	0	0	12
6	CHARA	48	19	0	0	0	0	67
7	DHAURA	24	6	12	8	2	2	54
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	2	1	1	0	0	0	4
10	JAMUN	7	1	3	3	2	0	16
11	KASI	4	0	0	0	0	0	4
12	KURUM	2	5	6	0	0	0	13
13	KENDU	0	0	0	0	0	0	0
14	KANGADA	33	17	8	7	5	5	75
15	KARADA	10	2	0	0	0	0	12
16	MAHULA	0	0	0	0	0	0	0
17	MUNDI	0	0	0	0	0	0	0
18	MAI	2	3	4	0	0	0	9
19	MISC	68	26	23	7	7	9	140
20	PIASAL	8	0	0	0	0	0	8
21	SAL	105	51	4	2	5	1	168
22	SISOO	1	0	0	0	0	0	1
23	SIDHA	4	3	1	0	0	0	8
24	SIMILI	2	2	7	1	0	0	12
25	TEAK	0	0	0	0	0	0	0
	TOTAL	405	169	81	33	23	22	733

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 1 % strip sampling				
Comp. No.-15				Period of Enumeration Jan-2015				
Area (In Ha.)-390.13				Area of Enumeration (In Ha.) -3.901				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	48	21	2	2	1	1	75
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	1	2	0	0	0	0	3
6	CHARA	47	3	0	0	0	0	50
7	DHAURA	0	0	0	0	0	1	1
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	0	0	0	1	0	0	1
10	JAMUN	2	1	0	0	1	0	4
11	KASI	0	0	0	0	0	0	0
12	KURUM	0	0	0	0	0	0	0
13	KENDU	5	0	0	0	0	0	5
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	5	0	4	2	0	7	18
17	MUNDI	0	0	0	0	0	1	1
18	MAI	0	0	0	0	0	0	0
19	MISC	214	14	13	7	4	8	260
20	PIASAL	0	0	0	0	0	0	0
21	SAL	58	19	4	2	5	8	96
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	1	0	0	0	0	1
25	TEAK	261	1	0	0	0	0	262
	TOTAL	641	62	23	14	11	26	777

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 1 % strip sampling				
Comp. No.-16				Period of Enumeration Jan-2015				
Area (In Ha.)-513.16				Area of Enumeration (In Ha.) -5.131				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	22	13	6	5	1	7	54
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	1	0	0	1	0	0	2
6	CHARA	86	17	5	1	0	0	109
7	DHAURA	0	0	1	1	0	0	2
8	GAMBHARI	0	0	1	0	0	0	1
9	HARIDA	5	3	1	0	0	0	9
10	JAMUN	15	6	2	3	0	0	26
11	KASI	0	0	0	0	0	0	0
12	KURUM	0	0	0	0	0	0	0
13	KENDU	31	6	1	2	1	0	41
14	KANGADA	3	3	2	0	0	0	8
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	41	9	12	7	1	6	76
17	MUNDI	0	0	0	0	1	0	1
18	MAI	0	0	0	0	0	0	0
19	MISC	82	19	17	4	0	5	127
20	PIASAL	13	5	2	0	0	0	20
21	SAL	100	72	45	18	5	23	263
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	59	0	0	0	0	0	59
	TOTAL	458	153	95	42	9	41	798

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method:5% strip sampling				
Comp. No.-17				Period of Enumeration Dec-2014				
Area (In Ha.)-438.3				Area of Enumeration (In Ha.) -21.915				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	193	87	55	22	2	19	378
2	AMLA	7	1	1	0	0	0	9
3	BELA	55	13	4	0	0	0	72
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	32	17	14	2	3	5	73
6	CHARA	123	20	5	0	0	0	148
7	DHAURA	80	39	46	17	0	14	196
8	GAMBHARI	20	1	0	1	1	0	23
9	HARIDA	1	1	0	0	1	3	6
10	JAMUN	54	11	14	4	0	4	87
11	KASI	10	11	6	0	0	0	27
12	KURUM	4	3	0	0	0	0	7
13	KENDU	48	19	19	11	4	8	109
14	KANGADA	113	59	34	15	2	28	251
15	KARADA	46	12	3	0	0	0	61
16	MAHULA	66	19	22	18	5	32	162
17	MUNDI	1	0	0	0	0	0	1
18	MAI	3	0	0	0	0	0	3
19	MISC	425	170	117	24	3	31	770
20	PIASAL	59	17	1	2	0	1	80
21	SAL	1040	284	128	36	5	26	1519
22	SISOO	8	1	0	2	0	0	11
23	SIDHA	3	5	2	1	0	0	11
24	SIMILI	2	4	2	1	0	0	9
25	TEAK	71	10	0	0	0	0	81
		2464	804	473	156	26	171	4094

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method:5% strip sampling				
Comp. No.-18				Period of Enumeration Jan-2015				
Area (In Ha.)-431.81				Area of Enumeration (In Ha.) -21.590				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	25	12	7	2	6	0	52
2	AMLA	62	9	0	0	0	0	71
3	BELA	89	13	0	6	0	0	108
4	BANDHAN	7	6	2	5	3	3	26
5	BAHADA	8	5	3	0	0	0	16
6	CHARA	204	23	5	0	0	0	232
7	DHAURA	143	22	23	7	0	11	206
8	GAMBHARI	17	0	0	0	0	0	17
9	HARIDA	0	1	1	3	0	0	5
10	JAMUN	18	10	7	4	6	0	45
11	KASI	70	27	11	0	0	0	108
12	KURUM	11	2	0	0	0	0	13
13	KENDU	48	21	44	6	16	12	147
14	KANGADA	204	58	26	15	6	1	310
15	KARADA	342	24	0	0	0	0	366
16	MAHULA	24	14	33	11	9	48	139
17	MUNDI	10	3	0	0	2	5	20
18	MAI	8	5	1	3	9	5	31
19	MISC	831	348	162	53	22	79	1495
20	PIASAL	28	5	0	0	0	0	33
21	SAL	210	107	62	25	7	8	419
22	SISOO	44	4	1	0	0	0	49
23	SIDHA	32	18	9	5	1	5	70
24	SIMILI	6	2	12	4	1	0	25
25	TEAK	0	0	0	0	0	0	0
		2441	739	409	149	88	177	4003

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: -1% strip sampling				
Comp. No.-19				Period of Enumeration Jan-2015				
Area (In Ha.)-299.89				Area of Enumeration (In Ha.) -2.998				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	2	0	1	0	0	0	3
2	AMLA	2	0	0	0	0	0	2
3	BELA	6	2	0	0	0	0	8
4	BANDHAN	1	0	0	0	0	0	1
5	BAHADA	0	1	0	0	0	0	1
6	CHARA	25	3	0	0	0	0	28
7	DHAURA	32	14	17	3	0	3	69
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	1	0	0	0	0	0	1
10	JAMUN	1	0	0	0	0	0	1
11	KASI	4	0	0	0	0	0	4
12	KURUM	0	0	0	0	0	0	0
13	KENDU	10	6	10	0	0	1	27
14	KANGADA	6	0	1	0	0	0	7
15	KARADA	25	1	0	0	0	0	26
16	MAHULA	4	3	6	2	0	12	27
17	MUNDI	0	0	0	0	0	0	0
18	MAI	0	0	0	0	0	0	0
19	MISC	55	17	15	3	1	4	95
20	PIASAL	0	0	0	0	0	0	0
21	SAL	19	6	1	1	0	2	29
22	SISOO	6	0	0	0	0	0	6
23	SIDHA	3	0	0	0	0	0	3
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
		202	53	51	9	1	22	338

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method:5% strip sampling				
Comp. No.-20				Period of Enumeration Jan-2015				
Area (In Ha.)-451.24				Area of Enumeration (In Ha.) -22.562				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	89	32	29	21	20	3	194
2	AMLA	27	4	0	0	0	0	31
3	BELA	82	19	0	0	0	0	101
4	BANDHAN	7	1	0	0	0	0	8
5	BAHADA	15	7	11	5	1	0	39
6	CHARA	342	71	2	0	0	0	415
7	DHAURA	169	57	39	26	18	6	315
8	GAMBHARI	0	1	0	0	2	0	3
9	HARIDA	6	3	11	10	1	0	31
10	JAMUN	20	7	8	12	6	7	60
11	KASI	55	41	8	5	1	1	111
12	KURUM	3	3	5	4	0	0	15
13	KENDU	71	36	28	19	15	6	175
14	KANGADA	77	42	15	3	0	1	138
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	45	18	18	19	12	20	132
17	MUNDI	1	0	0	0	0	0	1
18	MAI	33	14	13	12	0	3	75
19	MISC	755	316	204	89	79	79	1522
20	PIASAL	0	0	0	0	0	0	0
21	SAL	800	489	456	204	97	169	2215
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	86	29	17	25	6	2	165
24	SIMILI	18	28	23	9	1	0	79
25	TEAK	0	0	0	0	0	0	0
		2701	1218	887	463	259	297	5825

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method:5% strip sampling				
Comp. No.-21				Period of EnumerationDec-2014				
Area (In Ha.)-454.08				Area of Enumeration (In Ha.) -22.72				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	118	88	43	24	12	7	292
2	AMLA	29	0	0	0	0	0	29
3	BELA	26	17	2	0	0	0	45
4	BANDHAN	2	0	0	0	0	0	2
5	BAHADA	9	7	11	5	1	0	33
6	CHARA	137	34	11	0	1	0	183
7	DHAURA	159	80	49	21	10	4	323
8	GAMBHARI	20	6	5	2	0	1	34
9	HARIDA	9	4	2	1	0	0	16
10	JAMUN	111	55	18	6	10	5	205
11	KASI	39	12	4	2	1	0	58
12	KURUM	60	13	3	0	0	0	76
13	KENDU	18	15	10	8	8	1	60
14	KANGADA	425	160	97	52	28	3	765
15	KARADA	314	33	5	1	0	0	353
16	MAHULA	43	24	26	33	37	3	166
17	MUNDI	8	6	1	0	0	0	15
18	MAI	21	10	8	1	3	0	43
19	MISC	1737	430	190	87	49	13	2506
20	PIASAL	11	5	1	0	0	0	17
21	SAL	1156	511	190	112	57	10	2036
22	SISOO	13	2	0	0	0	0	15
23	SIDHA	69	28	16	6	5	0	124
24	SIMILI	9	7	7	4	3	0	30
25	TEAK	0	0	0	0	0	0	0
		4543	1547	699	365	225	47	7426

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method:5% strip sampling				
Comp. No.-22				Period of Enumeration Nov-2014				
Area (In Ha.)-485.64				Area of Enumeration (In Ha.) -24.282				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	40	15	19	11	8	6	99
2	AMLA	15	4	0	0	0	0	19
3	BELA	64	28	17	6	0	0	115
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	3	9	5	5	2	0	24
6	CHARA	145	61	30	3	1	0	240
7	DHAURA	121	49	73	45	28	8	324
8	GAMBHARI	2	8	4	0	0	0	14
9	HARIDA	10	9	11	7	0	0	37
10	JAMUN	4	10	15	5	3	5	42
11	KASI	25	15	15	8	0	3	66
12	KURUM	5	11	6	8	7	1	38
13	KENDU	31	25	42	17	8	5	128
14	KANGADA	118	42	126	61	40	44	431
15	KARADA	98	10	6	2	0	0	116
16	MAHULA	28	17	43	19	12	36	155
17	MUNDI	4	3	0	1	0	0	8
18	MAI	15	17	18	14	3	2	69
19	MISC	734	291	195	66	62	126	1474
20	PIASAL	17	3	3	4	0	0	27
21	SAL	359	226	238	184	219	147	1373
22	SISOO	22	9	1	0	0	0	32
23	SIDHA	60	22	12	7	6	1	108
24	SIMILI	1	5	5	0	6	1	18
25	TEAK	0	0	0	0	0	0	0
		1921	889	884	473	405	385	4957

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5% strip sampling				
Comp. No.-23				Period of Enumeration Nov-2014				
Area (In Ha.)-335.9				Area of Enumeration (In Ha.) -16.795				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	18	27	24	3	4	2	78
2	AMLA	1	0	0	0	0	0	1
3	BELA	3	1	2	1	0	0	7
4	BANDHAN	6	8	0	0	0	0	0
5	BAHADA	8	8	1	0	1	0	18
6	CHARA	67	39	3	4	1	0	114
7	DHAURA	68	54	64	24	1	1	212
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	5	9	6	0	2	0	22
10	JAMUN	11	11	6	0	0	0	28
11	KASI	2	0	1	0	0	0	3
12	KURUM	14	7	0	0	1	0	22
13	KENDU	45	17	8	7	1	2	80
14	KANGADA	56	37	44	23	7	6	173
15	KARADA	31	1	0	0	0	1	33
16	MAHULA	40	48	65	28	18	20	219
17	MUNDI	13	0	0	0	0	0	13
18	MAI	15	6	11	8	3		43
19	MISC	310	166	110	20	23	10	639
20	PIASAL	1	5	0	0	0	0	6
21	SAL	337	166	146	66	50	35	800
22	SISOO	5	2	0	0	0	0	7
23	SIDHA	19	4	4	2	0	0	29
24	SIMILI	0	4			1	0	5
25	TEAK	0	0	0	0	0	0	0
		1075	620	495	186	113	77	2566

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-24				Period of Enumeration Nove-2014				
Area (In Ha.)-528.94				Area of Enumeration (In Ha.) -26.48				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	3	24	36	49	20	0	132
2	AMLA	4	0	0	0	0	0	4
3	BELA	10	1	5	1	0	0	17
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	12	5	8	5	2	0	32
6	CHARA	50	16	6	0	0	0	72
7	DHAURA	81	53	70	54	21	4	283
8	GAMBHARI	0	0	0	0	1	0	1
9	HARIDA	2	3	6	10	2	1	24
10	JAMUN	51	22	20	13	6	0	112
11	KASI	8	5	1	3	0	0	17
12	KURUM	31	15	6	0	1	0	53
13	KENDU	25	21	10	6	6	0	68
14	KANGADA	171	87	66	69	33	4	430
15	KARADA	28	22	2	0	0	0	52
16	MAHULA	25	28	20	26	26	5	130
17	MUNDI	7	7	5	3	4	0	26
18	MAI	5	6	2	3	1	0	17
19	MISC	716	316	152	74	30	21	1309
20	PIASAL	0	0	0	0	0	0	0
21	SAL	347	194	129	157	88	14	929
22	SISOO	11	3	1	0	0	0	15
23	SIDHA	77	25	23	9	5	0	139
24	SIMILI	0	0	3	0	1	1	5
25	TEAK	0	0	0	0	0	0	0
	TOTAL	1664	853	571	482	247	50	3867

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-25				Period of Enumeration Jan-2015				
Area (In Ha.)-486.86				Area of Enumeration (In Ha.) -24.343				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	66	47	47	28	24	8	220
2	AMLA	10	5	1	0	0	0	16
3	BELA	28	23	0	0	0	0	51
4	BANDHAN	15	13	2	0	0	0	30
5	BAHADA	5	6	7	7	1	0	26
6	CHARA	87	33	4	0	0	0	124
7	DHAURA	123	37	40	18	23	3	244
8	GAMBHARI	6	2	0	0	0	0	8
9	HARIDA	3	5	8	7	1	0	24
10	JAMUN	17	5	11	15	16	0	64
11	KASI	19	2	2	0	0	0	23
12	KURUM	28	19	16	20	10	8	101
13	KENDU	26	7	17	9	4	5	68
14	KANGADA	220	84	63	39	22	10	438
15	KARADA	2	1	0	0	0	0	3
16	MAHULA	15	13	10	6	5	0	49
17	MUNDI	1	2	0	0	0	0	3
18	MAI	3	4	4	5	0	0	16
19	MISC	930	476	390	306	283	326	2711
20	PIASAL	8	2	0	0	0	0	10
21	SAL	1793	846	782	470	332	318	4541
22	SISOO	20	7	2	0	1	1	31
23	SIDHA	47	30	12	6	5	1	101
24	SIMILI	3	6	11	9	3	0	32
25	TEAK	1	0	0	0	0	0	1
	TOTAL	3476	1675	1429	945	730	680	8935

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-26				Period of Enumeration Dec-14 & Jan-2015				
Area (In Ha.)-716.72				Area of Enumeration (In Ha.) -35.836				
SL No.	**Species**	**30 to 59**	**60 to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
1	**ASAN**	62	33	40	28	13	3	179
2	**AMLA**	12	24	0	0	0	0	36
3	**BELA**	22	5	0	0	0	0	27
4	**BANDHAN**	33	18	9	3	3	0	66
5	**BAHADA**	20	8	10	2	2	0	42
6	**CHARA**	199	55	18	3	0	0	275
7	**DHAURA**	196	64	40	41	24	11	376
8	**GAMBHARI**	16	5	0	0	0	0	21
9	**HARIDA**	17	17	20	5	0	0	59
10	**JAMUN**	66	43	19	16	22	17	183
11	**KASI**	16	14	4	2	0	1	37
12	**KURUM**	48	35	19	12	13	4	131
13	**KENDU**	47	27	17	13	10	1	115
14	**KANGADA**	862	88	90	34	39	14	1127
15	**KARADA**	67	16	2	1	1	0	87
16	**MAHULA**	86	53	25	16	15	7	202
17	**MUNDI**	7	3	0	0	1	0	11
18	**MAI**	21	15	20	15	8	1	80
19	**MISC**	1260	498	371	265	161	168	2723
20	**PIASAL**	21	12	1	0	0	0	34
21	**SAL**	1727	723	556	467	270	274	4017
22	**SISOO**	19	18	7	0	0	0	44
23	**SIDHA**	73	31	30	12	10	4	160
24	**SIMILI**	29	15	18	16	4	0	82
25	**TEAK**	4	0	0	0	0	0	4
	TOTAL	4930	1820	1316	951	596	505	10118

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Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-27				Period of Enumeration Dec-2014				
Area (In Ha.)-394.99				Area of Enumeration (In Ha.) -19.749				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	16	16	12	5	4	0	53
2	AMLA	2	0	0	0	0	0	2
3	BELA	15	4	0	0	0	0	19
4	BANDHAN	8	5	0	0	0	0	13
5	BAHADA	13	7	2	3	0	0	25
6	CHARA	47	29	7	0	0	0	83
7	DHAURA	81	35	7	6	11	2	142
8	GAMBHARI	4	0	0	0	0	0	4
9	HARIDA	11	4	2	1	1	0	19
10	JAMUN	42	29	9	7	10	2	99
11	KASI	9	1	0	0	0	0	10
12	KURUM	15	13	18	1	2	0	49
13	KENDU	46	18	7	4	10	1	86
14	KANGADA	141	32	4	8	8	0	193
15	KARADA	18	3	0	0	0	0	21
16	MAHULA	22	34	19	14	8	2	99
17	MUNDI	1	3	0	0	0	0	4
18	MAI	3	1	5	6	2	0	17
19	MISC	684	399	360	291	212	112	2058
20	PIASAL	5	2	0	0	0	0	7
21	SAL	1043	568	492	381	282	220	2986
22	SISOO	8	0	1	3	3	0	15
23	SIDHA	28	11	4	4	0	0	47
24	SIMILI	6	6	2	5	1	0	20
25	TEAK	53	10	3	3	0	0	69
	TOTAL	2321	1230	954	742	554	339	6140

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-28				Period of Enumeration Dec-2014				
Area (In Ha.)-363.42				Area of Enumeration (In Ha.) -18.171				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	22	15	17	5	7	0	66
2	AMLA	2	0	0	0	0	0	2
3	BELA	11	8	0	0	0	0	19
4	BANDHAN	48	21	4	0	0	0	73
5	BAHADA	26	11	2	2	0	0	41
6	CHARA	105	24	6	1	0	0	136
7	DHAURA	131	37	46	20	5	2	241
8	GAMBHARI	4	0	0	0	0	0	4
9	HARIDA	68	10	8	0	0	0	86
10	JAMUN	26	32	20	7	3	0	88
11	KASI	21	10	0	0	0	0	31
12	KURUM	38	23	12	5	0	0	78
13	KENDU	42	21	13	16	8	1	101
14	KANGADA	217	46	64	5	7	0	339
15	KARADA	4	2	3	0	0	0	9
16	MAHULA	140	71	62	29	25	9	336
17	MUNDI	8	1	0	0	0	0	9
18	MAI	14	5	5	4	1	1	30
19	MISC	621	283	242	207	130	66	1549
20	PIASAL	6	2	0	0	0	0	8
21	SAL	934	425	521	327	148	172	2527
22	SISOO	15	7	0	0	0	0	22
23	SIDHA	47	27	8	15	4	0	101
24	SIMILI	23	17	13	3	3	0	59
25	TEAK	19	3	0	0	0	0	22
	TOTAL	2592	1101	1046	646	341	251	5977

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-29				Period of Enumeration Dec-2014				
Area (In Ha.)-556.06				Area of Enumeration (In Ha.) -27.84				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	140	82	34	21	8	4	289
2	AMLA	2	0	0	0	0	0	2
3	BELA	1	5	0	0	0	0	6
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	19	9	1	1	0	0	30
6	CHARA	113	37	3	0	0	0	153
7	DHAURA	96	61	22	2	1	0	182
8	GAMBHARI	4	3	1	0	0	0	8
9	HARIDA	4	1	3	0	0	1	9
10	JAMUN	223	154	48	11	8	7	451
11	KASI	9	9	1	0	0	0	19
12	KURUM	16	1	2	2	0	0	21
13	KENDU	10	6	5	4	0	0	25
14	KANGADA	372	169	62	13	3	0	619
15	KARADA	1	2	1	0	0	0	4
16	MAHULA	83	22	12	5	1	0	123
17	MUNDI	6	3	3	1	0	0	13
18	MAI	14	16	4	4	0	0	38
19	MISC	511	231	105	36	22	28	933
20	PIASAL	18	6	1	0	0	0	25
21	SAL	895	1409	1009	457	193	53	4016
22	SISOO	6	4	0	0	0	0	10
23	SIDHA	24	14	2	0	0	0	40
24	SIMILI	7	6	6	2	0	0	21
25	TEAK	9	3	0	0	0	0	12
	TOTAL	2583	2253	1325	559	236	93	7049

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-30				Period of Enumeration Nov &Dec-2014				
Area (In Ha.)-518.82				Area of Enumeration (In Ha.) -25.941				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	28	30	22	20	17	0	117
2	AMLA	8	7	1	0	0	0	16
3	BELA	25	11	5	0	0	0	41
4	BANDHAN	25	11	2	0	0	0	38
5	BAHADA	9	15	9	4	2	0	39
6	CHARA	42	18	2	0	0	0	62
7	DHAURA	234	66	56	38	48	17	459
8	GAMBHARI	4	7	7	2	2	0	22
9	HARIDA	15	16	10	3	1	1	46
10	JAMUN	117	55	19	11	5	0	207
11	KASI	7	17	2	2	1	0	29
12	KURUM	57	16	18	23	14	14	142
13	KENDU	14	9	13	5	4	4	49
14	KANGADA	112	29	40	42	29	1	253
15	KARADA	16	5	0	0	0	0	21
16	MAHULA	46	46	47	16	22	3	180
17	MUNDI	7	0	2	0	0	0	9
18	MAI	10	10	11	9	9	3	52
19	MISC	880	307	269	168	151	60	1835
20	PIASAL	21	10	4	0	0	0	35
21	SAL	425	303	220	156	128	60	1292
22	SISOO	8	6	2	0	0	0	16
23	SIDHA	30	20	16	17	6	0	89
24	SIMILI	13	10	17	12	3	0	55
25	TEAK	0	0	0	0	0	0	0
	TOTAL	2153	1024	794	528	442	163	5104

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-31				Period of Enumeration Nov -2014				
Area (In Ha.)-333.07				Area of Enumeration (In Ha.) -16.653				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	10	12	8	5	9	1	45
2	AMLA	0	0	0	0	0	0	0
3	BELA	25	11	7	0	0	0	43
4	BANDHAN	5	2	7	2	2	1	19
5	BAHADA	5	2	7	2	2	1	19
6	CHARA	47	11	7	0	0	0	65
7	DHAURA	197	68	89	32	35	6	427
8	GAMBHARI	2	3	2	1	1	0	9
9	HARIDA	12	12	11	0	2	0	37
10	JAMUN	2	0	0	0	0	0	2
11	KASI	0	0	0	0	0	0	0
12	KURUM	5	2	6	4	1	2	20
13	KENDU	104	20	38	20	14	2	198
14	KANGADA	46	18	40	30	13	2	149
15	KARADA	7	0	1	3	0	1	12
16	MAHULA	11	11	34	19	16	13	104
17	MUNDI	0	0	0	0	0	0	0
18	MAI	3	1	2	0	0	0	6
19	MISC	348	170	131	68	56	41	814
20	PIASAL	0	0	0	0	0	0	0
21	SAL	101	89	170	134	155	79	728
22	SISOO	6	2	4	0	0	1	13
23	SIDHA	28	15	26	4	4	1	78
24	SIMILI	0	1	5	1	1	0	8
25	TEAK	0	0	0	0	0	0	0
	TOTAL	964	450	595	325	311	151	2796

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-32				Period of Enumeration Nov -2014				
Area (In Ha.)-324.98				Area of Enumeration (In Ha.) -16.249				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	17	8	15	10	2	1	53
2	AMLA	0		0	0	0	0	0
3	BELA	8	1	2	0	0	0	11
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	9	1	11	0	2	0	23
6	CHARA	39	2	5	2	0	0	48
7	DHAURA	86	26	71	26	13	2	224
8	GAMBHARI	10	6	3	5	2	0	26
9	HARIDA	1	0	6	1	3	0	11
10	JAMUN	13	1	6	6	5	3	34
11	KASI	0	0	1	0	0	0	1
12	KURUM	31	8	27	11	4	3	84
13	KENDU	15	8	17	3	3	1	47
14	KANGADA	201	35	84	49	20	5	394
15	KARADA	13	2	0	0	0	0	15
16	MAHULA	16	3	9	10	3	4	45
17	MUNDI	0	0	0	0	0	0	0
18	MAI	4	1	6	4	2	1	18
19	MISC	645	131	191	109	68	28	1172
20	PIASAL	5	2	4	1	0	0	12
21	SAL	114	102	218	194	193	144	965
22	SISOO	13	2	3	0	0	0	18
23	SIDHA	14	3	14	8	4	1	44
24	SIMILI	3	3	5	4	1	2	18
25	TEAK	0	0	0	0	0	0	0
	TOTAL	1257	345	698	443	325	195	3263

Name of the Range:Kamakhya Nagar East								
Block- Ranjagarh R.F				Method: 5 % strip sampling				
Comp. No.-33				Period of Enumeration Nove-2014				
Area (In Ha.)-401.48				Area of Enumeration (In Ha.) -20.08				
SL No.	Species	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	29	17	13	15	4	1	79
2	AMLA	15	3	0	0	0	0	18
3	BELA	29	18	2	0	0	0	49
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	17	8	2	0	0	1	28
6	CHARA	75	27	10	2	0	0	114
7	DHAURA	245	140	66	26	5	3	485
8	GAMBHARI	1	0	0	0	0	1	2
9	HARIDA	14	9	8	4	0	0	35
10	JAMUN	23	7	8	2	2	1	43
11	KASI	11	10	7	4	1	0	33
12	KURUM	18	16	13	3	0	0	50
13	KENDU	57	36	22	12	7	5	139
14	KANGADA	64	73	38	20	1	0	196
15	KARADA	64	10	2	0	0	0	76
16	MAHULA	38	56	51	47	23	19	234
17	MUNDI	16	3	2	5	2	0	28
18	MAI	16	16	16	9	3	0	60
19	MISC	661	293	98	48	10	10	1120
20	PIASAL	9	2	0	0	0	0	11
21	SAL	159	179	257	258	129	71	1053
22	SISOO	20	5	1	1	0	0	27
23	SIDHA	17	9	4	3	0	0	33
24	SIMILI	1	6	7	4	2	0	20
25	TEAK	0	0	0	0	0	0	0
	TOTAL	1599	943	627	463	189	112	3933

Name of the Range :- K. Nager West.					Method :- 1% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 1					Area of enumeration :-4.3141 ha.			
Total Area :- 431.41 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	1	6	6	5	1	0	19
2	AMLA	0	0	1	0	0	0	1
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	0	0	0	0	0	0	0
7	GAMBHAR	0	0	0	0	0	0	0
8	DHAURA	0	0	0	0	0	0	0
9	HARIDA	0	0	0	0	0	0	0
10	JAMUN	0	0	0	0	0	0	0
11	KASI	0	0	0	0	0	0	0
12	KURUM	0	0	1	0	1	0	2
13	KENDU	0	0	1	0	0	0	1
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	0	0	0	0	0	0	0
17	MUNDI	0	0	0	0	0	0	0
18	MAI	13	18	3	1	0	0	35
19	MISC	0	0	0	0	0	0	0
20	PIASAL	25	45	14	3	1	0	88
21	SAL	1855	919	33	15	3	1	2826
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	2	0	0	0	0	0	2
25	TEAK						0	0
	Total	1896	988	59	24	6	1	2974

Name of the Range :- K. Nager West.					Method :- 1% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 2					Area of enumeration :-2.9342 ha.			
Total Area :- 293.417ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	18	14	4	0	0	0	36
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	1	0	0	0	0	1
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	40	4	0	0	0	0	44
7	GAMBHAR	0	0	0	0	0	0	0
8	DHAURA	2	2	0	0	0	0	4
9	HARIDA	0	0	0	0	0	0	0
10	JAMUN	5	1	1	0	0	0	7
11	KASI	1	0	0	0	0	0	1
12	KURUM	1	2	0	0	1	0	4
13	KENDU	21	8	1	0	0	0	30
14	KANGADA	5	1	1	0	0	0	7
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	5	3	3	0	0	0	11
17	MUNDI	1	1	1	0	0	0	3
18	MAI	5	5	4	0	0	0	14
19	MISC	29	13	2	2	0	0	46
20	PIASAL	7	8	0	0	0	0	15
21	SAL	422	231	63	6	2	0	724
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	1	0	0	0	0	1
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	Total	562	295	80	8	3	0	948

Name of the Range :- K. Nager West.					Method :- 1% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 3					Area of enumeration :-5.257 ha.			
Total Area :- 525.705ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	46	25	5	3	0	0	79
2	AMLA	2	0	0	0	0	0	2
3	BELA	4	0	0	0	0	0	4
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	1	0	0	0	0	1
6	CHARA	111	13	6	0	0	0	130
7	GAMBHAR	1	0	0	0	0	0	1
8	DHAURA	4	0	0	0	0	0	4
9	HARIDA	0	1	0	1	0	0	2
10	JAMUN	13	0	3	1	0	0	17
11	KASI	7	0	0	0	0	0	7
12	KURUM	0	0	0	0	1	0	1
13	KENDU	34	8	3	0	1	0	46
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	20	3	0	0	0	0	23
16	MAHULA	10	5	0	0	2	1	18
17	MUNDI	2	2	1	0	0	0	5
18	MAI	15	6	3	1	0	0	25
19	MISC	61	46	11	1	4	3	126
20	PIASAL	91	40	13	2	0	0	146
21	SAL	820	356	68	21	15	3	1283
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	Total	1241	506	113	30	23	7	1920

Name of the Range :- K. Nager West.					Method :- 1% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 4					Area of enumeration :-4.266 ha.			
Total Area :- 426.556ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	33	10	3	2	0	0	48
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	1	0	0	0	0	1
6	CHARA	68	5	0	0	0	0	73
7	GAMBHAR	0	0	0	0	0	0	0
8	DHAURA	2	0	0	0	0	0	2
9	HARIDA	0	0	0	0	0	0	0
10	JAMUN	12	8	3	1	1	0	25
11	KASI	0	0	0	0	0	0	0
12	KURUM	0	0	0	0	0	0	0
13	KENDU	28	8	4	2	0	0	42
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	19	3	1	1	0	0	24
17	MUNDI	0	0	0	0	0	0	0
18	MAI	13	5	4	2	0	0	24
19	MISC	21	4	4	1	0	0	30
20	PIASAL	0	0	0	0	0	0	0
21	SAL	399	246	33	9	1	0	688
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	Total	595	290	52	18	2	0	957

Name of the Range :- K. Nager West.					Method :- 5% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 5					Area of enumeration :-18.838 ha.			
Total Area :- 376.775 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	122	55	10	7	1	2	197
2	AMLA	0	0	0	0	0	0	0
3	BELA	5	1	1	0	0	0	7
4	BANDHAN	4	0	1	0	0	0	5
5	BAHADA	5	5	4	0	1	0	15
6	CHARA	85	20	2	1	1	0	109
7	GAMBHAR	0	0	0	0	0	0	0
8	DHAURA	72	35	26	8	3	1	145
9	HARIDA	2	2	1	0	0	0	5
10	JAMUN	17	33	9	4	4	0	67
11	KASI	7	9	3	0	0	0	19
12	KURUM	18	3	1	0	0	0	22
13	KENDU	28	50	26	7	4	4	119
14	KANGADA	29	6	2	0	1	0	38
15	KARADA	48	19	4	0	0	0	71
16	MAHULA	74	53	45	18	15	23	228
17	MUNDI	0	0	0	0	0	0	0
18	MAI	24	12	1	1	0	0	38
19	MISC	419	275	67	34	13	13	821
20	PIASAL	4	0	0	0	0	0	4
21	SAL	605	383	212	72	11	8	1291
22	SISOO	3	0	0	0	0	0	3
23	SIDHA	1	0	0	0	0	1	2
24	SIMILI	1	2	1	0	0	0	4
25	TEAK	8	1	0	0	0	0	9
	Total	1581	964	416	152	54	52	3219

Name of the Range :- K. Nager West.					Method :- 1% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- December-2014			
Compartment No :- 6					Area of enumeration :-2.594 ha.			
Total Area :- 259.412 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	104	21	8	4	1	0	138
2	AMLA	1	0	0	0	0	0	1
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	4	2	0	0	0	0	6
6	CHARA	104	27	0	1	0	0	132
7	GAMBHAR	0	0	0	0	0	0	0
8	DHAURA	5	2	2	3	0	0	12
9	HARIDA	0	1	0	0	0	0	1
10	JAMUN	6	4	6	1	0	0	17
11	KASI	5	3	2	1	0	0	11
12	KURUM	3	2	1	0	0	0	6
13	KENDU	24	4	5	9	2	0	44
14	KANGADA	10	7	1	2	1	0	21
15	KARADA	0	0	0	0	0	0	0
16	MAHULA	31	13	21	7	3	0	75
17	MUNDI	0	0	0	0	0	0	0
18	MAI	36	22	2	3	0	0	63
19	MISC	26	8	7	5	1	0	47
20	PIASAL	15	9	3	1	0	0	28
21	SAL	244	75	31	20	9	0	379
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	6	2	0	0	0	0	8
24	SIMILI	0	1	0	0	0	0	1
25	TEAK	96	12	0	0	0	0	108
	Total	720	215	89	57	17	0	1098

Name of the Range :- K. Nager West.					Method :- 5% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- December-2014			
Compartment No :- 7					Area of enumeration :-22.56 ha.			
Total Area :- 451.241 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	59	44	17	8	7	0	135
2	AMLA	2	0	0	0	0	0	2
3	BELA	44	17	1	0	0	0	62
4	BANDHAN	3	0	0	0	0	0	3
5	BAHADA	6	8	2	1	0	0	17
6	CHARA	305	68	0	0	0	0	373
7	GAMBHAR	0	0	0	0	0	0	0
8	DHAURA	159	72	72	34	14	7	358
9	HARIDA	9	4	2	0	0	0	15
10	JAMUN	15	13	10	4	3	7	52
11	KASI	38	19	1	0	0	0	58
12	KURUM	15	7	2	0	0	0	24
13	KENDU	96	91	70	49	10	13	329
14	KANGADA	22	4	0	4	0	0	30
15	KARADA	161	43	8	4	2	4	222
16	MAHULA	50	70	79	45	23	25	292
17	MUNDI	0	1	0	0	0	0	1
18	MAI	73	101	35	3	0	0	212
19	MISC	958	608	271	132	31	49	2049
20	PIASAL	11	10	2	0	0	0	23
21	SAL	300	371	314	124	30	18	1157
22	SISOO	43	17	2	0	0	0	62
23	SIDHA	2	3	0	0	0	0	5
24	SIMILI	1	3	0	0	0	0	4
25	TEAK	0	0	0	1	0	0	1
	Total	2372	1574	888	409	120	123	5486

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. -8				Period of Enumeration -December -2014				
Area(In Ha.) - 448.002				Area of Enumeration (In Ha.)-22.4				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	186	125	13	10	5	5	344
2	AMLA	0	0	0	0	0	0	0
3	BELA	1	2	0	0	0	0	3
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	6	2	0	0	0	0	8
6	CHARA	288	107	8	0	0	0	403
7	DHAURA	72	35	9	15	7	17	155
8	GAMBHARI	0	1	0	0	0	0	1
9	HARIDA	9	6	2	0	0	0	17
10	JAMUN	22	13	9	4	0	4	52
11	KASI	8	1	0	0	0	0	9
12	KURUM	22	5	1	0	0	0	28
13	KENDU	56	39	20	9	10	23	157
14	KANGADA	26	10	0	0	0	1	37
15	KARADA	70	50	0	0	0	0	120
16	MAHULA	43	52	34	25	8	55	217
17	MUNDI	0	0	0	0	0	0	0
18	MAI	107	75	42	3	0	0	227
19	MISC	517	248	63	0	0	0	828
20	PIASAL	1	1	0	0	0		2
21	SAL	412	195	75	45	8	25	760
22	SISOO	4	1	2	0	0	0	7
23	SIDHA	6	2	1	1	2	0	12
24	SIMILI	0	1	0	0	0	0	1
25	TEAK	0	0	0	0	0		0
	TOTAL	1856	971	279	112	40	130	3388

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. -9				Period of Enumeration -December -2014 to January 2015				
Area(In Ha.) - 562.937				Area of Enumeration (In Ha.)-28.141				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	379	151	36	8	2	1	577
2	AMLA	24	4	0	0	0	0	28
3	BELA	39	26	2	0	0	0	67
4	BANDHAN	2	0	0	0	0	0	2
5	BAHADA	22	25	8	3	1	0	59
6	CHARA	492	90	14	0	0	1	597
7	DHAURA	189	135	102	44	11	6	487
8	GAMBHARI	6	3	1	0	1	0	11
9	HARIDA	16	11	6	3	2	0	38
10	JAMUN	53	13	8	6	2	1	83
11	KASI	37	23	2	1	0	1	64
12	KURUM	37	11	1	2	0	0	51
13	KENDU	150	84	34	25	0	1	294
14	KANGADA	367	202	54	18	4	2	647
15	KARADA	290	85	9	6	1	0	391
16	MAHULA	200	126	93	70	21	37	547
17	MUNDI	0	0	0	0	0	2	2
18	MAI	48	37	18	4	2	0	109
19	MISC	1275	578	234	84	23	28	2222
20	PIASAL	7	3	0	0	0	0	10
21	SAL	1471	600	271	96	24	16	2488
22	SISOO	7	1	0	0	0	0	8
23	SIDHA	75	15	5	0	0	0	95
24	SIMILI	4	5	3	0	0	0	12
25	TEAK	0	0	0	0	0	0	0
	TOTAL	5190	2228	901	370	94	96	8889

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. -10				Period of Enumeration - January 2015				
Area(In Ha.) - 342.78				Area of Enumeration (In Ha.)-3.427				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	26	12	0	0	0	0	38
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	61	4	1	0	0	0	66
7	DHAURA	5	0	1	0	0	0	6
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	0	0	1	0	0	0	1
10	JAMUN	0	1	2	2	0	0	5
11	KASI	0	0	0	0	0	0	0
12	KURUM	0	0	0	0	0	0	0
13	KENDU	4	7	5	2	0	0	18
14	KANGADA	2	0	0	0	0	0	2
15	KARADA	3	0	0	0	0	0	3
16	MAHULA	7	7	3	5	2	1	25
17	MUNDI	0	0	0	0	0	0	0
18	MAI	8	0	1	0	0	0	9
19	MISC	112	11	15	6	0	0	144
20	PIASAL	0	0	0	0	0	0	0
21	SAL	153	44	25	9	3	1	235
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	TOTAL	381	86	54	24	5	2	552

Name of the Range:-Kamakhya Nagar west								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. -11				Period of Enumeration -January 2015				
Area(In Ha.) - 480.378				Area of Enumeration (In Ha.)-24.018				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	173	82	30	7	1	1	294
2	AMLA	8	1	0	0	0	0	9
3	BELA	23	15	0	0	0	0	38
4	BANDHAN	1	0	0	0	0	0	1
5	BAHADA	17	6	5	0	0	0	28
6	CHARA	228	55	13	1	0	0	297
7	DHAURA	101	51	16	6	2	6	182
8	GAMBHARI	1	0	0	0	0	0	1
9	HARIDA	14	4	0	0	0	0	18
10	JAMUN	35	9	5	1	0	0	50
11	KASI	24	3	1	0	0	0	28
12	KURUM	27	3	0	0	0	0	30
13	KENDU	143	64	36	5	6	4	258
14	KANGADA	81	26	11	1	0	2	121
15	KARADA	165	54	4	0	0	0	223
16	MAHULA	85	48	33	10	5	15	196
17	MUNDI	0	0	0	0	0	0	0
18	MAI	123	94	34	1	1	0	253
19	MISC	969	470	128	43	7	23	1640
20	PIASAL	12	5	0	0	0	0	17
21	SAL	1261	495	85	50	7	14	1912
22	SISOO	7	4	0	0	0	0	11
23	SIDHA	38	6	0	0	0	0	44
24	SIMILI	3	4	0	0	0	0	7
25	TEAK	0	0	0	0	0	0	0
	TOTAL	3539	1499	401	125	29	65	5658

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. -12				Period of Enumeration -January 2015				
Area(In Ha.) - 532.585				Area of Enumeration (In Ha.)-26.624				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	439	154	21	4	0	0	618
2	AMLA	7	0	0	0	0	0	7
3	BELA	3	0	0	0	0	0	3
4	BANDHAN	11	0	0	0	0	0	11
5	BAHADA	7	4	0	0	0	0	11
6	CHARA	515	53	2	1	0	0	571
7	DHAURA	149	73	47	14	0	0	283
8	GAMBHARI	2	0	0	0	0	0	2
9	HARIDA	15	3	1	0	0	0	19
10	JAMUN	84	36	13	2	0	0	135
11	KASI	16	0	0	0	0	0	16
12	KURUM	63	21	4	2	0	0	90
13	KENDU	416	227	80	9	2	11	745
14	KANGADA	8	0	0	0	0	0	8
15	KARADA	225	31	0	0	0	0	256
16	MAHULA	259	163	109	41	31	51	654
17	MUNDI	0	0	0	0	0	0	0
18	MAI	44	28	4	0	0	0	76
19	MISC	1060	364	90	16	4	2	1536
20	PIASAL	5	0	0	0	0	0	5
21	SAL	1655	579	222	55	5	12	2528
22	SISOO	29	0	0	0	0	0	29
23	SIDHA	33	8	1	0	0	0	42
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	TOTAL	5045	1744	594	144	42	76	7645

Name of the Range :- K. Nager West.					Method :- 5% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 13					Area of enumeration :- 26.325 ha.			
Total Area :- 526.514 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	114	72	54	22	10	16	288
2	AMLA	14	6	4	1	0	0	25
3	BELA	11	16	0	0	0	0	27
4	BANDHAN	13		0	0	0	0	13
5	BAHADA	10	12	1	0	0	0	23
6	CHARA	236	83	10	5	0	0	334
7	GAMBHAR	5	10	2	0	0	0	17
8	DHAURA	57	69	75	35	10	21	267
9	HARIDA	7	1	0	0	0	0	8
10	JAMUN	37	40	34	9	13	12	145
11	KASI	13	2	1	1	0	0	17
12	KURUM	36	22	5	1		0	64
13	KENDU	128	123	67	43	11	32	404
14	KANGADA	0	2	1	0	0	0	3
15	KARADA	82	5	1	0	0	0	88
16	MAHULA	117	101	81	44	16	36	395
17	MUNDI	0	0	0	0	0	0	0
18	MAI	56	21	4	0	0	0	81
19	MISC	335	270	112	77	21	59	874
20	PIASAL	11	3	0	0	0	0	14
21	SAL	570	450	339	135	37	54	1585
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	Total	1852	1308	791	373	118	230	4672

Name of the Range :- K. Nager West.					Method :- 5% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 14					Area of enumeration :- 21.59 ha.			
Total Area :- 431.814 ha.								
SL No.	**Species**	**30to 59**	**60 to 89**	**90 to 119**	**120to 149**	**150 to 179**	**180 & above**	**Total**
1	**ASAN**	64	50	45	25	9	32	**225**
2	**AMLA**	8	3	2	0	0	0	**13**
3	**BELA**	4	7	3	0	1	0	**15**
4	**BANDHAN**	10	4	0	0	0	0	**14**
5	**BAHADA**	5	4	1	0	0	0	**10**
6	**CHARA**	324	176	49	10	0	0	**559**
7	**GAMBHAR**	7	6	0	1	0	0	**14**
8	**DHAURA**	207	167	72	80	80	95	**701**
9	**HARIDA**	13	10	1	0	0	0	**24**
10	**JAMUN**	7	13	17	8	2	4	**51**
11	**KASI**	16	7	2	0	0	0	**25**
12	**KURUM**	65	41	6	7	7	1	**127**
13	**KENDU**	78	90	75	55	37	69	**404**
14	**KANGADA**	2	7	2	0	0	0	**11**
15	**KARADA**	193	133	17	1	0	0	**344**
16	**MAHULA**	67	84	66	62	47	83	**409**
17	**MUNDI**	0	0	0	0	0	0	**0**
18	**MAI**	31	24	10	2	0	0	**67**
19	**MISC**	499	332	157	104	73	126	**1291**
20	**PIASAL**	18	7	2		0	0	**27**
21	**SAL**	410	341	203	110	63	98	**1225**
22	**SISOO**	12	8	2	0	0	0	**22**
23	**SIDHA**	0	0	0	0	0	0	**0**
24	**SIMILI**	0	0	0	0	0	0	**0**
25	**TEAK**	0	0	0	0	0	0	**0**
	Total	**2040**	**1514**	**732**	**465**	**319**	**508**	**5578**

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 15				Period of Enumeration - January 2015				
Area(In Ha.) - 510.731 ha.				Area of Enumeration (In Ha.)-25.536				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	202	57	16	4	0	0	279
2	AMLA	6	0	0	0	0	0	6
3	BELA	27	12	5	0	0	0	44
4	BANDHAN	3	2	0	0	0	0	5
5	BAHADA	8	3	0	0	0	0	11
6	CHARA	297	74	18	1	0	0	390
7	DHAURA	222	142	50	10	3	4	431
8	GAMBHARI	20	0	0	0	0	0	20
9	HARIDA	10	6	1	0	0	0	17
10	JAMUN	144	75	41	9	1	12	282
11	KASI	14	11	5	1	0	1	32
12	KURUM	49	9	0	0	0	0	58
13	KENDU	114	90	54	15	4	9	286
14	KANGADA	168	116	17	3	1	1	306
15	KARADA	297	73	12	1	1	0	384
16	MAHULA	100	47	57	29	5	27	265
17	MUNDI	0	0	0	0	0	0	0
18	MAI	9	0	1	0	0	0	10
19	MISC	1880	685	180	49	16	38	2848
20	PIASAL	3	1	0	0	0	0	4
21	SAL	2617	1020	340	55	19	21	4072
22	SISOO	57	10	0	0	0	0	67
23	SIDHA	15	8	8	0	0	0	31
24	SIMILI	7	2	4	0	0	0	13
25	TEAK	11	1	1	0	0	0	13
	TOTAL	6280	2444	810	177	50	113	9874

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 16				Period of Enumeration - January 2015				
Area(In Ha.) - 540.274 ha.				Area of Enumeration (In Ha.)-27.013				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	155	130	108	18	1	1	413
2	AMLA	5	2	0	0	0	0	7
3	BELA	13	8	0	0	0	0	21
4	BANDHAN	7	5	0	0	0	0	12
5	BAHADA	6	2	1	0	0	0	9
6	CHARA	460	107	15	0	0	0	582
7	DHAURA	200	240	152	32	3	6	633
8	GAMBHARI	2	0	0	0	0	0	2
9	HARIDA	6	2	0	0	0	0	8
10	JAMUN	74	80	50	11	5	4	224
11	KASI	30	23	5	0	0	0	58
12	KURUM	45	34	8	1	0	0	88
13	KENDU	278	193	100	29	10	14	624
14	KANGADA	112	86	34	2	1	1	236
15	KARADA	377	74	2	0	0	0	453
16	MAHULA	118	175	147	44	8	52	544
17	MUNDI	0	0	0	0	0	0	0
18	MAI	19	9	1	0	0	0	29
19	MISC	863	513	215	224	25	0	1840
20	PIASAL	4	2	0	0	0	0	6
21	SAL	895	974	842	112	22	18	2863
22	SISOO	1	0	0	0	0	0	1
23	SIDHA	4	5	1	0	0	1	11
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	TOTAL	3674	2664	1681	473	75	97	8664

Name of the Range :- K. Nager West.					Method :- 5% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- December-2014			
Compartment No :- 17					Area of enumeration :- 17.806 ha.			
Total Area :- 356.135 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	131	49	50	26	7	1	264
2	AMLA	0	0	0	0	0		0
3	BELA	0	1	0	0	0	0	1
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	3	0	0	0	0	3
6	CHARA	196	82	1	0	0	0	279
7	DHAURA	34	83	40	21	6	1	185
8	GAMBHAR	0	1	0	0	0	0	1
9	HARIDA	5	6	4	0	0	0	15
10	JAMUN	65	51	23	3	0	1	143
11	KASI	1	0	0	0	0	0	1
12	KURUM	22	10	0	1	0	0	33
13	KENDU	237	109	57	28	4	0	435
14	KANGADA	5	0	0	0	0	0	5
15	KARADA	23	20	0	0	0	0	43
16	MAHULA	40	48	65	19	12	14	198
17	MUNDI	0	2	0	0	0	0	2
18	MAI	11	2	0	0	0	0	13
19	MISC	291	232	169	104	58	23	877
20	PIASAL	0	4	2	2	2	1	11
21	SAL	530	204	486	356	198	94	1868
22	SISOO	1	0	0	0	0	0	1
23	SIDHA	0	2	2	0	0	0	4
24	SIMILI	0	0	0	1	1	0	2
25	TEAK	0	0	0	0	0	0	0
	Total	1592	909	899	561	288	135	4384

Name of the Range :- K. Nager West.					Method :- 5% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 18					Area of enumeration :- 19.1 ha.			
Total Area :- 382.036 ha.								
SL No.	**Species**	**30to 59**	**60 to 89**	**90 to 119**	**120to 149**	**150 to 179**	**180 & above**	**Total**
1	**ASAN**	61	66	29	28	16	17	**217**
2	**AMLA**	1	1	1	2			**5**
3	**BELA**	0	6	3	0	0	0	**9**
4	**BANDHAN**	0	0	0	0	0	0	**0**
5	**BAHADA**	3	3	2	0	0	1	**9**
6	**CHARA**	226	119	11	0		5	**361**
7	**DHAURA**	96	88	63	22	10	33	**312**
8	**GAMBHAR**	3	0	0	0	0	0	**3**
9	**HARIDA**	1	0	1	0	0	1	**3**
10	**JAMUN**	14	26	26	12	2	5	**85**
11	**KASI**	0	2	1	0	0	0	**3**
12	**KURUM**	21	8		2	1	0	**32**
13	**KENDU**	103	107	73	49	30	42	**404**
14	**KANGADA**	0	1	0	0	0	0	**1**
15	**KARADA**	162	32	1	0	0	0	**195**
16	**MAHULA**	103	92	71	56	35	32	**389**
17	**MUNDI**	0	0	0	0	0	0	**0**
18	**MAI**	18	18	1	3	1	1	**42**
19	**MISC**	372	280	79	47	42	57	**877**
20	**PIASAL**	0	2	0	0	0	0	**2**
21	**SAL**	364	169	200	94	58	56	**941**
22	**SISOO**	4	1	1	0	0	0	**6**
23	**SIDHA**	0	0	0	0	0	0	**0**
24	**SIMILI**	0	0	0	0	0	0	**0**
25	**TEAK**	0	0	0	0	0	0	**0**
	Total	**1552**	**1021**	**563**	**315**	**195**	**250**	**3896**

Name of the Range :- K. Nager West.					Method :- 5% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- November-2014			
Compartment No :- 19					Area of enumeration :- 17.219 ha.			
Total Area :- 344.395 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	102	25	11	5	2	0	145
2	AMLA	1	0	0	0	0	0	1
3	BELA	0	2	0	0	0	0	2
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	1	3	1	0	0	0	5
6	CHARA	144	18	6	0	0	0	168
7	DHAURA	37	18	6	4	2		67
8	GAMBHAR	0	0	0	0	0	0	0
9	HARIDA	2	1	3	0	0	0	6
10	JAMUN	42	34	25	6	1	2	110
11	KASI	0	0	0	0	0	0	0
12	KURUM	3	0	0	0	0	1	4
13	KENDU	130	123	81	22	3	10	369
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	7	0	2	0	0	0	9
16	MAHULA	110	147	102	71	19	36	485
17	MUNDI	0	0	0	0	0	0	0
18	MAI	4	0	0	1	0	0	5
19	MISC	195	44	16	9	2	6	272
20	PIASAL	4	3	0	0	0	0	7
21	SAL	312	174	131	74	21	52	764
22	SISOO	1	0	0	0	0	0	1
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	7		0	0	0	0	7
	Total	1102	592	384	192	50	107	2427

Name of the Range :- K. Nager West.					Method :- 5% Strip sampling .			
Name of the Forest block :- Anantapur R.F.					Period of enumeration :- December-2014			
Compartment No :- 20					Area of enumeration :- 20.902 ha.			
Total Area :- 418.055 ha.								
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	253	148	61	44	29	29	564
2	AMLA	5	1	0	0	0	0	6
3	BELA	3	5	2	0	0	0	10
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	17	7	0	0	0	0	24
6	CHARA	160	85	5	0	0	0	250
7	DHAURA	89	83	85	57	27	33	374
8	GAMBHAR	0	0	0	0	0	0	0
9	HARIDA	4	0	1	0	0	0	5
10	JAMUN	0	5	3	2	1	1	12
11	KASI	14	10	2	0	0	0	26
12	KURUM	61	29	7	6	0	0	103
13	KENDU	53	58	50	27	9	21	218
14	KANGADA	52	55	54	34	8	6	209
15	KARADA	65	26	0	0	0	0	91
16	MAHULA	54	43	55	51	23	6	232
17	MUNDI	0	0	0	0	0	0	0
18	MAI	41	27	5	0	0	1	74
19	MISC	434	268	134	75	54	68	1033
20	PIASAL	7	0	3	0	0	0	10
21	SAL	513	274	142	79	50	41	1099
22	SISOO	1	0	0	0	0	0	1
23	SIDHA	1	4	0	0	0	0	5
24	SIMILI	0	2	0	0	0	0	2
25	TEAK	0	0	0	0	0	0	0
	Total	1827	1130	609	375	201	206	4348

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 21				Period of Enumeration - January & 2015				
Area(In Ha.) - 573.055				Area of Enumeration (In Ha.)-28.64				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	129	102	27	19	3	0	280
2	AMLA	2	0	0	0	0	0	2
3	BELA	5	3	1	0	0	0	9
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	2	0	1	1	0	0	4
6	CHARA	233	30	5	0	0	0	268
7	DHAURA	63	89	68	12	2	0	234
8	GAMBHARI	2	6	1	0	0	0	9
9	HARIDA	5	1	0	0	0	1	7
10	JAMUN	65	70	45	18	6	0	204
11	KASI	0	0	0	0	0	0	0
12	KURUM	12	9	3	1	0	0	25
13	KENDU	524	218	117	29	8	4	900
14	KANGADA	64	13	3	0	0	1	81
15	KARADA	58	17	3	0	0	0	78
16	MAHULA	264	212	109	17	15	4	621
17	MUNDI	21	11	6	3	1	0	42
18	MAI	69	30	8	4	0	0	111
19	MISC	505	205	62	19	11	2	804
20	PIASAL	1	2	1	0	0	0	4
21	SAL	603	603	476	181	61	8	1932
22	SISOO	3	0	0	0	0	0	3
23	SIDHA	1	3	0	1	0	0	5
24	SIMILI	0	1	0	0	0	0	1
25	TEAK	0	0	0	0	0	0	0
	TOTAL	2631	1625	936	305	107	20	5624

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 22				Period of Enumeration - January 2015				
Area(In Ha.) - 486.449				Area of Enumeration (In Ha.)-24.322				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	107	20	34	19	20	10	210
2	AMLA	15	0	0	0	0	0	15
3	BELA	19	3	1	0	0	0	23
4	BANDHAN	3	0	0	0	0	0	3
5	BAHADA	6	1	2	2	1	1	13
6	CHARA	223	72	3	1	0	0	299
7	DHAURA	81	32	55	35	23	15	241
8	GAMBHARI	0	0	0	0	1	0	1
9	HARIDA	1	2	1	2	0	0	6
10	JAMUN	26	5	7	6	4	2	50
11	KASI	1	0	0	0	0	0	1
12	KURUM	6	8	5	2	0	0	21
13	KENDU	127	54	76	63	19	47	386
14	KANGADA	0	0	0	0	0	1	1
15	KARADA	130	36	3	0	0	0	169
16	MAHULA	20	11	42	30	12	63	178
17	MUNDI	4	0	0	0	0	0	4
18	MAI	35	32	32	21	71	0	191
19	MISC	443	239	251	72	59	146	1210
20	PIASAL	0	0	0	0	0	0	0
21	SAL	731	318	183	127	93	113	1565
22	SISOO	3	1	0	0	0	0	4
23	SIDHA	44	17	4	5	0	0	70
24	SIMILI	6	16	26	13	3	1	65
25	TEAK	0	0	0	0	0	0	0
	TOTAL	2031	867	725	398	306	399	4726

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 23				Period of Enumeration - January 2015				
Area(In Ha.) - 449.217				Area of Enumeration (In Ha.)-22.48				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	144	66	38	6	4	0	258
2	AMLA	3	1	0	0	0	0	4
3	BELA	5	8	4	1	0	0	18
4	BANDHAN	1	0	0	0	0	0	1
5	BAHADA	3	1	3	0	1	1	9
6	CHARA	294	55	11	0	0	0	360
7	DHAURA	73	143	110	34	8	0	368
8	GAMBHARI	1	1	1	0	0	0	3
9	HARIDA	12	10	4	0	0	0	26
10	JAMUN	122	81	45	9	1	3	261
11	KASI	6	6	1	0	0	0	13
12	KURUM	72	19	1	0	0	0	92
13	KENDU	409	201	103	18	5	2	738
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	140	61	8	0	0	0	209
16	MAHULA	125	83	86	54	17	11	376
17	MUNDI	8	2	2	0	0	0	12
18	MAI	35	30	22	9	0	2	98
19	MISC	683	301	133	29	11	3	1160
20	PIASAL	9	0	2	0	0	0	11
21	SAL	906	493	282	66	10	2	1759
22	SISOO	9	6	0	0	0	0	15
23	SIDHA	25	10	10	2	0	0	47
24	SIMILI	1	2	0	0	0	0	3
25	TEAK	0	0	0	0	0	0	0
	TOTAL	3086	1580	866	228	57	24	5841

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 24				Period of Enumeration - January 2015				
Area(In Ha.) - 460.953 ha				Area of Enumeration (In Ha.)-23.047 ha				
SL No.	Species	30to 59	60 to 89	90 to 119	120to 149	150 to 179	180 & above	Total
1	ASAN	78	47	25	9	8	2	169
2	AMLA	20	4	0	0	0	0	24
3	BELA	56	17	5	3	1	0	82
4	BANDHAN	18	6	4	3	0	0	31
5	BAHADA	56	20	26	11	0	0	113
6	CHARA	265	114	15	2	0	0	396
7	DHAURA	209	221	123	67	24	11	655
8	GAMBHARI	7	4	2	1	0	0	14
9	HARIDA	4	2	3	0	0	0	9
10	JAMUN	19	15	14	8	2	1	59
11	KASI	17	29	4	1	1	2	54
12	KURUM	34	18	6	14	0	2	74
13	KENDU	175	81	41	22	22	10	351
14	KANGADA	10	4	0	0	0	0	14
15	KARADA	70	14	1	0	0	0	85
16	MAHULA	42	39	34	22	11	11	159
17	MUNDI	6	4	5	2	3	1	21
18	MAI	46	61	28	16	11	2	164
19	MISC	978	464	244	109	80	118	1993
20	PIASAL	3	2	2	0	0	0	7
21	SAL	585	358	196	74	69	71	1353
22	SISOO	13	10	6	3	1	0	33
23	SIDHA	8	11	0	1	0	0	20
24	SIMILI	15	8	11	10	4	0	48
25	TEAK	0	0	0	0	0	0	0
	TOTAL	2734	1553	795	378	237	231	5928

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 25				Period of Enumeration - January 2015				
Area(In Ha.) - 450.025				Area of Enumeration (In Ha.)-22.501				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	308	161	60	16	4	1	550
2	AMLA	4	1	0	0	0	0	5
3	BELA	17	7	2	0	0	1	27
4	BANDHAN	1	0	0	0	0	0	1
5	BAHADA	9	1	1	0	0	0	11
6	CHARA	392	77	7	0	0	1	477
7	DHAURA	74	58	41	5	1	3	182
8	GAMBHARI	5	0	0	0	0	0	5
9	HARIDA	30	15	5	0	0	1	51
10	JAMUN	69	49	50	8	2	14	192
11	KASI	68	28	13	1	1	0	111
12	KURUM	111	11	4	1	0	0	127
13	KENDU	220	101	50	23	1	7	402
14	KANGADA	178	31	7	1	0	0	217
15	KARADA	207	38	4	1	0	0	250
16	MAHULA	143	94	2	33	18	17	307
17	MUNDI	1	0	0	0	0	1	2
18	MAI	42	13	4	2	0	3	64
19	MISC	1690	589	275	65	20	37	2676
20	PIASAL	9	2	0	0	0	0	11
21	SAL	1652	1152	773	120	23	50	3770
22	SISOO	31	8	1	0	0	0	40
23	SIDHA	11	4	2	0	0	0	17
24	SIMILI	3	1	1	0	0	1	6
25	TEAK	0	0	0	0	0	0	0
	TOTAL	5275	2441	1302	276	70	137	9501

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 26				Period of Enumeration - January 2015				
Area(In Ha.) - 619.595 ha				Area of Enumeration (In Ha.)-30.979 ha.				
SL No.	**Species**	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
1	**ASAN**	338	95	25	1	1	0	460
2	**AMLA**	3	0	0	0	0	0	3
3	**BELA**	3	0	0	0	0	0	3
4	**BANDHAN**	5	0	0	0	0	0	5
5	**BAHADA**	11	4	2	1	0	0	18
6	**CHARA**	466	49	3	0	0	0	518
7	**DHAURA**	98	74	37	8	2	1	220
8	**GAMBHARI**	2	0	0	0	0	0	2
9	**HARIDA**	13	3	1	0	0	0	17
10	**JAMUN**	88	85	29	7	0	1	210
11	**KASI**	5	2	0	0	0	0	7
12	**KURUM**	10	2	1	0	0	0	13
13	**KENDU**	324	291	110	31	5	6	767
14	**KANGADA**	8	3	1	0	0	0	12
15	**KARADA**	80	12	0	0	0	0	92
16	**MAHULA**	208	194	190	68	19	31	710
17	**MUNDI**	0	0	0	0	0	0	0
18	**MAI**	122	91	34	3	0	0	250
19	**MISC**	909	303	88	16	3	1	1320
20	**PIASAL**	11	3	0	0	0	0	14
21	**SAL**	1614	893	306	67	17	19	2916
22	**SISOO**	5	1	0	0	0	0	6
23	**SIDHA**	15	6	1	0	0	0	22
24	**SIMILI**	2	2	1	0	0	0	5
25	**TEAK**	0	0	0	0	0	0	0
	TOTAL	4340	2113	**829**	202	47	59	7590

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 27				Period of Enumeration - January 2015				
Area(In Ha.) - 377.585 ha.				Area of Enumeration (In Ha.)-3.77 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	21	8	8	1	0	0	38
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	2	5	1	0	0	0	8
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	32	11	1	0	0	0	44
7	DHAURA	0	0	0	0	0	0	0
8	GAMBHARI	2	0	0	0	0	0	2
9	HARIDA	0	0	0	0	0	0	0
10	JAMUN	6	5	1	1	0	0	13
11	KASI	0	0	0	0	0	0	0
12	KURUM	0	0	0	0	0	0	0
13	KENDU	32	21	18	7	0	1	79
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	5	0	0	0	0	0	5
16	MAHULA	23	16	2	4	0	0	45
17	MUNDI	0	0	0	0	0	0	0
18	MAI	0	0	0	0	0	0	0
19	MISC	54	24	12	5	2	1	98
20	PIASAL	0	0	0	0	0	0	0
21	SAL	60	18	13	10	3	0	104
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	5	5	3	1	0	0	14
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	TOTAL	242	113	59	29	5	2	450

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 28				Period of Enumeration -February-2015				
Area(In Ha.) - 340.575 ha.				Area of Enumeration (In Ha.)-17.037 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	162	66	32	10	2	1	273
2	AMLA	0	0	0	0	0	0	0
3	BELA	3	3	2	0	0	0	8
4	BANDHAN	4	0	0	0	0	0	4
5	BAHADA	1	1	0	0	0	0	2
6	CHARA	195	24	2	0	0	0	221
7	DHAURA	39	10	8	5	1	3	66
8	GAMBHARI	1	0	0	0	0	0	1
9	HARIDA	1	4	0	0	0	0	5
10	JAMUN	11	15	12	7	2	1	48
11	KASI	9	6	2	0	2	0	19
12	KURUM	24	5	1	0	0	0	30
13	KENDU	187	178	110	26	8	4	513
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	18	5	0	0	0	0	23
16	MAHULA	86	102	115	59	16	18	396
17	MUNDI	0	0	0	0	0	0	0
18	MAI	21	12	3	1	0	1	38
19	MISC	552	196	56	21	24	9	858
20	PIASAL	16	10	1	0	0	0	27
21	SAL	1171	521	179	62	11	13	1957
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	2	2	2	0	0	0	6
24	SIMILI	1	0	1	0	0	0	2
25	TEAK	0	0	0	0	0	0	0
	TOTAL	2504	1160	**526**	191	66	50	4497

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 29				Period of Enumeration -February 2015				
Area(In Ha.) - 407.128 ha.				Area of Enumeration (In Ha.)-20.35 ha.				
SL No.	**Species**	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
1	**ASAN**	322	112	40	20	5	2	501
2	**AMLA**	1	0	0	0	0	0	1
3	**BELA**	6	1	0	0	0	0	7
4	**BANDHAN**	0	0	0	0	0	0	0
5	**BAHADA**	1	0	0	0	0	0	1
6	**CHARA**	143	19	0	0	0	0	162
7	**DHAURA**	47	32	20	5	1	1	106
8	**GAMBHARI**	2	0	0	0	0	0	2
9	**HARIDA**	2	0	0	0	0	0	2
10	**JAMUN**	12	6	0	0	1	1	20
11	**KASI**	0	1	0	0	0	0	1
12	**KURUM**	19	8	3	0	1	0	31
13	**KENDU**	93	47	15	6	0	4	165
14	**KANGADA**	2	0	0	0	0	0	2
15	**KARADA**	39	7	0	0	0	0	46
16	**MAHULA**	57	38	20	10	3	16	144
17	**MUNDI**	0	0	0	0	0	0	0
18	**MAI**	24	12	12	1	1	3	53
19	**MISC**	544	132	62	11	4	14	767
20	**PIASAL**	0	2	0	0	0	0	2
21	**SAL**	875	214	55	10	8	4	1166
22	**SISOO**	0	1	0	0	0	0	1
23	**SIDHA**	26	7	5	0	0	0	38
24	**SIMILI**	2	2	0	0	0	0	4
25	**TEAK**	0	0	0	0	0	0	0
	TOTAL	2217	**641**	**232**	63	**24**	45	3222

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 30				Period of Enumeration -Januuary 2015				
Area(In Ha.) -513.564 ha.				Area of Enumeration (In Ha.)-25.678 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	295	77	69	63	46	27	577
2	AMLA	12	2	0	0	0	0	14
3	BELA	59	21	2	1	0	0	83
4	BANDHAN	16	12	1	0	0	0	29
5	BAHADA	20	7	8	8	4	0	47
6	CHARA	193	196	45	0	0	0	434
7	DHAURA	509	94	49	49	37	23	761
8	GAMBHARI	27	4	2	1	0	0	34
9	HARIDA	5	3	6	11	1	0	26
10	JAMUN	42	14	12	13	18	6	105
11	KASI	64	52	12	1	0	0	129
12	KURUM	53	33	31	21	26	7	171
13	KENDU	138	36	47	36	27	44	328
14	KANGADA	5	0	1	0	0	0	6
15	KARADA	121	50	4	0	4	0	179
16	MAHULA	62	32	37	35	21	58	245
17	MUNDI	1	0	0	0	0	0	1
18	MAI	47	29	26	29	24	4	159
19	MISC	1034	430	250	128	77	272	2191
20	PIASAL	18	9	0	1	0	0	28
21	SAL	1126	620	455	238	111	187	2737
22	SISOO	18	7	1	0	0	0	26
23	SIDHA	76	44	25	18	3	0	166
24	SIMILI	19	32	41	13	4	0	109
25	TEAK	0	0	0	0	0	0	0
	TOTAL	3960	**1804**	**1124**	666	**403**	628	8585

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 1 % strip sampling				
Comp. No. 31				Period of Enumeration -February 2015				
Area(In Ha.) - 605.43 ha.				Area of Enumeration (In Ha.)-6.054 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	156	44	8	0	0	0	208
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	4	0	0	0	0	0	4
5	BAHADA	2	0	0	0	0	0	2
6	CHARA	217	43	1	0	0	0	261
7	DHAURA	36	3	0	0	0	0	39
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	3	1	0	0	0	0	4
10	JAMUN	22	10	0	0		0	32
11	KASI	3	0	0	0	0	0	3
12	KURUM	3	0	0	0		0	3
13	KENDU	169	138	27	0	0	0	334
14	KANGADA	6	3	0	0	0	0	9
15	KARADA	6	0	0	0	0	0	6
16	MAHULA	54	35	9	1	4	1	104
17	MUNDI	4	0	0	0	0	0	4
18	MAI	26	19	4	0	0	0	49
19	MISC	354	238	32	2	0	0	626
20	PIASAL	0	0	0	0	0	0	0
21	SAL	324	51	34	0	0	0	409
22	SISOO	1	10	0	0	0	0	11
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	TOTAL	1390	595	115	3	4	1	2108

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method:1% strip sampling				
Comp. No. 32				Period of Enumeration -February 2015				
Area(In Ha.) -772.977 ha.				Area of Enumeration (In Ha.)-7.73 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	50	17	15	5	9	3	99
2	AMLA	2	0	0	0	0	0	2
3	BELA	7	1	0	0	0	0	8
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	2	0	0	2	0	0	4
6	CHARA	141	30	3	0	0	0	174
7	DHAURA	26	11	9	5	1	0	52
8	GAMBHARI	1	0	0	0	0	0	1
9	HARIDA	1	0	1	0	0	0	2
10	JAMUN	31	5	8	4	1	0	49
11	KASI	7	2	2	0	0	0	11
12	KURUM	2	4	4	1	0	0	11
13	KENDU	56	17	17	10	7	2	109
14	KANGADA	1	0	0	0	0	0	1
15	KARADA	5	0	0	0	0	0	5
16	MAHULA	24	17	11	13	10	6	81
17	MUNDI	0	0	0	0	0	0	0
18	MAI	32	9	7	7	4	0	59
19	MISC	161	43	18	12	15	8	257
20	PIASAL	7	4	1	0	0	0	12
21	SAL	532	174	63	28	9	16	822
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	22	3	5	0	0	0	30
24	SIMILI	4	8	2	7	0	0	21
25	TEAK	0	0	0	0	0	0	0
	TOTAL	1114	345	166	94	56	35	1810

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 1% strip sampling				
Comp. No. 33				Period of Enumeration -February 2015				
Area(In Ha.) -732.509 ha.				Area of Enumeration (In Ha.)-7.33 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	69	31	16	7	8	21	152
2	AMLA	0	0	0	0	0	0	0
3	BELA	46	19	4	0	0	0	69
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	1	1	2	3	0	0	7
6	CHARA	138	35	14	1	0	0	188
7	DHAURA	31	5	12	0	2	2	52
8	GAMBHARI	1	1	0	0	0	0	2
9	HARIDA	1	8	4	1	0	0	14
10	JAMUN	11	4	2	3	10	2	32
11	KASI	9	6	1	0	0	0	16
12	KURUM	10	2	11	5	4	0	32
13	KENDU	49	18	12	14	10	12	115
14	KANGADA	1	0	0	0	2	0	3
15	KARADA	104	36	10	2	1	0	153
16	MAHULA	10	0	7	7	3	13	40
17	MUNDI	0	0	0	0	0	0	0
18	MAI	19	9	8	9	0	0	45
19	MISC	330	108	66	20	15	48	587
20	PIASAL	1	1	0	0	3	0	5
21	SAL	218	77	35	32	23	31	416
22	SISOO	26	2	0	0	5	0	33
23	SIDHA	24	7	6	2	0	0	39
24	SIMILI	0	7	6	7	1	0	21
25	TEAK	1	0	0	0	0	0	1
	TOTAL	1100	**377**	**216**	113	**87**	129	2022

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 5 % strip sampling				
Comp. No. 34				Period of Enumeration -February 2015				
Area(In Ha.) -467.023 ha.				Area of Enumeration (In Ha.)-4.670 Ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	31	15	1	0	2	0	49
2	AMLA	1	0	0	0	0	0	1
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	16	6	0	0	0	0	22
5	BAHADA	19	2	0	0	0	0	21
6	CHARA	51	0	0	0	0	0	51
7	DHAURA	44	6	0	0	0	0	50
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	18	6	0	0	0	0	24
10	JAMUN	1	0	1	0	0	0	2
11	KASI	18	2	0	0	0	0	20
12	KURUM	7	0	0	0	0	0	7
13	KENDU	82	19	6	0	0	0	107
14	KANGADA	6	0	0	0	0	0	6
15	KARADA	6	2	0	0	0	0	8
16	MAHULA	23	15	9	4	1	0	52
17	MUNDI	4	0	0	0	0	0	4
18	MAI	21	5	0	0	0	0	26
19	MISC	141	100	34	8	0	0	283
20	PIASAL	0	0	0	0	0	0	0
21	SAL	115	89	34	0	0	0	238
22	SISOO	4	2	0	0	0	0	6
23	SIDHA	14	5	0	0	0	0	19
24	SIMILI	1	0	0	0	0	0	1
25	TEAK	0	0	0	0	0	0	0
	TOTAL	623	**274**	**85**	12	**3**	0	997

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 1 % strip sampling				
Comp. No. 35				Period of Enumeration -February 2015				
Area(In Ha.) -624.856 ha.				Area of Enumeration (In Ha.)-6.248 ha.				
SL No.	**Species**	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
1	**ASAN**	13	2	7	5	2	0	29
2	**AMLA**	0	0	0	0	0	0	0
3	**BELA**	4		0	0	0	0	4
4	**BANDHAN**	0	0	0	0	0	0	0
5	**BAHADA**	0	0	0	0	0	0	0
6	**CHARA**	177	69	22	3	0	0	271
7	**DHAURA**	8	5	5	0	0	0	18
8	**GAMBHARI**	0	0	0	0	0	0	0
9	**HARIDA**	0	0	0	0	0	0	0
10	**JAMUN**	12	8	3	9	4	0	36
11	**KASI**	0	0	0	0	0	0	0
12	**KURUM**	3	4	0	2	0	0	9
13	**KENDU**	22	18	11	14	12	18	95
14	**KANGADA**	0	0	0	0	0	0	0
15	**KARADA**	9	4	0	0	0	0	13
16	**MAHULA**	41	18	29	33	33	44	198
17	**MUNDI**	0	0	0	0	0	0	0
18	**MAI**	3	4	6	6	3	0	22
19	**MISC**	205	100	46	41	29	32	453
20	**PIASAL**	0	0	0	0	0	0	0
21	**SAL**	225	114	59	60	30	52	540
22	**SISOO**	0	0	0	0	0	0	0
23	**SIDHA**	7	2	0	0	0	0	9
24	**SIMILI**	0	2	3	4	1	0	10
25	**TEAK**	0	0	0	0	0	0	0
	TOTAL	729	**350**	**191**	177	**114**	146	1707

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 1 % strip sampling				
Comp. No. 36				Period of Enumeration -February 2015				
Area(In Ha.) - 471.475 ha.				Area of Enumeration (In Ha.)-4.714 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	0	0	0	0	0	0	0
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	0	0	0	0	0	0
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	163	53	39	0	0	0	255
7	DHAURA	4	6	2	1	0	0	13
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	0	0	0	0	0	0	0
10	JAMUN	60	29	32	13	4	0	138
11	KASI	0	0	0	0	0	0	0
12	KURUM	0	0	0	0	0	0	0
13	KENDU	34	69	52	26	7	0	188
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	13	8	0	0	0	0	21
16	MAHULA	60	26	14	18	2	2	122
17	MUNDI	0	0	0	0	0	0	0
18	MAI	12	7	6	3	2	0	30
19	MISC	195	73	47	7	1	0	323
20	PIASAL	0	0	0	0	0	0	0
21	SAL	588	223	84	10	4	4	913
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	0	0	0	0	0	0
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	TOTAL	1129	**494**	**276**	78	**20**	6	2003

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 1 % strip sampling				
Comp. No. 37				Period of Enumeration -February 2015				
Area(In Ha.) - 578.316 ha.				Area of Enumeration (In Ha.)-5.76 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	56	15	14	1	0	0	86
2	AMLA	1	0	0	0	0	0	1
3	BELA	5	6	1	0	0	0	12
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	3	3	0	0	0	0	6
6	CHARA	18	12	4	0	0	0	34
7	DHAURA	19	14	2	2	0	0	37
8	GAMBHARI	1	1	0	0	0	1	3
9	HARIDA	0	4	2	0	0	0	6
10	JAMUN	16	12	1	2	0	0	31
11	KASI	12	7	1	2	0	0	22
12	KURUM	5	2	2	0	0	0	9
13	KENDU	53	41	18	0	0	0	112
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	7	2	0	0	0	0	9
16	MAHULA	4	4	1	0	0	0	9
17	MUNDI	1	0	1	0	0	0	2
18	MAI	6	11	9	2	0	0	28
19	MISC	128	56	21	4	2	0	211
20	PIASAL	18	3	0	0	0	0	21
21	SAL	181	85	22	4	0	0	292
22	SISOO	1	2	0	0	0	0	3
23	SIDHA	3	2	3	0	0	0	8
24	SIMILI	6	5	1	0	0	0	12
25	TEAK	0	0	0	0	0	0	0
	TOTAL	544	**287**	**103**	17	**2**	1	954

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 1% strip sampling				
Comp. No. 38				Period of Enumeration -February 2015				
Area(In Ha.) - 456.906 ha.				Area of Enumeration (In Ha.)-4.6 ha.				
SL No.	**Species**	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
1	**ASAN**	38	13	3	0	0	0	54
2	**AMLA**	0	0	0	0	0	0	0
3	**BELA**	1	0	0	0	0	0	1
4	**BANDHAN**	0	0	0	0	0	0	0
5	**BAHADA**	1	0	0	0	0	0	1
6	**CHARA**	30	6	0	0	0	0	36
7	**DHAURA**	20	7	0	0	0	0	27
8	**GAMBHARI**	1	0	0	0	0	0	1
9	**HARIDA**	4	1	1	0	0	0	6
10	**JAMUN**	11	5	3	0	0	0	19
11	**KASI**	1	0	0	0	0	0	1
12	**KURUM**	0	0	0	0	0	0	0
13	**KENDU**	26	10	3	0	0	0	39
14	**KANGADA**	1	1	0	0	0	0	2
15	**KARADA**	6	0	0	0	0	0	6
16	**MAHULA**	9	8	4	0	0	1	22
17	**MUNDI**	2	1	0	0	0	0	3
18	**MAI**	57	25	4	0	0	0	86
19	**MISC**	246	71	21	7	0	1	346
20	**PIASAL**	4	0	0	0	0	0	4
21	**SAL**	427	223	12	3	0	0	665
22	**SISOO**	0	0	0	0	0	0	0
23	**SIDHA**	2	0	0	0	0	0	2
24	**SIMILI**	0	0	0	0	0	0	0
25	**TEAK**	0	0	0	0	0	0	0
	TOTAL	887	**371**	**51**	10	**0**	**2**	1321

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method:1% strip sampling				
Comp. No. 39				Period of Enumeration -February 2015				
Area(In Ha.) - 280.861 ha.				Area of Enumeration (In Ha.)-2.9 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	9	7	1	0	0	0	17
2	AMLA	2	0	0	0	0	0	2
3	BELA	1	1	0	0	0	0	2
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	26	4	1	0	0	0	31
7	DHAURA	67	15	5	2	0	0	89
8	GAMBHARI	5	3	0	0	0	0	8
9	HARIDA	6	1	1	0	0	0	8
10	JAMUN	0	0	0	0	0	0	0
11	KASI	14	9	2	0	0	0	25
12	KURUM	15	3	0	0	0	0	18
13	KENDU	7	7	1	0	0	0	15
14	KANGADA	0	0	1	0	0	0	1
15	KARADA	40	6	0	0	0	0	46
16	MAHULA	4	2	0	1	0	3	10
17	MUNDI	0	0	0	0	0	0	0
18	MAI	5	3	3	0	0	0	11
19	MISC	89	36	18	6	2	4	155
20	PIASAL	0	0	0	0	0	0	0
21	SAL	14	5	1	0	0	0	20
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	11	3	0	1	0	0	15
24	SIMILI	0	1	0	0	0	0	1
25	TEAK	0	0	0	0	0		0
	TOTAL	315	**106**	**34**	10	**2**	7	474

Name of the Range:-Kamakhya Nagar West								
Block-Anatapur R.F				Method: 1% strip sampling				
Comp. No. 40				Period of Enumeration -February-2015				
Area(In Ha.) - 506.279 ha				Area of Enumeration (In Ha.)-5.063 ha.				
SL No.	Species	30 to 59	60to 89	90 to 119	120 to 149	150 to 179	180 to above	Total
1	ASAN	32	19	11	0	62	0	124
2	AMLA	0	0	0	0	0	0	0
3	BELA	0	1	0	0	1	0	2
4	BANDHAN	0	0	0	0	0	0	0
5	BAHADA	0	0	0	0	0	0	0
6	CHARA	20	8	0	0	28	0	56
7	DHAURA	20	15	8	1	44	0	88
8	GAMBHARI	0	0	0	0	0	0	0
9	HARIDA	0	0	0	0	0	0	0
10	JAMUN	0	0	0	0	0	0	0
11	KASI	3	1	0	0	4	0	8
12	KURUM	1	3	0	0	4	0	8
13	KENDU	16	4	2	0	22	0	44
14	KANGADA	0	0	0	0	0	0	0
15	KARADA	3	3	0	0	6	0	12
16	MAHULA	0	0	0	0	0	0	0
17	MUNDI	0	0	0	0	0	0	0
18	MAI	1	1	0	0	2	0	4
19	MISC	86	20	8	4	118	0	236
20	PIASAL	6	3	2	0	11	0	22
21	SAL	537	114	16	5	672	0	1344
22	SISOO	0	0	0	0	0	0	0
23	SIDHA	0	1	0	0	1	0	2
24	SIMILI	0	0	0	0	0	0	0
25	TEAK	0	0	0	0	0	0	0
	TOTAL	725	193	47	10	975	0	1950

ANNEXURE – XIX

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	Area(Ha)	30-59cm	60-89 cm	90-119cm	120-149cm	150-179cm	180+ cm	TOTAL
Ranjagarh	ASAN							
1	384.869	9.41	0.94	0.16	0.10	0.10	0.00	10.71
2	220.156	0.91	0.27	0.27	0.27	0.18	0.18	2.09
3	433.029	3.14	1.25	0.74	0.69	0.00	0.05	5.87
4	500.613	4.17	1.57	1.34	1.30	0.43	0.16	8.98
5	539.465	4.04	2.08	1.82	2.11	0.37	0.78	11.20
6	352.898	2.41	0.96	0.37	0.48	0.30	0.11	4.63
7	425.744	28.39	10.50	1.47	1.28	0.28	0.46	42.39
8	320.927	21.28	5.12	1.80	1.20	0.33	0.40	30.12
9	245.248	12.42	3.10	3.10	0.41	0.08	0.25	19.36
10	425.339	20.39	4.79	1.55	0.70	0.19	0.19	27.82
11	452.454	20.01	4.11	1.50	0.44	0.18	0.13	26.37
12	433.434	29.70	8.44	3.04	0.78	0.14	0.14	42.25
13	261.436	98.11	22.73	4.92	0.76	0.38	0.00	126.89
14	401.058	16.83	6.83	2.44	0.73	0.49	1.22	28.54
15	390.13	12.30	5.38	0.51	0.51	0.26	0.26	19.23
16	513.159	4.29	2.53	1.17	0.97	0.19	1.36	10.52
17	438.29	8.81	3.97	2.51	0.23	0.09	0.87	16.47
18	431.814	1.30	0.56	0.32	0.09	0.28	0.00	2.55
19	299.882	0.67	0.00	0.33	0.00	0.00	0.00	1.00
20	451.249	3.94	1.42	1.29	0.93	0.89	0.13	8.60
21	454.071	5.19	3.87	1.89	1.06	0.53	0.31	12.85
22	485.64	1.65	0.62	0.78	0.45	0.33	0.25	4.08
23	335.901	1.07	1.61	1.43	0.18	0.24	0.12	4.64
24	528.942	0.11	0.91	1.36	1.85	0.76	0.00	4.98
25	486.853	2.71	1.93	1.93	1.15	0.99	0.33	9.04
26	716.722	1.73	0.92	1.12	0.78	0.36	0.08	4.99
27	394.987	0.81	0.81	0.61	0.25	0.20	0.00	2.68
28	363.428	1.21	0.83	0.94	0.28	0.39	0.00	3.63
29	556.057	5.03	2.95	1.22	0.75	0.29	0.14	10.38
30	518.824	1.08	1.16	0.85	0.77	0.66	0.00	4.51
31	333.068	0.60	0.72	0.48	0.30	0.54	0.06	2.70
32	324.974	1.05	0.49	0.92	0.62	0.12	0.06	3.26
33	401.462	1.44	0.85	0.65	0.75	0.20	0.05	3.93
Total	13822.12	326.21	104.21	44.83	23.20	10.74	8.08	517.27

Mean		9.89	3.16	1.36	0.70	0.33	0.24	15.68
All Trees		136632.70	43649.31	18777.15	9716.71	4500.50	3383.71	216730.89
Kandhara	ASAN							
1	409.556	3.32	1.90	0.63	0.00	0.00	0.00	5.86
2	502.342	4.24	2.84	1.07	0.26	0.04	0.07	8.52
3	268.72	5.10	3.62	2.66	1.11	0.15	0.15	12.80
4	507.898	5.36	3.22	2.63	1.47	0.40	0.09	13.17
5	570.626	8.58	11.03	5.25	0.35	0.18	0.00	25.39
6	470.666	6.20	3.02	1.83	0.76	0.08	0.00	11.90
7	514.373	2.44	1.07	0.29	0.10	0.00	0.00	3.91
8	605.431	5.61	2.81	2.31	0.00	0.50	0.17	11.39
9	448.812	1.47	0.49	0.45	0.09	0.00	0.00	2.50
10	411.579	0.49	0.97	0.24	0.00	0.00	0.00	1.70
11	356.54	26.13	7.12	1.83	0.54	0.08	0.12	35.81
12	333.877	4.63	3.13	2.16	0.24	0.06	0.00	10.22
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	0.00	0.42	0.00	0.00	0.00	0.00	0.42
15	390.13	13.11	6.76	2.77	1.02	0.10	0.00	23.77
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	18.76	10.69	3.93	0.00	0.00	0.00	33.37
18	612.105	18.69	13.20	2.91	0.82	0.03	0.03	35.67
19	583.981	2.67	2.29	1.20	0.45	0.17	0.07	6.85
20	459.739	5.31	2.22	1.65	0.57	0.00	0.00	9.75
21	443.146	1.28	0.02	0.00	0.00	0.00	0.00	1.30
22	318.498	20.06	0.00	0.00	0.00	0.00	0.00	20.06
23	346.018	15.03	5.20	1.73	0.29	0.00	0.00	22.25
24	378.799	2.69	1.27	0.16	0.00	0.00	0.00	4.12
25	391.749	2.09	1.48	0.26	0.10	0.00	0.00	3.93
Total	11172.43	173.27	84.77	35.96	8.17	1.79	0.69	304.66
Mean		6.93	3.39	1.44	0.33	0.07	0.03	12.19
All trees		77433.719	37883.638	16072.5753	3651.665944	798.20139	310.06786	136149.868
Anantpur	ASAN							
1	431.41	0.23	1.39	1.39	1.16	0.23	0.00	4.40
2	293.407	7.52	5.85	1.67	0.00	0.00	0.00	15.04
3	525.705	8.75	4.76	0.95	0.57	0.00	0.00	15.03
4	426.556	7.74	2.34	0.70	0.47	0.00	0.00	11.25
5	376.775	6.48	2.92	0.53	0.37	0.05	0.11	10.46

6	259.412	40.09	8.10	3.08	1.54	0.39	0.00	53.20
7	451.241	2.62	1.95	0.75	0.35	0.31	0.00	5.98
8	448.002	8.30	50.22	0.58	0.45	0.22	0.22	15.36
9	562.937	13.47	5.37	1.28	0.28	0.07	0.04	20.50
10	342.78	7.59	3.50	0.00	0.00	0.00	0.00	11.09
11	480.378	7.20	3.41	1.25	0.29	0.04	0.04	12.24
12	532.585	16.49	5.78	0.79	0.15	0.00	0.00	23.21
13	526.514	4.33	2.74	2.05	0.84	0.38	0.61	7.14
14	431.814	2.50	2.32	2.08	1.16	0.42	1.48	10.42
15	510.731	7.91	2.23	0.63	0.16	0.00	0.00	10.93
16	540.274	5.74	4.81	4.00	0.67	0.04	0.04	15.29
17	356.135	7.36	2.75	2.81	1.46	0.39	0.06	14.83
18	382.036	3.19	3.46	1.52	1.47	0.84	0.89	11.36
19	344.393	5.92	1.45	0.64	0.29	0.12	0.00	8.42
20	418.055	12.10	7.08	2.92	2.11	1.39	1.39	26.98
21	573.055	4.50	3.56	0.94	0.66	0.10	0.00	9.78
22	486.449	4.40	0.82	1.40	0.78	0.82	0.41	8.63
23	449.217	6.41	2.94	1.69	0.27	0.18	0.00	11.48
24	460.953	3.38	2.04	1.08	0.39	0.35	0.09	7.33
25	450.025	13.69	7.16	2.67	0.71	0.18	0.04	24.44
26	619.595	10.91	3.07	0.81	0.03	0.03	0.00	14.85
27	377.585	5.57	2.12	2.12	0.27	0.00	0.00	10.08
28	340.757	9.51	3.87	1.88	0.59	0.12	0.06	16.02
29	407.128	15.82	5.50	1.97	0.98	0.25	0.10	24.62
30	513.564	11.49	3.00	2.69	2.45	1.79	1.05	22.47
31	605.43	25.77	7.27	1.32	0.00	0.00	0.00	34.36
32	772.977	6.47	2.20	1.94	0.65	1.16	0.39	12.81
33	732.507	9.41	4.23	3.55	0.95	1.09	2.86	20.74
34	467.023	6.64	3.21	0.21	0.00	0.43	0.00	10.49
35	624.856	2.08	0.32	1.12	0.80	0.32	0.00	4.64
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	9.72	2.60	2.43	0.17	0.00	0.00	14.93
38	456.906	8.26	2.83	0.65	0.00	0.00	0.00	11.74
39	280.279	3.10	2.41	0.34	0.00	0.00	0.00	5.86
40	506.279	6.32	3.75	2.17	0.00	12.25	0.00	24.49
Total	18815.52	338.99	185.33	60.61	23.49	23.95	9.87	592.90
Mean		8.47	4.63	1.52	0.59	0.60	0.25	16.06
All trees		159455.41	87178.24	28510.96	11047.92	11266.34	4643.21	302102.09

TOTAL	**43810.06**	**838.46**	**374.31**	**141.41**	**54.86**	**36.48**	**18.64**	**1414.82**
MEAN		**8.56**	**3.82**	**1.44**	**0.56**	**0.37**	**0.19**	**14.44**
STDEV		**11.848648**	**5.7724761**	**1.09734122**	**0.531208826**	**1.2543252**	**0.4213658**	**15.5969855**
All Block(Tree)		**374828.27**	**167334.24**	**63214.54**	**24523.09**	**16309.01**	**8334.36**	**632485.33**
TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**AMLA**							
1	384.869	0.21	0.00	0.05	0.00	0.00	0.00	0.26
2	220.156	0.18	0.09	0.00	0.00	0.00	0.00	0.27
3	433.029	0.97	0.65	0.18	0.23	0.00	0.00	2.03
4	500.613	0.16	0.00	0.00	0.00	0.00	0.00	0.16
5	539.465	0.15	0.07	0.00	0.00	0.00	0.00	0.22
6	352.898	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	425.744	0.56	0.14	0.00	0.00	0.00	0.00	0.70
8	320.927	0.44	0.06	0.00	0.00	0.00	0.00	0.50
9	245.248	0.08	0.00	0.00	0.00	0.00	0.00	0.08
10	425.339	0.05	0.00	0.00	0.00	0.00	0.00	0.05
11	452.454	0.13	0.00	0.00	0.00	0.00	0.00	0.13
12	433.434	0.37	0.00	0.00	0.00	0.00	0.00	0.37
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	0.32	0.05	0.05	0.00	0.00	0.00	0.41
18	431.814	2.87	0.42	0.00	0.00	0.00	0.00	3.29
19	299.882	0.67	0.00	0.00	0.00	0.00	0.00	0.67
20	451.249	1.20	0.18	0.00	0.00	0.00	0.00	1.37
21	454.071	1.28	0.00	0.00	0.00	0.00	0.00	1.28
22	485.64	0.62	0.16	0.00	0.00	0.00	0.00	0.78
23	335.901	0.06	0.00	0.00	0.00	0.00	0.00	0.06
24	528.942	0.15	0.00	0.00	0.00	0.00	0.00	0.15
25	486.853	0.41	0.21	0.04	0.00	0.00	0.00	0.66
26	716.722	0.33	0.67	0.00	0.00	0.00	0.00	1.00
27	394.987	0.10	0.00	0.00	0.00	0.00	0.00	0.10
28	363.428	0.11	0.00	0.00	0.00	0.00	0.00	0.11
29	556.057	0.07	0.00	0.00	0.00	0.00	0.00	0.07

30	518.824	0.31	0.27	0.04	0.00	0.00	0.00	0.62
31	333.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	324.974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	401.462	0.75	0.15	0.00	0.00	0.00	0.00	0.90
Total	13822.12	12.54	3.11	0.36	0.23	0.00	0.00	16.25

Mean		0.38	0.09	0.01	0.01	0.00	0.00	0.49
All trees		5253.24	1304.228	151.61	96.73	0.00	0.00	6805.81
Kandhara	**AMLA**							
1	409.556	0.39	0.15	0.05	0.00	0.00	0.00	0.59
2	502.342	0.07	0.00	0.00	0.00	0.00	0.00	0.07
3	268.72	0.52	0.15	0.00	0.07	0.00	0.00	0.74
4	507.898	1.58	0.71	0.00	0.00	0.00	0.00	2.28
5	570.626	0.35	0.18	0.00	0.00	0.00	0.00	0.53
6	470.666	0.30	0.00	0.13	0.00	0.00	0.00	0.42
7	514.373	0.29	0.10	0.05	0.00	0.00	0.00	0.44
8	605.431	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	448.812	0.13	0.04	0.00	0.00	0.00	0.00	0.18
10	411.579	0.00	0.00	0.00	0.24	0.00	0.00	0.24
11	356.54	0.08	0.00	0.00	0.00	0.00	0.00	0.08
12	333.877	0.24	0.12	0.06	0.00	0.00	0.00	0.42
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	1.05	0.63	0.21	0.00	0.00	0.00	1.89
15	390.13	0.61	0.26	0.00	0.00	0.00	0.00	0.87
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	1.31	0.44	0.00	0.00	0.00	0.00	1.74
18	612.105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	583.981	1.10	0.27	0.00	0.00	0.00	0.00	1.37
20	459.739	0.17	0.13	0.04	0.00	0.00	0.00	0.35
21	443.146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	318.498	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	346.018	0.58	0.00	0.00	0.00	0.00	0.00	0.58
24	378.799	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	391.749	0.20	0.05	0.00	0.00	0.00	0.00	0.26
Total	11172.43	8.98	3.22	0.54	0.32	0.00	0.00	13.05
Mean		0.36	0.13	0.02	0.01	0.00	0.00	0.52
All trees		4011.3205	1438.5583	240.802895	141.5246575	0.00	0.00	5832.20634
Anantpur	**AMLA**							
1	431.41	0.00	0.00	0.23	0.23	0.00	0.00	0.23

2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	525.705	0.38	0.00	0.00	0.00	0.00	0.00	0.38
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	259.412	0.39	0.00	0.00	0.00	0.00	0.00	0.39
7	451.241	0.09	0.00	0.00	0.00	0.00	0.00	0.09
8	448.002	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	562.937	0.85	0.14	0.00	0.00	0.00	0.00	0.99
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.33	0.04	0.00	0.00	0.00	0.00	0.37
12	532.585	0.26	0.00	0.00	0.00	0.00	0.00	0.26
13	526.514	0.53	0.23	0.15	0.04	0.00	0.00	0.95
14	431.814	0.37	0.14	0.09	0.00	0.00	0.00	0.60
15	510.731	0.23	0.00	0.00	0.00	0.00	0.00	0.23
16	540.274	0.19	0.07	0.00	0.00	0.00	0.00	0.26
17	356.135	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	382.036	0.05	0.05	0.00	0.05	0.05	0.05	0.05
19	344.393	0.06	0.06	0.06	0.12	0.00	0.00	0.29
20	418.055	0.24	0.05	0.00	0.00	0.00	0.00	0.29
21	573.055	0.07	0.00	0.00	0.00	0.00	0.00	0.07
22	486.449	0.62	0.00	0.00	0.00	0.00	0.00	0.62
23	449.217	0.13	0.04	0.00	0.00	0.00	0.00	0.18
24	460.953	0.87	0.17	0.00	0.00	0.00	0.00	1.04
25	450.025	0.18	0.04	0.00	0.00	0.00	0.00	0.22
26	619.595	0.10	0.00	0.00	0.00	0.00	0.00	0.10
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	407.128	0.05	0.00	0.00	0.00	0.00	0.00	0.05
30	513.564	0.47	0.08	0.00	0.00	0.00	0.00	0.55
31	605.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	772.977	0.26	0.00	0.00	0.00	0.00	0.00	0.26
33	732.507	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	467.023	0.21	0.00	0.00	0.00	0.00	0.00	0.21
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.17	0.00	0.00	0.00	0.00	0.00	0.17
38	456.906	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	280.861	0.69	0.00	0.00	0.00	0.00	0.00	0.69
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total	18816.10	7.79	1.12	0.53	0.44	0.05	0.05	9.55
Mean		0.19	0.03	0.01	0.01	0.00	0.00	0.24
All trees		3664.28	528.37	251.41	206.18	24.63	24.63	4491.94
TOTAL	**1299.49**	**0.95**	**0.20**	**0.00**	**0.00**	**0.00**	**0.00**	**1.15**
MEAN		**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**
STDEV		**0.4351665**	**0.1527857**	**0.04373995**	**0.043624437**	**0.0053716**	**0.0053716**	**0.56553528**
All Block(Tree)		**12.61**	**2.66**	**0.00**	**0.00**	**0.00**	**0.00**	**15.27**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**BELA**							
1	384.869	0.47	1.14	0.68	0.00	0.00	0.00	2.29
2	220.156	0.91	0.27	0.09	0.27	0.00	0.00	1.54
3	433.029	1.57	0.97	0.37	0.28	0.05	0.00	3.23
4	500.613	0.56	0.92	0.16	0.00	0.00	0.00	1.64
5	539.465	1.74	0.85	0.78	0.07	0.07	0.00	3.52
6	352.898	0.26	0.11	0.11	0.00	0.00	0.00	0.48
7	425.744	2.30	0.47	0.09	0.00	0.00	0.00	2.87
8	320.927	2.74	1.62	0.00	0.00	0.06	0.00	4.43
9	245.248	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	425.339	0.19	0.05	0.00	0.00	0.00	0.00	0.23
11	452.454	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	433.434	0.51	0.18	0.14	0.00	0.00	0.00	0.83
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	2.20	0.98	0.00	0.00	3.17	0.00	3.17
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	2.51	0.59	0.18	0.00	0.00	0.00	3.29
18	431.814	4.12	0.60	0.28	0.00	0.00	0.00	5.00
19	299.882	2.00	0.67	0.00	0.00	0.00	0.00	2.67
20	451.249	3.63	0.84	0.00	0.00	0.00	0.00	4.48
21	454.071	1.14	0.75	0.09	0.00	0.00	0.00	1.98
22	485.64	2.64	1.15	0.70	0.25	0.00	0.00	4.74
23	335.901	0.18	0.06	0.12	0.06	0.00	0.00	0.42
24	528.942	0.38	0.04	0.19	0.04	0.00	0.00	0.64
25	486.853	1.15	0.94	0.00	0.00	0.00	0.00	2.10
26	716.722	0.61	0.14	0.00	0.00	0.00	0.00	0.75

27	394.987	0.76	0.20	0.00	0.00	0.00	0.00	0.96
28	363.428	0.61	0.44	0.00	0.00	0.00	0.00	1.05
29	556.057	0.04	0.18	0.00	0.00	0.00	0.00	0.22
30	518.824	0.96	0.42	0.19	0.00	0.00	0.00	1.58
31	333.068	1.50	0.66	0.42	0.00	0.00	0.00	2.58
32	324.974	0.49	0.06	0.12	0.00	0.00	0.00	0.68
33	401.462	1.44	0.90	0.10	0.00	0.00	0.00	2.44
Total	13822.12	37.61	16.22	4.81	0.97	3.35	0.00	59.80
Mean		1.14	0.49	0.15	0.03	0.10	0.00	1.91
All trees		15755.00	6793.47	2014.83	405.54	1404.58	0.00	26373.43
Kandhara	**BELA**							
1	409.556	6.59	1.81	0.24	0.15	0.00	0.00	8.79
2	502.342	1.29	0.52	0.04	0.00	0.00	0.00	1.84
3	268.72	5.10	1.48	0.44	0.00	0.00	0.00	7.03
4	507.898	3.43	2.09	0.28	0.00	0.00	0.00	5.79
5	570.626	7.01	0.70	0.00	0.00	0.00	0.00	7.71
6	470.666	1.23	1.06	0.30	0.00	0.00	0.00	2.59
7	514.373	2.20	0.88	0.15	0.00	0.00	0.00	3.22
8	605.431	3.80	0.33	0.00	0.00	0.00	0.00	4.13
9	448.812	5.21	1.43	0.36	0.04	0.00	0.00	7.04
10	411.579	3.40	2.43	0.00	0.00	0.00	0.00	5.83
11	356.54	0.89	0.19	0.00	0.00	0.00	0.00	1.09
12	333.877	3.67	0.96	0.24	0.12	0.00	0.00	4.99
13	360.183	1.67	0.83	0.56	0.00	0.00	0.00	3.06
14	475.909	1.05	1.89	0.00	0.00	0.00	0.00	2.94
15	390.13	1.90	1.28	0.05	0.00	0.00	0.00	3.23
16	553.224	1.45	0.72	0.00	0.00	0.00	0.00	2.17
17	458.524	0.00	0.87	0.00	0.00	0.00	0.00	0.87
18	612.105	0.03	0.00	0.00	0.00	0.00	0.00	0.03
19	583.981	3.15	1.75	0.14	0.00	0.00	0.00	5.03

20	459.739	2.92	2.26	0.78	0.00	0.00	0.00	5.96
21	443.146	3.16	0.00	0.00	0.00	0.00	0.00	3.16
22	318.498	5.96	0.00	0.00	0.31	0.00	0.00	6.27
23	346.018	3.47	0.29	0.00	0.00	0.00	0.00	3.76
24	378.799	1.06	0.42	0.00	0.00	0.00	0.00	1.48
25	391.749	0.97	0.26	0.00	0.00	0.00	0.00	1.23
Total	11172.43	70.58	24.45	3.57	0.62	0.00	0.00	99.22
Mean		2.82	0.98	0.14	0.02	0.00	0.00	3.96

All trees		31543.86	10925.43	1594.69	279.19	0.00	0.00	44242.80
Anantpur	**BELA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.34	0.00	0.00	0.00	0.00	0.34
3	525.705	0.76	0.00	0.00	0.00	0.00	0.00	0.76
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.27	0.05	0.05	0.00	0.00	0.00	0.37
6	259.412	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	451.241	1.95	0.75	0.04	0.00	0.00	0.00	2.75
8	448.002	0.04	0.09	0.00	0.00	0.00	0.00	0.13
9	562.937	1.39	0.92	0.07	0.00	0.00	0.00	2.38
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.96	0.62	0.00	0.00	0.00	0.00	1.58
12	532.585	0.11	0.00	0.00	0.00	0.00	0.00	0.11
13	526.514	0.42	0.61	0.00	0.00	0.00	0.00	1.03
14	431.814	0.19	0.32	0.14	0.00	0.05	0.00	0.69
15	510.731	1.06	0.47	0.20	0.00	0.00	0.00	1.72
16	540.274	0.48	0.30	0.00	0.00	0.00	0.00	0.78
17	356.135	0.48	0.06	0.00	0.00	0.00	0.00	0.06
18	382.036	0.48	0.31	0.16	0.00	0.00	0.00	0.47
19	344.393	0.48	0.06	0.00	0.00	0.00	0.00	0.06
20	418.055	0.48	0.24	0.10	0.00	0.00	0.00	0.48
21	573.055	0.17	0.10	0.03	0.00	0.00	0.00	0.31
22	486.449	0.78	0.12	0.04	0.00	0.00	0.00	0.95
23	449.217	0.22	0.36	0.18	0.04	0.00	0.00	0.80
24	460.953	2.43	0.74	0.22	0.13	0.04	0.00	3.56
25	450.025	0.76	0.31	0.09	0.00	0.00	0.04	1.20
26	619.595	0.10	0.00	0.00	0.00	0.00	0.00	0.10
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.18	0.12	0.00	0.00	0.00	0.00	0.47
29	407.128	0.29	0.05	0.00	0.00	0.00	0.00	0.34
30	513.564	2.30	0.82	0.08	0.04	0.00	0.00	3.23
31	605.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	772.977	0.91	0.13	0.00	0.00	0.00	0.00	1.03
33	732.507	6.28	2.59	0.55	0.00	0.00	0.00	9.41
34	467.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	624.856	0.64	0.00	0.00	0.00	0.00	0.00	0.64
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.87	1.04	0.17	0.00	0.00	0.00	2.08

38	456.906	0.22	0.00	0.00	0.00	0.00	0.00	0.22
39	280.861	0.34	0.00	0.00	0.00	0.00	0.00	0.69
40	506.279	0.00	0.20	0.00	0.00	0.20	0.00	0.40
Total	18816.10	26.02	11.73	2.11	0.21	0.29	0.04	39.15
Mean		0.65	0.29	0.05	0.01	0.01	0.00	1.01
All trees		12242.12	5517.13	993.96	100.48	135.11	20.91	19009.71
TOTAL	**1299.49**	**2.41**	**1.35**	**0.10**	**0.00**	**0.20**	**0.00**	**4.06**
MEAN		**0.02**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.04**
STDEV		**1.6411778**	**0.6115068**	**0.18222122**	**0.060569453**	**0.3252543**	**0.0045597**	**2.19416689**
All Block(Tree)		**32.02**	**17.89**	**1.32**	**0.00**	**2.62**	**0.00**	**53.85**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)

Block/comp	Arae(ha)	30-59cm	60-89 cm	90-119cm	120-149cm	150-179cm	180+ cm	TOTAL
Ranjagarh	**BANDHAN**							
1	384.869	0.05	0.00	0.00	0.00	0.00	0.00	0.05
2	220.156	0.09	0.09	0.18	0.00	0.00	0.00	0.36
3	433.029	1.43	0.28	0.28	0.05	0.00	0.00	2.03
4	500.613	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	539.465	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	352.898	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	425.744	0.09	0.00	0.00	0.00	0.00	0.00	0.09
8	320.927	0.00	0.06	0.00	0.00	0.00	0.00	0.06
9	245.248	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	425.339	0.00	0.14	0.05	0.00	0.00	0.00	0.19
11	452.454	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	433.434	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	431.814	0.32	0.28	0.09	0.23	0.14	0.14	1.20
19	299.882	0.33	0.00	0.00	0.00	0.00	0.00	0.33
20	451.249	0.31	0.04	0.00	0.00	0.00	0.00	0.35
21	454.071	0.09	0.00	0.00	0.00	0.00	0.00	0.09
22	485.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	335.901	0.36	0.48	0.00	0.00	0.00	0.00	0.83
24	528.942	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	486.853	0.62	0.53	0.08	0.00	0.00	0.00	1.23
26	716.722	0.92	0.50	0.25	0.08	9.29	0.00	11.05
27	394.987	0.41	0.25	0.00	0.00	0.00	0.00	0.66

28	363.428	2.64	1.16	0.22	0.00	0.00	0.00	4.02
29	556.057	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	518.824	0.96	0.42	0.08	0.00	0.00	0.00	1.46
31	333.068	0.30	0.12	0.42	0.12	0.12	0.06	1.14
32	324.974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	401.462	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	13822.12	8.93	4.36	1.65	0.48	9.55	0.20	25.17
Mean		0.27	0.13	0.05	0.01	0.29	0.01	0.76
All trees		3740.18	1825.85	690.83	201.71	4000.62	83.35	10542.55
Kandhara	**BANDHAN**							
1	409.556	0.20	0.05	0.00	0.00	0.00	0.00	0.24
2	502.342	0	0	0	0	0	0	0
3	268.72	0.00	0.00	0.07	0.07	0.00	0.00	0.15
4	507.898	0.59	0.67	0.24	0.04	0.00	0.00	1.54
5	570.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	470.666	0.00	0.04	0.00	0.00	0.00	0.00	0.04
7	514.373	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	605.431	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	448.812	0.00	0.04	0.00	0.00	0.00	0.00	0.04
10	411.579	0.24	0.00	0.00	0.00	0.00	0.00	0.24
11	356.54	0.04	0.00	0.00	0.00	0.00	0.00	0.04
12	333.877	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	3.36	1.68	0.84	0.00	0.00	0.00	5.88
15	390.13	0.20	0.05	0.00	0.00	0.00	0.00	0.26
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	0.44	0.00	0.00	0.00	0.00	0.00	0.44
18	612.105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	583.981	0.51	0.41	0.07	0.00	0.00	0.00	0.99
20	459.739	0.13	0.00	0.00	0.09	0.00	0.00	0.22

21	443.146	2.03	0.45	0.00	0.00	0.00	0.00	2.48
22	318.498	0.31	0.00	0.00	0.00	0.00	0.00	0.31
23	346.018	0.29	0.00	0.00	0.00	0.00	0.00	0.29
24	378.799	0.11	0.00	0.00	0.00	0.00	0.00	0.11
25	391.749	0.26	0.00	0.00	0.00	0.00	0.00	0.26
Total	11172.43	8.71	3.40	1.22	0.20	0.00	0.00	13.53
Mean		0.35	0.14	0.05	0.01	0.00	0.00	0.55
All trees		3892.23	1517.82	544.80	89.55	0.00	0.00	6144.83
Anantpur	**BANDHAN**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3	525.705	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.21	0.00	0.05	0.00	0.00	0.00	0.27
6	259.412	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	451.241	0.13	0.00	0.00	0.00	0.00	0.00	0.13
8	448.002	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	562.937	0.07	0.00	0.00	0.00	0.00	0.00	0.07
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.04	0.00	0.00	0.00	0.00	0.00	0.04
12	532.585	0.41	0.00	0.00	0.00	0.00	0.00	0.41
13	526.514	0.49	0.00	0.00	0.00	0.00	0.00	0.49
14	431.814	0.46	0.19	0.00	0.00	0.00	0.00	0.65
15	510.731	0.12	0.08	0.00	0.00	0.00	0.00	0.20
16	540.274	0.26	0.19	0.00	0.00	0.00	0.00	0.44
17	356.135	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	382.036	0.16	0.16	0.00	0.00	0.16	0.05	0.47
19	344.393	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	418.055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	573.055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	486.449	0.12	0.00	0.00	0.00	0.00	0.00	0.12
23	449.217	0.04	0.00	0.00	0.00	0.00	0.00	0.04
24	460.953	0.78	0.26	0.17	0.13	0.00	0.00	1.35
25	450.025	0.04	0.00	0.00	0.00	0.00	0.00	0.04
26	619.595	0.16	0.00	0.00	0.00	0.00	0.00	0.16
27	377.585	0.53	1.33	0.27	0.00	0.00	0.00	2.12
28	340.757	0.23	0.00	0.00	0.00	0.00	0.00	0.23
29	407.128	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	513.564	0.78	0.04	0.04	0.00	0.00	0.00	1.13
31	605.43	0.66	0.00	0.00	0.00	0.00	0.00	0.66
32	772.977	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	732.507	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	467.023	3.43	1.28	0.00	0.00	0.00	0.00	4.71
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	456.906	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	280.861	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.10	9.15	3.52	0.53	0.13	0.16	0.05	13.75

Mean		0.23	0.09	0.01	0.00	0.00	0.00	0.33
All trees		4303.04	1653.98	249.71	61.23	73.89	24.63	6209.31
TOTAL	**43810.65**	**26.79**	**11.27**	**3.40**	**0.81**	**9.71**	**0.25**	**52.45**
MEAN		**0.27**	**0.12**	**0.03**	**0.01**	**0.10**	**0.00**	**0.54**
STDEV		**0.6075748**	**0.2957139**	**0.11032195**	**0.032428853**	**0.9385449**	**0.0160574**	**1.43162106**
All Block(Tree)		**11974.89**	**5038.95**	**1519.62**	**363.06**	**4340.14**	**112.37**	**23447.49**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**BAHADA**							
1	384.869	0.99	0.99	0.62	0.26	0.00	0.00	2.86
2	220.156	0.55	0.82	0.18	0.45	0.27	0.27	2.54
3	433.029	0.97	1.34	0.46	0.23	0.05	0.00	3.05
4	500.613	1.20	1.00	0.52	0.20	0.00	0.04	3.00
5	539.465	0.89	0.74	0.56	0.26	0.11	0.00	2.56
6	352.898	0.15	0.00	0.07	0.04	0.00	0.00	0.26
7	425.744	0.75	0.05	0.05	0.14	0.05	0.05	1.08
8	320.927	0.19	0.00	0.00	0.00	0.00	0.00	0.19
9	245.248	0.90	0.00	0.25	0.16	0.00	0.00	1.31
10	425.339	1.17	0.89	0.19	0.00	0.00	0.05	2.30
11	452.454	1.06	0.66	0.09	0.00	0.00	0.09	1.93
12	433.434	0.88	0.14	0.00	0.00	0.00	0.05	1.06
13	261.436	1.89	0.76	0.00	0.00	0.00	0.00	2.65
14	401.058	1.71	0.24	0.49	0.49	0.00	0.00	2.93
15	390.13	0.26	0.51	0.00	0.00	0.00	0.00	0.77
16	513.159	0.19	0.00	0.00	0.19	0.00	0.00	0.39
17	438.29	1.46	0.78	0.64	0.09	0.14	0.23	3.33
18	431.814	0.37	0.23	0.14	0.00	0.00	0.00	0.74
19	299.882	0.00	0.33	0.00	0.00	0.00	0.00	0.33
20	451.249	0.66	0.31	0.49	0.22	0.04	0.00	1.73
21	454.071	0.40	0.31	0.48	0.22	0.04	0.00	1.45
22	485.64	0.12	0.37	0.21	0.21	0.08	0.00	0.99
23	335.901	0.48	0.48	0.06	0.00	0.06	0.00	1.07
24	528.942	0.45	0.19	0.30	0.19	0.08	0.00	1.21
25	486.853	0.21	0.25	0.29	0.29	0.04	0.00	1.07

26	716.722	0.56	0.22	0.28	0.06	0.06	0.00	1.17
27	394.987	0.66	0.35	0.10	0.15	0.00	0.00	1.27
28	363.428	1.43	0.61	0.11	0.11	0.00	0.00	2.26
29	556.057	0.68	0.32	0.04	0.04	0.00	0.00	1.08
30	518.824	0.35	0.58	0.35	0.15	0.08	0.00	1.50
31	333.068	0.30	0.12	0.42	0.12	0.12	0.06	1.14
32	324.974	0.55	0.06	0.68	0.00	0.12	0.00	1.42
33	401.462	0.85	0.40	0.10	0.00	0.00	0.00	2.44
Total	13822.12	23.27	14.05	8.15	4.27	1.34	0.83	53.07
Mean		0.71	0.43	0.25	0.13	0.04	0.03	1.59
All trees		9745.62	5882.94	3412.63	1789.17	559.92	347.29	21977.18
Kandhara	**BAHADA**							
1	409.556	1.12	1.27	0.63	0.59	0.05	0.05	3.71
2	502.342	0.18	0.11	0.00	0.00	0.00	0.00	0.30
3	268.72	1.48	1.11	0.67	0.30	0.15	0.00	3.70
4	507.898	0.43	0.51	0.55	0.55	0.20	0.12	2.35
5	570.626	2.28	0.88	0.53	0.18	0.00	0.00	3.85
6	470.666	0.30	0.13	0.17	0.42	0.00	0.76	1.78
7	514.373	0.63	0.29	0.20	0.00	0.05	0.00	1.17
8	605.431	0.99	0.33	0.00	0.00	0.00	0.00	1.32
9	448.812	0.98	0.40	0.18	0.13	0.04	0.00	1.74
10	411.579	1.70	1.46	0.49	0.00	0.00	0.00	3.64
11	356.54	0.62	0.12	0.04	0.04	0.00	0.00	0.82
12	333.877	2.58	1.14	0.30	0.12	0.00	0.12	4.45
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	0.84	0.21	0.00	0.00	0.00	0.00	1.05
15	390.13	0.67	0.31	0.56	0.72	0.00	0.10	2.61
16	553.224	0.36	0.18	0.36	0.00	0.00	0.36	1.27
17	458.524	2.62	1.09	0.22	0.00	0.00	0.00	3.93
18	612.105	0.52	0.13	0.03	0.00	0.00	0.00	0.69
19	583.981	0.92	0.27	0.58	0.55	0.73	0.03	2.47
20	459.739	0.09	0.17	0.04	0.26	0.00	0.00	0.52
21	443.146	2.93	0.45	0.00	0.00	0.00	0.00	3.39
22	318.498	2.51	0.00	0.00	0.00	0.00	0.00	2.51
23	346.018	1.16	1.16	0.58	0.00	0.00	0.00	2.89
24	378.799	1.00	0.63	0.00	0.00	0.00	0.00	1.64
25	391.749	1.23	0.72	0.10	0.00	0.00	0.00	2.04
Total	11172.43	28.15	13.06	6.22	3.85	1.21	1.55	53.82
Mean		1.13	0.52	0.25	0.15	0.05	0.06	2.16

All trees		12580.05	5838.60	2781.65	1720.20	542.59	692.59	24155.68
Anantpur	**BAHADA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	525.705	0.00	0.19	0.00	0.00	0.00	0.00	0.19
4	426.556	0.00	0.23	0.00	0.00	0.00	0.00	0.23
5	376.775	0.27	0.27	0.21	0.00	0.05	0.00	0.80
6	259.412	1.54	0.77	0.00	0.00	0.00	0.00	2.31
7	451.241	0.27	0.35	0.09	0.04	0.00	0.00	0.75
8	448.002	0.27	0.09	0.00	0.00	0.00	0.00	0.36
9	562.937	1.54	0.77	0.00	0.00	0.00	0.00	2.31
10	342.78	0.78	0.89	0.28	0.11	0.04	0.00	2.10
11	480.378	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	532.585	0.27	0.15	0.00	0.00	0.00	0.00	0.42
13	526.514	0.38	0.46	0.04	0.00	0.00	0.00	0.87
14	431.814	0.23	0.19	0.00	0.00	0.00	0.00	0.46
15	510.731	0.31	0.12	0.00	0.00	0.00	0.00	0.43
16	540.274	0.22	0.07	0.04	0.00	0.00	0.00	0.33
17	356.135	0.00	0.17	0.00	0.00	0.00	0.00	0.17
18	382.036	0.16	0.16	0.10	0.00	0.00	0.05	0.47
19	344.393	0.06	0.17	0.00	0.00	0.00	0.00	0.29
20	418.055	0.81	0.33	0.00	0.00	0.00	0.00	1.15
21	573.055	0.07	0.00	0.03	0.03	0.00	0.00	0.14
22	486.449	0.25	0.04	0.08	0.08	0.04	0.04	0.53
23	449.217	0.13	0.04	0.13	0.00	0.04	0.04	0.40
24	460.953	2.43	0.87	1.13	0.48	0.00	0.00	4.90
25	450.025	0.40	0.04	0.04	0.00	0.00	0.00	0.49
26	619.595	0.36	0.13	0.06	0.03	0.00	0.00	0.58
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.06	0.06	0.00	0.00	0.00	0.00	0.12
29	407.128	0.05	0.00	0.00	0.00	0.00	0.00	0.05
30	513.564	0.78	0.27	0.31	0.31	0.16	0.00	1.83
31	605.43	0.33	0.00	0.00	0.00	0.00	0.00	0.33
32	772.977	0.26	0.00	0.00	0.26	0.00	0.00	0.52
33	732.507	0.14	0.14	0.27	0.41	0.00	0.00	0.95
34	467.023	4.07	0.43	0.00	0.00	0.00	0.00	4.50
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.52	0.00	0.00	0.00	0.00	0.00	1.04
38	456.906	0.22	0.00	0.00	0.00	0.00	0.00	0.22
39	280.861	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Total	18816.10	17.16	7.41	2.84	1.76	0.33	0.14	30.26
Mean		0.43	0.19	0.07	0.04	0.01	0.00	0.74
All trees		8072.47	3484.24	1334.59	826.59	155.23	64.89	13938.01
TOTAL	**43810.65**	**68.58**	**34.52**	**17.21**	**9.88**	**2.88**	**2.52**	**137.14**
MEAN		**0.70**	**0.35**	**0.18**	**0.10**	**0.03**	**0.03**	**1.40**
STDEV		**0.7563923**	**0.3659872**	**0.23113865**	**0.162077817**	**0.0858261**	**0.0933795**	**1.22561478**
All Block(Tree)		**30657.61**	**15430.77**	**7693.27**	**4415.94**	**1287.91**	**1125.16**	**61309.15**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**CHARA**							
1	384.869	7.48	1.35	0.94	0.16	0.00	0.00	9.93
2	220.156	3.09	9/11.007	0.64	0.00	0.00	0.00	4.54
3	433.029	3.33	1.06	0.05	0.23	0.00	0.00	4.66
4	500.613	13.10	2.44	0.80	0.16	0.00	0.00	16.49
5	539.465	4.15	1.19	0.59	0.11	0.07	0.04	6.15
6	352.898	3.37	0.48	0.07	0.00	0.00	0.00	3.93
7	425.744	20.49	2.07	0.28	0.00	0.05	0.00	22.89
8	320.927	27.31	2.62	0.19	0.00	0.00	0.00	30.11
9	245.248	30.31	1.88	0.16	0.00	0.00	0.00	32.35
10	425.339	33.74	3.90	0.56	0.00	0.00	0.00	38.20
11	452.454	15.81	3.14	0.44	0.00	0.00	0.00	19.39
12	433.434	22.05	2.54	0.37	0.00	0.00	0.00	24.95
13	261.436	37.50	1.52	0.00	0.00	0.00	0.00	39.02
14	401.058	11.71	4.63	0.00	0.00	0.00	0.00	16.34
15	390.13	12.05	0.77	0.00	0.51	0.00	0.00	12.82
16	513.159	16.76	3.31	0.97	0.19	0.00	0.00	21.24
17	438.29	5.61	0.91	0.23	0.00	0.00	0.00	6.75
18	431.814	9.45	1.07	0.23	0.00	0.00	0.00	10.75
19	299.882	8.34	1.00	0.00	0.00	0.00	0.00	9.34
20	451.249	15.16	3.15	0.09	0.00	0.00	0.00	18.39
21	454.071	6.03	1.50	0.48	0.00	0.04	0.00	8.05
22	485.64	5.97	2.51	1.24	0.12	0.04	0.00	9.88
23	335.901	3.99	2.32	0.18	0.24	0.06	0.00	6.79
24	528.942	1.89	0.60	0.23	0.00	0.00	0.00	2.72
25	486.853	3.54	1.34	0.16	0.00	0.00	0.00	5.05

26	716.722	5.55	1.53	0.50	0.08	0.00	0.00	7.67
27	394.987	2.38	1.47	0.35	0.00	0.00	0.00	4.20
28	363.428	5.78	1.32	0.33	0.06	0.00	0.00	7.48
29	556.057	4.06	1.33	0.11	0.00	0.00	0.00	5.50
30	518.824	1.62	0.69	0.08	0.00	0.00	0.00	2.39
31	333.068	0.66	0.66	0.42	0.00	0.00	0.00	3.90
32	324.974	2.40	0.12	0.31	0.12	0.00	0.00	2.95
33	401.462	3.74	1.34	0.50	0.10	0.00	0.00	5.68
Total	13822.12	348.41	55.77	11.50	2.09	0.27	0.04	420.54
Mean		10.56	1.69	0.35	0.06	0.01	0.00	12.74
All trees		145932.70	23358.16	4816.39	874.79	111.36	15.53	176142.13
Kandhara	**CHARA**							
1	409.556	1.66	1.27	0.15	0.10	0.00	0.00	3.17
2	502.342	0.63	0.15	0.30	0.00	0.00	0.00	1.07
3	268.72	4.73	2.00	0.30	0.00	0.00	0.00	7.03
4	507.898	13.51	4.73	1.34	0.04	0.00	0.00	19.61
5	570.626	2.10	0.70	0.70	0.00	0.00	0.00	3.50
6	470.666	4.25	1.87	0.89	0.13	0.00	0.00	7.14
7	514.373	1.56	0.39	0.10	0.05	0.00	0.00	2.10
8	605.431	0.17	0.00	0.00	0.00	0.00	0.00	0.17
9	448.812	0.62	0.22	0.13	0.00	0.00	0.00	0.98
10	411.579	1.46	0.73	0.24	0.00	0.00	0.00	2.43
11	356.54	2.61	1.36	0.08	0.00	0.00	0.00	4.04
12	333.877	0.60	0.18	0.06	0.00	0.00	0.00	0.84
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	4.41	2.73	0.00	0.00	0.00	0.00	7.14
15	390.13	10.30	4.41	1.18	0.00	0.00	0.00	15.88
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	6.98	3.49	0.00	0.00	0.00	0.00	10.47
18	612.105	10.75	1.70	0.16	0.00	0.00	0.00	12.61
19	583.981	7.67	3.12	0.65	0.00	0.00	0.00	11.44
20	459.739	0.09	0.04	0.00	0.00	0.00	0.00	0.13
21	443.146	1.81	0.45	0.00	0.00	0.00	0.00	2.26
22	318.498	4.08	0.00	0.00	0.00	0.00	0.00	4.08
23	346.018	2.02	0.00	0.00	0.00	0.00	0.00	2.02
24	378.799	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	391.749	0.72	0.26	0.00	0.00	0.00	0.00	0.97
Total	11172.43	82.71	29.78	6.27	0.31	0.00	0.00	119.08

Mean		3.31	1.19	0.25	0.01	0.00	0.00	4.76
All trees		36961.41	13310.74	2803.57	140.03	0.00	0.00	53215.75
Anantpur	**CHARA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	13.63	1.36	0.00	0.00	0.00	0.00	15.00
3	525.705	21.11	2.47	1.14	0.00	0.00	0.00	24.73
4	426.556	15.94	1.17	0.00	0.00	0.00	0.00	17.11
5	376.775	4.51	0.11	0.05	0.05	0.00	0.00	5.79
6	259.412	40.09	10.41	0.00	0.39	0.00	0.00	50.89
7	451.241	13.52	3.01	0.00	0.00	0.00	0.00	16.53
8	448.002	12.86	4.78	0.36	0.00	0.00	0.00	17.99
9	562.937	17.48	3.20	0.50	0.00	0.00	0.04	21.21
10	342.78	17.80	1.17	0.29	0.00	0.00	0.00	19.26
11	480.378	9.49	2.29	0.54	0.04	0.00	0.00	12.37
12	532.585	19.34	1.99	0.08	0.04	0.00	0.00	21.45
13	526.514	8.96	3.15	0.38	0.19	0.00	0.00	12.69
14	431.814	15.01	8.15	2.27	0.46	0.00	0.00	25.89
15	510.731	11.63	2.90	0.70	0.04	0.00	0.00	15.27
16	540.274	16.96	3.94	0.55	0.00	0.00	0.00	17169.92
17	356.135	11.01	4.61	0.06	0.00	0.00	0.00	15.67
18	382.036	11.83	6.23	0.58	0.00	0.00	0.26	18.90
19	344.393	8.36	1.05	0.35	0.00	0.00	0.00	9.76
20	418.055	7.65	4.07	0.24	0.00	0.00	0.00	11.96
21	573.055	8.14	1.05	0.17	0.00	0.00	0.00	9.36
22	486.449	9.17	2.96	0.12	0.04	0.00	0.00	12.29
23	449.217	13.08	2.45	0.49	0.00	0.00	0.00	16.01
24	460.953	11.50	4.95	0.65	0.09	0.00	0.00	17.18
25	450.025	17.42	3.42	0.31	0.00	0.00	0.04	21.20
26	619.595	15.04	1.58	0.10	0.00	0.00	0.00	16.72
27	377.585	8.49	2.92	0.27	0.00	0.00	0.00	11.67
28	340.757	11.45	1.41	0.12	0.00	0.00	0.00	12.97
29	407.128	7.03	0.93	0.00	0.00	0.00	0.00	7.96
30	513.564	7.52	7.63	1.75	0.00	0.00	0.00	16.90
31	605.43	35.84	7.10	0.17	0.00	0.00	0.00	43.11
32	772.977	18.24	3.88	0.39	0.00	0.00	0.00	22.51
33	732.507	18.83	4.77	1.91	0.14	0.00	0.00	25.65
34	467.023	10.92	0.00	0.00	0.00	0.00	0.00	10.92
35	624.856	28.33	11.04	3.52	0.48	0.00	0.00	43.37
36	471.475	34.58	11.24	8.27	0.00	0.00	0.00	54.09

37	578.316	3.13	2.08	0.69	0.69	0.00	0.00	5.90
38	456.906	6.52	1.30	0.00	0.00	0.00	0.00	7.83
39	280.861	8.97	1.38	0.34	0.00	0.00	0.00	10.69
40	506.279	3.95	1.58	0.00	0.00	5.53	0.00	11.06
Total	18816.10	555.33	139.74	27.36	2.65	5.53	0.34	17879.79
Mean		13.88	3.49	0.68	0.07	0.14	0.01	18.27
All trees		261227.36	65736.06	12871.25	1246.08	2601.48	160.76	343842.99
TOTAL	**43810.65**	**986.45**	**225.30**	**45.13**	**5.05**	**5.80**	**0.38**	**18419.41**
MEAN		**10.07**	**2.30**	**0.46**	**0.05**	**0.06**	**0.00**	**187.95**
STDEV		**9.1498976**	**2.3153263**	**0.95983993**	**0.121850434**	**0.5585003**	**0.0271834**	**1733.1591**
All Block(Tree)		**440987.73**	**100718.07**	**20177.32**	**2257.97**	**2591.17**	**169.36**	**8234347.75**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**DHAURA**							
1	384.869	4.37	3.22	5.92	2.60	1.30	0.36	17.77
2	220.156	4.45	4.09	6.09	4.72	3.54	1.54	24.44
3	433.029	5.45	3.51	2.45	1.99	1.02	0.97	14.50
4	500.613	2.28	3.59	3.59	1.80	0.60	0.12	10.78
5	539.465	2.34	0.93	1.41	1.33	0.22	0.44	6.67
6	352.898	2.00	0.82	0.93	0.26	0.22	0.19	4.41
7	425.744	15.37	5.59	2.91	1.17	0.23	0.14	25.42
8	320.927	8.67	4.43	3.43	1.06	0.31	0.06	17.96
9	245.248	4.82	0.65	0.25	0.49	0.08	0.16	6.45
10	425.339	3.20	1.22	0.89	0.38	0.00	0.19	5.87
11	452.454	1.33	0.22	0.35	0.31	0.04	0.00	2.25
12	433.434	10.61	1.11	0.78	0.60	0.00	0.05	13.15
13	261.436	13.64	0.38	1.14	0.00	0.38	0.00	15.53
14	401.058	5.85	1.46	2.93	1.95	0.49	0.49	13.17
15	390.13	0.00	0.00	0.00	0.00	0.00	0.26	0.00
16	513.159	0.00	0.00	0.19	0.19	0.00	0.00	0.39
17	438.29	3.65	1.78	2.10	0.78	0.00	0.64	8.94
18	431.814	6.62	1.02	1.07	0.32	0.00	0.51	9.54
19	299.882	10.67	4.67	5.67	1.00	10.67	1.00	23.02
20	451.249	7.49	2.53	1.73	1.15	0.80	0.27	13.96

21	454.071	7.00	3.52	2.16	0.92	0.44	0.18	14.22
22	485.64	4.98	2.02	3.01	1.85	1.15	0.33	13.34
23	335.901	4.05	3.22	3.81	1.43	0.06	0.06	12.62
24	528.942	3.06	2.00	2.64	2.04	0.79	0.15	10.69
25	486.853	5.05	1.52	1.64	0.74	0.94	0.12	10.02
26	716.722	5.47	1.79	1.12	1.14	0.67	0.31	10.49
27	394.987	4.10	1.77	0.35	0.30	0.56	0.10	7.19
28	363.428	7.21	2.04	2.53	1.10	0.28	0.11	13.26
29	556.057	3.45	2.19	0.79	0.07	0.04	0.00	6.54
30	518.824	9.02	2.54	2.16	1.46	1.85	0.66	17.69
31	333.068	11.83	4.08	5.34	1.92	2.10	0.36	25.64
32	324.974	5.29	1.60	4.37	1.60	0.80	0.12	13.79
33	401.462	12.20	6.97	3.29	1.29	0.25	0.15	24.15
Total	13822.12	195.51	76.48	77.04	38.00	29.84	10.03	413.89
Mean		5.92	2.32	2.33	1.15	0.90	0.30	12.92
All trees		81887.95	32032.56	32268.66	15914.58	12499.70	4202.72	178581.83
Kandhara	**DHAURA**							
1	409.556	6.74	3.27	0.98	0.15	0.05	0.00	11.18
2	502.342	4.25	2.03	1.35	0.24	0.04	0.04	7.95
3	268.72	7.69	2.14	0.22	0.22	0.15	0.00	10.43
4	507.898	22.05	10.20	5.36	3.03	1.18	1.77	43.59
5	570.626	5.78	3.50	1.93	0.35	0.00	0.00	11.56
6	470.666	3.06	1.74	1.15	0.13	0.00	0.00	7.14
7	514.373	7.13	2.73	0.44	0.20	0.00	0.15	10.64
8	605.431	0.33	0.00	0.00	0.00	0.00	0.00	0.33
9	448.812	4.14	1.16	0.18	0.00	0.00	0.00	5.57
10	411.579	1.46	0.97	0.00	0.00	0.00	0.00	2.43
11	356.54	2.84	1.98	0.86	0.23	0.04	0.08	6.03
12	333.877	3.25	1.68	0.54	0.06	0.06	0.06	5.65
13	360.183	1.94	1.67	1.11	0.00	0.00	0.00	4.72
14	475.909	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	7.53	2.92	1.64	1.23	0.92	0.31	14.55
16	553.224	0.54	0.54	0.36	0.36	0.00	0.72	2.53
17	458.524	3.05	2.18	0.00	0.00	0.00	0.00	5.23
18	612.105	10.29	4.44	1.89	0.59	0.07	0.00	17.28
19	583.981	12.71	5.03	2.19	1.37	1.00	0.19	22.16

20	459.739	3.22	1.83	0.78	0.35	0.09	0.00	6.27
21	443.146	6.55	0.90	0.45	0.00	0.00	0.00	7.90
22	318.498	8.46	0.00	0.94	0.00	0.00	0.00	9.40
23	346.018	4.62	1.45	0.87	0.29	0.00	0.00	7.23
24	378.799	9.72	5.76	2.11	1.06	0.16	0.21	19.02
25	391.749	6.28	3.52	1.28	1.02	0.36	0.10	12.56
Total	11172.43	143.64	61.66	26.62	10.87	4.11	3.63	251.35
Mean		5.75	2.47	1.06	0.43	0.16	0.15	10.02
All trees		64192.61	27556.50	11897.98	4857.62	1835.56	1622.58	111962.85
Anantpur	**DHAURA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.68	0.68	0.00	0.00	0.00	0.00	1.36
3	525.705	0.76	0.00	0.00	0.00	0.00	0.00	0.76
4	426.556	0.47	0.00	0.00	0.00	0.00	0.00	0.47
5	376.775	3.82	1.86	1.38	0.42	0.16	0.05	7.70
6	259.412	1.93	0.77	0.77	1.16	0.00	0.00	4.63
7	451.241	7.05	3.19	3.19	1.51	0.62	0.31	15.87
8	448.002	3.21	1.56	0.40	0.67	0.31	0.76	6.92
9	562.937	6.72	4.80	3.62	1.56	0.39	0.21	17.31
10	342.78	1.46	0.00	0.29	0.00	0.00	0.00	1.75
11	480.378	4.21	2.12	0.67	0.25	0.08	0.25	7.58
12	532.585	5.60	0.86	1.77	0.53	0.00	0.00	10.63
13	526.514	2.17	1.48	2.85	1.33	0.38	0.80	10.14
14	431.814	9.59	7.74	3.33	3.71	3.71	4.40	32.47
15	510.731	8.69	5.56	1.96	0.39	0.12	0.16	16.88
16	540.274	7.37	8.85	5.60	1.18	0.11	0.22	23.33
17	356.135	1.91	4.66	2.25	1.18	0.34	0.06	10.39
18	382.036	5.03	4.61	3.30	1.15	0.52	1.73	16.34
19	344.393	2.15	1.05	0.35	0.23	0.12	0.00	3.89
20	418.055	4.26	3.97	4.07	2.73	1.29	1.58	17.89
21	573.055	2.20	3.11	2.37	0.42	0.07	0.00	8.17
22	486.449	3.34	1.32	2.27	1.45	0.95	0.62	3.34
23	449.217	3.25	6.36	4.89	1.51	0.36	0.00	16.37
24	460.953	9.07	9.59	5.34	2.91	1.04	0.48	28.42
25	450.025	3.29	2.58	1.82	0.22	0.04	0.13	8.09
26	619.595	3.16	2.39	1.19	0.26	0.06	0.03	7.10
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	2.29	0.59	0.47	0.29	0.06	0.18	3.87
29	407.128	0.02	0.02	0.01	0.00	0.00	0.00	0.05

30	513.564	19.82	3.66	1.91	1.91	1.44	0.90	29.64
31	605.43	5.95	0.50	0.00	0.00	0.00	0.00	6.44
32	772.977	3.36	1.42	1.16	0.65	0.13	0.00	6.73
33	732.507	4.23	0.68	1.64	0.00	0.27	0.27	7.09
34	467.023	9.42	1.28	0.00	0.00	0.00	0.00	10.71
35	624.856	1.28	0.80	0.80	0.00	0.00	0.00	2.88
36	471.475	0.85	1.27	0.42	0.21	0.00	0.00	2.76
37	578.316	3.30	2.43	0.35	0.35	0.00	0.00	6.42
38	456.906	4.35	1.52	0.00	0.00	0.00	0.00	5.87
39	280.861	23.10	5.17	1.72	0.69	0.00	0.00	30.69
40	506.279	3.95	2.96	1.58	0.20	8.69	0.00	17.38
Total	18816.10	183.30	101.41	63.75	29.06	21.27	13.13	408.33
Mean		4.58	2.54	1.59	0.73	0.53	0.33	10.30
All trees		86223.65	47704.70	29989.88	13667.71	10003.93	6176.90	193766.76
TOTAL	**43810.65**	**522.44**	**239.55**	**167.42**	**77.92**	**55.22**	**26.80**	**1073.57**
MEAN		**5.33**	**2.44**	**1.71**	**0.80**	**0.56**	**0.27**	**10.95**
STDEV		**4.4411259**	**2.1419371**	**1.59726929**	**0.897253067**	**1.4785635**	**0.5667722**	**8.29668073**
All Block(Tree)		**233557.20**	**107090.83**	**74843.73**	**34834.25**	**24684.55**	**11978.98**	**479936.43**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**GAMBHARI**							
1	384.869	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	220.156	0.36	0.18	0.64	0.09	0.45	0.00	1.73
3	433.029	0.51	0.65	0.28	0.05	0.14	0.00	1.99
4	500.613	0.28	0.04	0.04	0.00	0.00	0.00	0.36
5	539.465	0.33	0.26	0.07	0.07	0.00	0.00	0.74
6	352.898	0.07	0.00	0.00	0.00	0.00	0.00	0.07
7	425.744	0.00	0.00	0.00	0.00	0.05	0.00	0.05
8	320.927	0.19	0.00	0.00	0.00	0.00	0.00	0.19
9	245.248	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	425.339	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	452.454	0.04	0.04	0.09	0.04	0.00	0.00	0.22
12	433.434	0.00	0.05	0.00	0.00	0.00	0.00	0.05
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	0.00	0.00	0.00	0.00	0.00	0.00	0.00

15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.19	0.00	0.00	0.00	0.19
17	438.29	0.91	0.05	0.00	0.05	0.05	0.00	1.05
18	431.814	0.79	0.00	0.00	0.00	0.00	0.00	0.79
19	299.882	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	451.249	0.00	0.04	0.00	0.00	0.09	0.00	0.13
21	454.071	0.88	0.26	0.22	0.09	0.00	0.04	1.50
22	485.64	0.08	0.33	0.16	0.00	0.00	0.00	0.58
23	335.901	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	528.942	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	486.853	0.25	0.08	0.00	0.00	0.00	0.00	0.33
26	716.722	0.45	0.14	0.00	0.00	0.00	0.00	0.59
27	394.987	0.20	0.00	0.00	0.00	0.00	0.00	0.20
28	363.428	0.22	0.00	0.00	0.00	0.00	0.00	0.22
29	556.057	0.14	0.11	0.04	0.00	0.00	0.00	0.29
30	518.824	0.15	0.27	0.27	0.08	0.08	0.00	0.85
31	333.068	0.12	0.18	0.12	0.06	0.06	0.00	0.54
32	324.974	0.62	0.37	0.18	0.31	0.12	0.00	1.60
33	401.462	0.05	0.00	0.00	0.00	0.00	0.05	0.10
Total	13822.12	6.65	3.05	2.31	0.83	1.03	0.09	14.34
Mean		0.20	0.09	0.07	0.03	0.03	0.00	0.42
All trees		2786.01	1277.61	965.74	349.27	433.23	39.29	5805.29
Kandhara	**GAMBHARI**							
1	409.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	502.342	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	268.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	507.898	0.16	0.20	0.04	0.00	0.00	0.00	0.39
5	570.626	0.18	0.18	0.00	0.00	0.18	0.00	0.53
6	470.666	0.25	0.08	0.00	0.00	0.00	0.00	0.34
7	514.373	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	605.431	0.66	0.00	0.00	0.00	0.00	0.00	0.66
9	448.812	0.27	0.04	0.00	0.00	0.00	0.00	0.31
10	411.579	0.49	0.00	0.00	0.00	0.00	0.00	0.49
11	356.54	0.19	0.08	0.00	0.00	0.00	0.00	0.27
12	333.877	0.06	0.00	0.00	0.00	0.00	0.00	0.06
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	0.63	0.63	0.00	0.00	0.00	0.00	1.26
15	390.13	0.26	0.10	0.00	0.00	0.00	0.00	0.36
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00

17	458.524	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	612.105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	583.981	1.54	0.65	0.21	0.14	0.00	0.03	2.57

20	459.739	0.00	0.04	0.00	0.00	0.00	0.00	0.04
21	443.146	0.23	0.00	0.00	0.00	0.00	0.00	0.23
22	318.498	0.63	0.00	0.00	0.00	0.00	0.00	0.63
23	346.018	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	378.799	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	391.749	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	11172.43	5.54	2.01	0.24	0.14	0.18	0.03	8.13
Mean		0.22	0.08	0.01	0.01	0.01	0.00	0.33
All trees		2473.68	896.60	109.43	61.22	78.27	15.31	3634.51
Anantpur	**GAMBHARI**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	525.705	0.19	0.00	0.00	0.00	0.00	0.00	0.19
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	259.412	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	451.241	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	448.002	0.00	0.04	0.00	0.00	0.00	0.00	0.04
9	562.937	0.21	0.11	0.04	0.00	0.04	0.00	0.39
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.04	0.00	0.00	0.00	0.00	0.00	0.04
12	532.585	0.08	0.00	0.00	0.00	0.00	0.00	0.08
13	526.514	0.19	0.38	0.08	0.00	0.00	0.00	0.65
14	431.814	0.32	0.28	0.00	0.05	0.00	0.00	0.65
15	510.731	0.78	0.00	0.00	0.00	0.00	0.00	0.78
16	540.274	0.07	0.00	0.00	0.00	0.00	0.00	0.07
17	356.135	0.00	0.06	0.00	0.00	0.00	0.00	0.06
18	382.036	0.16	0.00	0.00	0.00	0.00	0.00	0.16
19	344.393	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	418.055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	573.055	0.07	0.21	0.03	0.00	0.00	0.00	0.31
22	486.449	0.00	0.00	0.00	0.00	0.04	0.00	0.04
23	449.217	0.04	0.04	0.04	0.00	0.00	0.00	0.13
24	460.953	0.30	0.17	0.09	0.04	0.00	0.00	0.61
25	450.025	0.22	0.00	0.00	0.00	0.00	0.00	0.22

26	619.595	0.06	0.00	0.00	0.00	0.00	0.00	0.06
27	377.585	0.53	0.00	0.00	0.00	0.00	0.00	0.53
28	340.757	0.06	0.00	0.00	0.00	0.00	0.00	0.06
29	407.128	0.10	0.00	0.00	0.00	0.00	0.00	0.10
30	513.564	1.01	0.15	0.07	0.04	0.00	0.00	1.27
31	605.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	772.977	0.13	0.00	0.00	0.00	0.00	0.00	0.13
33	732.507	0.14	0.14	0.14	0.00	0.00	0.00	0.27
34	467.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.17	0.17	0.00	0.00	0.17	0.17	0.52
38	456.906	0.22	0.00	0.00	0.00	0.00	0.00	0.22
39	280.861	1.72	1.03	0.00	0.00	0.00	0.00	2.76
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.10	6.83	2.79	0.49	0.13	0.25	0.18	10.35
Mean		0.17	0.07	0.01	0.00	0.01	0.00	0.26
All trees		3214.71	1311.10	230.07	59.83	117.72	82.46	4869.25
TOTAL	**43810.65**	**19.02**	**7.84**	**3.04**	**1.10**	**1.46**	**0.30**	**32.82**
MEAN		**0.19**	**0.08**	**0.03**	**0.01**	**0.01**	**0.00**	**0.33**
STDEV		**0.3141338**	**0.1678023**	**0.08638182**	**0.038502875**	**0.0560209**	**0.0189396**	**0.53316006**
All Block(Tree)		**8503.17**	**3506.51**	**1358.86**	**490.88**	**652.56**	**135.62**	**14673.43**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**HARIDA**							
1	384.869	0.62	0.21	0.31	0.00	0.00	0.00	1.14
2	220.156	0.82	0.36	0.09	0.09	0.45	0.00	1.82
3	433.029	0.79	0.92	0.51	0.14	0.09	0.05	2.49
4	500.613	0.16	0.44	0.24	0.00	0.00	0.00	0.84
5	539.465	0.07	0.11	0.26	0.07	0.00	0.00	0.59
6	352.898	0.15	0.04	0.00	0.00	0.04	0.04	0.26
7	425.744	0.05	0.19	0.05	0.00	0.00	0.00	0.28
8	320.927	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	245.248	0.57	0.00	0.00	0.08	0.00	0.00	0.65
10	425.339	0.23	0.14	0.05	0.00	0.00	0.00	0.42

11	452.454	0.53	0.31	0.22	0.04	0.00	0.00	1.10
12	433.434	1.61	0.37	0.18	0.09	0.00	0.00	2.26
13	261.436	1.14	1.14	0.38	0.00	0.00	0.00	2.65
14	401.058	0.49	0.24	0.24	0.00	0.00	0.00	0.98
15	390.13	0.00	0.00	0.26	0.00	0.00	0.00	0.26
16	513.159	0.97	0.58	0.19	0.00	0.00	0.00	1.75
17	438.29	0.05	0.05	0.00	0.00	0.05	0.14	0.27
18	431.814	0.00	0.05	0.05	0.14	0.00	0.00	0.23
19	299.882	0.33	0.00	0.00	0.00	0.00	0.00	0.33
20	451.249	0.27	0.13	0.49	0.44	0.04	0.00	1.37
21	454.071	0.40	0.18	0.09	0.04	0.00	0.00	0.70
22	485.64	0.41	0.37	0.45	0.29	0.00	0.00	1.52
23	335.901	0.30	0.54	0.36	0.00	0.12	0.00	1.31
24	528.942	0.08	0.11	0.23	0.38	0.08	0.04	0.91
25	486.853	0.12	0.21	0.33	0.29	0.04	0.00	0.99
26	716.722	0.47	0.47	0.56	0.14	0.00	0.00	1.65
27	394.987	0.56	0.20	0.10	0.05	0.05	0.00	0.96
28	363.428	3.74	0.55	0.44	0.00	0.00	0.00	4.73
29	556.057	0.14	0.04	0.11	0.00	0.00	0.04	0.32
30	518.824	0.58	0.62	0.39	0.12	0.04	0.04	1.77
31	333.068	0.72	0.72	0.66	0.00	0.12	0.00	2.22
32	324.974	0.06	0.00	0.37	0.06	0.18	0.00	0.68
33	401.462	0.70	0.45	0.40	0.20	0.00	0.00	1.74
Total	13822.12	17.13	9.73	7.99	2.67	1.30	0.33	39.23
Mean		0.52	0.29	0.24	0.08	0.04	0.01	1.18
All trees		7174.92	4075.28	3347.29	1117.46	545.87	139.22	16310.11
Kandhara	**HARIDA**							
1	409.556	0.20	0.15	0.00	0.00	0.00	0.00	0.34
2	502.342	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	268.72	0.67	0.37	0.15	0.00	0.00	0.00	1.18
4	507.898	0.16	0.12	0.43	0.43	0.04	0.00	1.18
5	570.626	0.35	0.35	0.35	0.00	0.00	0.00	1.05
6	470.666	0.04	0.13	0.04	0.25	0.00	0.00	0.47
7	514.373	0.20	0.00	0.00	0.00	0.00	0.00	0.20
8	605.431	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	448.812	0.04	0.00	0.00	0.00	0.00	0.00	0.04
10	411.579	0.00	0.24	0.00	0.00	0.00	0.00	0.24
11	356.54	0.19	0.00	0.00	0.00	0.00	0.00	0.19
12	333.877	0.36	0.00	0.00	0.00	0.00	0.00	0.36

13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	0.84	0.42	0.42	0.00	0.00	0.00	1.68
15	390.13	0.36	0.26	0.51	0.67	0.15	0.00	1.95
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	2.18	1.31	0.87	0.00	0.00	0.00	4.37
18	612.105	0.36	0.13	0.03	0.00	0.00	0.00	0.52
19	583.981	0.21	0.27	0.58	0.27	0.03	0.00	1.37
20	459.739	0.13	0.13	0.30	0.13	0.00	0.00	0.70
21	443.146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	318.498	2.19	0.31	0.00	0.00	0.00	0.00	2.51
23	346.018	0.58	0.00	0.00	0.00	0.00	0.00	0.58
24	378.799	1.85	0.16	0.00	0.00	0.00	0.00	2.01
25	391.749	1.48	0.36	0.15	0.00	0.00	0.00	1.99
Total	11172.43	12.39	4.71	3.85	1.76	0.23	0.00	22.93
Mean		0.50	0.19	0.15	0.07	0.01	0.00	0.92
All trees		5535.42	2103.11	1721.70	785.97	101.59	0.00	10247.80
Anantpur	**HARIDA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	525.705	0.00	0.19	0.00	0.19	0.00	0.00	0.38
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.11	0.11	0.05	0.00	0.00	0.00	0.27
6	259.412	0.00	0.39	0.00	0.00	0.00	0.00	0.39
7	451.241	0.40	0.18	0.09	0.00	0.00	0.00	0.66
8	448.002	0.40	0.27	0.09	0.00	0.00	0.00	0.76
9	562.937	0.57	0.39	0.21	0.11	0.07	0.00	1.35
10	342.78	0.00	0.00	0.29	0.00	0.00	0.00	0.29
11	480.378	0.58	0.17	0.00	0.00	0.00	0.00	0.75
12	532.585	0.56	0.11	0.04	0.00	0.00	0.00	0.71
13	526.514	0.27	0.04	0.00	0.00	0.00	0.00	0.30
14	431.814	0.60	0.46	0.05	0.00	0.00	0.00	1.11
15	510.731	0.39	0.23	0.04	0.00	0.00	0.00	0.67
16	540.274	0.22	0.07	0.00	0.00	0.00	0.00	0.30
17	356.135	0.28	0.34	0.22	0.00	0.00	0.00	0.84
18	382.036	0.05	0.00	0.05	0.00	0.00	0.00	0.16
19	344.393	0.12	0.06	0.17	0.00	0.00	0.00	0.35
20	418.055	0.19	0.00	0.05	0.00	0.00	0.00	0.24
21	573.055	0.17	0.03	0.00	0.00	0.00	0.00	0.24

22	486.449	0.04	0.08	0.04	0.08	0.00	0.00	0.25
23	449.217	0.53	0.44	0.18	0.00	0.00	0.00	1.16
24	460.953	0.17	0.09	0.13	0.00	0.00	0.00	0.39
25	450.025	1.33	0.67	0.22	0.00	0.00	0.04	2.27
26	619.595	0.42	0.10	0.03	0.00	0.00	0.00	0.55
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.06	0.23	0.00	0.00	0.00	0.00	0.29
29	407.128	0.10	0.00	0.00	0.00	0.00	0.00	0.10
30	513.564	0.19	0.12	0.23	0.43	0.04	0.00	1.01
31	605.43	0.50	0.17	0.00	0.00	0.00	0.00	0.66
32	772.977	0.13	0.00	0.13	0.00	0.00	0.00	0.26
33	732.507	0.14	1.09	0.55	0.14	0.00	0.00	1.91
34	467.023	3.85	1.28	0.00	0.00	0.00	0.00	5.14
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.00	0.69	0.35	0.00	0.00	0.00	1.04
38	456.906	0.87	0.22	0.22	0.00	0.00	0.00	1.30
39	280.861	2.07	0.34	0.34	0.00	0.00	0.00	2.76
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.10	15.33	8.56	3.78	0.94	0.11	0.04	28.86
Mean		0.38	0.21	0.09	0.02	0.00	0.00	0.70
All trees		7209.41	4028.65	1778.13	444.00	51.75	20.91	13171.27
TOTAL	**43810.65**	**44.84**	**23.00**	**15.62**	**5.37**	**1.64**	**0.38**	**91.02**
MEAN		**0.46**	**0.23**	**0.16**	**0.05**	**0.02**	**0.00**	**0.93**
STDEV		**0.6847296**	**0.284454**	**0.19069277**	**0.120374051**	**0.055602**	**0.0166764**	**0.99191286**
All Block(Tree)		**20046.67**	**10282.05**	**6984.74**	**2400.87**	**733.43**	**168.46**	**40688.38**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	Arae(ha)	30-59cm	60-89 cm	90-119cm	120-149cm	150-179cm	180+ cm	TOTAL
Ranjagarh	JAMUN							
1	384.869	0.31	0.21	0.00	0.05	0.00	0.00	0.57
2	220.156	0.73	0.27	0.36	0.18	0.09	0.00	1.64
3	433.029	1.29	1.02	0.65	0.74	0.18	0.28	4.16
4	500.613	0.64	0.52	0.16	0.40	0.00	0.00	1.72
5	539.465	0.48	0.52	0.33	0.37	0.26	0.59	2.56
6	352.898	0.41	0.26	0.19	0.00	0.07	0.07	1.00
7	425.744	1.74	0.94	0.56	0.47	0.09	0.33	4.14
8	320.927	3.74	1.06	0.69	0.00	0.12	0.12	5.74
9	245.248	1.47	0.41	0.41	0.00	0.00	0.00	2.45
10	425.339	0.05	0.14	0.00	0.00	0.00	0.00	0.19
11	452.454	1.77	1.28	1.81	0.44	0.09	0.31	5.70
12	433.434	3.46	0.74	0.32	0.18	0.00	0.00	4.70
13	261.436	7.20	2.65	1.52	2.27	0.76	0.38	14.39
14	401.058	1.71	0.24	0.73	0.73	0.49	0.00	3.90
15	390.13	0.51	0.26	0.51	0.00	0.00	0.26	1.03
16	513.159	2.92	1.17	0.39	0.58	0.00	0.00	5.07
17	438.29	2.46	0.50	0.64	0.18	0.00	0.18	3.97
18	431.814	0.83	0.46	0.32	0.19	0.28	0.00	2.08
19	299.882	0.33	0.00	0.00	0.00	0.00	0.00	0.33
20	451.249	0.89	0.31	0.35	0.53	0.27	0.31	2.66
21	454.071	4.89	2.42	0.79	0.26	0.44	0.22	9.02
22	485.64	0.16	0.41	0.62	0.21	0.12	0.21	1.73
23	335.901	0.41	0.41	0.22	0.04	0.00	0.00	1.04
24	528.942	1.93	0.83	0.76	0.49	0.23	0.00	4.23
25	486.853	0.70	0.21	0.45	0.62	0.66	0.00	2.63
26	716.722	1.84	1.20	0.53	0.45	0.61	0.47	5.11
27	394.987	2.13	1.47	0.46	0.35	0.51	0.10	5.01
28	363.428	1.43	1.76	1.10	0.39	0.17	0.00	4.84
29	556.057	8.01	5.53	1.72	0.40	0.29	0.25	16.20
30	518.824	4.51	2.12	0.73	0.42	0.19	0.00	7.98
31	333.068	0.08	0.00	0.00	0.00	0.00	0.00	0.08
32	324.974	0.80	0.06	0.37	0.37	0.31	0.18	2.09
33	401.462	1.15	0.35	0.40	0.10	0.10	0.05	2.14
Total	13822.12	60.97	29.73	18.10	11.42	6.33	4.32	130.10
Mean		1.85	0.90	0.55	0.35	0.19	0.13	3.97
All trees		25536.22	12452.29	7581.09	4781.74	2649.59	1810.57	54811.49

Kandhara	JAMUN							
1	409.556	0.49	0.39	0.00	0.00	0.00	0.00	0.93
2	502.342	0.22	0.37	0.00	0.00	0.00	0.00	0.59
3	268.72	0.96	1.33	1.04	0.37	0.00	0.00	3.70
4	507.898	1.14	0.39	0.43	0.24	0.24	0.00	2.44
5	570.626	2.80	0.88	0.35	0.00	0.00	0.00	4.03
6	470.666	1.66	0.72	0.34	0.25	0.21	0.00	3.19
7	514.373	0.24	0.29	0.10	0.05	0.00	0.05	0.73
8	605.431	0.83	0.50	0.33	0.00	0.17	0.00	1.82
9	448.812	0.58	0.31	0.13	0.00	0.04	0.00	1.07
10	411.579	0.97	0.49	0.00	0.00	0.00	0.00	1.46
11	356.54	0.66	0.31	0.00	0.00	0.00	0.00	0.97
12	333.877	0.96	0.48	0.18	0.12	0.06	0.06	1.86
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	1.47	0.21	0.00	0.00	0.00	0.00	3.57
15	390.13	1.18	0.51	0.61	0.56	0.15	0.00	3.02
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	5.02	2.84	0.87	0.00	0.00	0.00	8.30
18	612.105	2.03	1.54	0.26	0.10	0.00	0.00	3.92
19	583.981	0.92	0.48	0.27	0.31	0.31	0.07	2.36
20	459.739	1.00	0.44	0.57	0.35	0.04	0.00	2.39
21	443.146	2.71	0.45	0.00	0.00	0.00	0.00	3.16
22	318.498	2.82	0.31	0.00	0.00	0.00	0.00	3.13
23	346.018	0.29	0.00	0.00	0.00	0.00	0.00	0.29
24	378.799	0.42	0.00	0.00	0.00	0.00	0.00	0.42
25	391.749	0.97	0.20	0.10	0.00	0.00	0.00	1.28
Total	11172.43	30.35	13.44	5.59	2.35	1.22	0.18	54.63
Mean		1.21	0.54	0.22	0.09	0.05	0.01	2.12
All trees		13562.68	6006.34	2499.02	1049.34	546.98	79.30	23685.54
Anantpur	JAMUN							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	1.70	0.34	0.34	0.00	0.00	0.00	2.39
3	525.705	2.47	0.00	0.57	0.19	0.00	0.00	3.23
4	426.556	2.81	1.88	0.70	0.23	0.23	0.00	5.86
5	376.775	0.90	1.75	0.48	0.21	0.21	0.05	3.56
6	259.412	2.31	1.54	2.31	0.39	0.00	0.00	0.39
7	451.241	0.66	0.58	0.44	0.18	0.13	0.31	2.30
8	448.002	0.98	0.58	0.40	0.18	0.00	0.18	2.32

9	562.937	1.88	0.46	0.28	0.21	0.07	0.04	191.29
10	342.78	0.00	0.29	0.58	0.58	0.00	0.00	1.46
11	480.378	1.46	0.37	0.21	0.04	0.00	0.00	2.08
12	532.585	3.16	1.35	0.49	0.08	0.00	0.00	5.07
13	526.514	1.03	1.52	1.29	0.34	0.49	0.46	5.51
14	431.814	0.32	0.60	0.79	0.37	0.09	0.19	2.36
15	510.731	5.64	2.94	1.61	0.35	0.04	0.47	11.04
16	540.274	2.74	2.96	1.85	0.41	0.19	0.15	8.29
17	356.135	3.65	2.86	1.29	0.17	0.00	0.06	8.03
18	382.036	0.73	1.36	1.36	0.63	0.10	0.26	4.45
19	344.393	2.44	1.97	1.45	0.35	0.06	0.06	2.44
20	418.055	0.00	0.24	0.14	0.10	0.05	0.05	0.57
21	573.055	2.27	2.44	1.57	0.63	0.21	0.00	7.12
22	486.449	1.07	0.21	0.29	0.25	0.16	0.08	2.06
23	449.217	5.43	3.60	2.00	0.40	0.04	0.13	11.61
24	460.953	0.82	0.65	0.61	0.35	0.09	0.04	2.56
25	450.025	3.07	2.18	2.22	0.36	0.09	0.62	8.53
26	619.595	2.84	2.74	0.94	0.23	0.00	0.03	6.78
27	377.585	1.59	1.33	0.27	0.27	0.00	0.00	3.45
28	340.757	0.65	0.88	0.70	0.41	0.12	0.06	2.82
29	407.128	0.01	0.00	0.00	0.00	0.00	0.00	0.01
30	513.564	1.64	0.55	0.47	0.51	0.70	0.23	4.09
31	605.43	3.36	1.53	0.00	0.00	0.00	0.00	4.89
32	772.977	4.01	0.65	1.03	0.52	0.13	0.00	6.34
33	732.507	1.50	0.55	0.27	0.41	1.36	0.27	4.37
34	467.023	0.21	0.00	0.00	0.00	0.00	0.00	0.43
35	624.856	1.92	1.28	0.48	1.44	0.64	0.00	5.76
36	471.475	12.73	6.15	6.79	2.76	0.85	0.00	29.27
37	578.316	2.78	2.08	0.17	0.35	0.00	0.00	5.38
38	456.906	2.39	1.09	0.65	0.00	0.00	0.00	4.13
38	280.861	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.10	83.18	51.51	35.06	13.86	6.07	3.74	372.25
Mean		2.08	1.29	0.88	0.35	0.15	0.09	4.84
All trees		39128.93	24230.82	16494.29	6521.47	2854.16	1759.16	90988.84
TOTAL	**43810.65**	**174.50**	**94.68**	**58.76**	**27.63**	**13.62**	**8.24**	**556.98**
MEAN		**1.78**	**0.97**	**0.60**	**0.28**	**0.14**	**0.08**	**5.68**

STDEV		**1.9238306**	**1.0994752**	**0.83292581**	**0.40519365**	**0.2287492**	**0.1427873**	**19.3597057**
All Block(Tree)		**78008.67**	**42326.66**	**26266.64**	**12351.00**	**6087.56**	**3683.59**	**248994.44**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**KASI**							
1	284.869	0.36	0.42	0.42	0.26	0.00	0.00	1.46
2	220.156	1.00	1.00	1	0.27	0.00	0.09	2.91
3	433.029	2.22	1.02	0.69	0.14	0.14	0.18	4.30
4	500.613	0.84	1.00	0.64	0.16	0.00	0.00	2.64
5	539.465	0.85	0.63	0.44	0.30	0.11	0.26	2.60
6	352.898	0.11	0.00	0.00	0.00	0.00	0.00	0.11
7	425.744	0.09	0.00	0.00	0.00	0.00	0.00	0.09
8	320.927	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	245.248	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	425.339	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	452.454	0.62	0.35	0.09	0.00	0.00	0.00	1.06
12	433.434	0.74	0.65	0.32	0.32	0.14	0.00	2.17
13	261.436	0.38	0.76	0.00	0.00	0.00	0.00	1.14
14	401.058	0.98	0.00	0.00	0.00	0.00	0.00	0.98
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	6.39	0.50	0.27	0.00	0.00	0.00	1.23
18	431.814	3.24	1.25	0.51	0.00	0.00	0.00	5.00
19	299.882	1.33	0.00	0.00	0.00	0.00	0.00	1.33
20	451.249	2.44	1.82	0.35	0.22	0.04	0.04	4.92
21	454.071	1.72	0.53	0.18	0.09	0.04	0.00	2.55
22	485.64	1.03	0.62	0.62	0.33	0.00	0.12	2.72
23	335.901	0.12	0.00	0.06	0.00	0.00	0.00	0.18
24	528.942	0.30	0.19	0.04	0.11	0.00	0.00	0.64
25	486.853	0.78	0.08	0.08	0.00	0.00	0.00	0.94
26	716.722	0.45	0.39	0.11	0.06	0.00	0.03	1.03
27	394.987	0.46	0.05	0.00	0.00	0.00	0.00	0.51
28	363.428	1.16	0.55	0.00	0.00	0.00	0.00	1.71
29	556.057	0.32	0.32	0.04	0.00	0.00	0.00	0.68
30	518.824	0.27	0.66	0.08	0.08	0.04	0.00	1.12
31	333.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	324.974	0.00	0.06	0.00	0.00	0.00	0.00	0.06

33	401.462	0.55	0.50	0.35	0.20	0.05	0.00	1.64
Total	13722.12	28.74	13.33	5.83	2.53	0.56	0.73	45.71
Mean		0.87	0.40	0.18	0.08	0.02	0.02	1.57
All trees		11949.32	5544.15	2425.53	1053.97	234.88	303.92	21511.77
Kandhara	**KASI**							
1	409.556	0.59	0.05	0.00	0.00	0.00	0.00	0.63
2	502.342	0.30	0.00	0.00	0.00	0.00	0.00	0.30
3	268.72	1.04	0.22	0.00	0.00	0.00	0.00	1.26
4	507.898	2.13	1.34	0.39	0.00	0.00	0.00	3.86
5	570.626	0.53	0.53	0.00	0.00	0.00	0.00	1.05
6	470.666	0.59	0.51	0.08	0.00	0.00	0.04	1.23
7	514.373	0.15	0.15	0.00	0.00	0.00	0.00	0.29
8	605.431	1.32	0.33	0.17	0.17	0.00	0.00	1.98
9	448.812	0.76	0.36	0.09	0.00	0.04	0.00	1.25
10	411.579	0.00	0.24	0.00	0.00	0.00	0.00	0.24
11	356.54	0.04	0.04	0.04	0.00	0.00	0.00	0.12
12	333.877	0.54	0.36	0.18	0.12	0.06	0.00	1.26
13	360.183	0.28	0.00	0.00	0.00	0.00	0.00	0.28
14	475.909	2.94	2.52	0.00	0.00	0.00	0.00	5.25
15	390.13	1.02	0.56	0.00	0.00	0.00	0.00	1.59
16	553.224	0.54	0.72	0.00	0.00	0.00	0.00	1.27
17	458.524	0.00	0.00	0.00	0.00	0.00	0.00	0.22
18	612.105	0.00	0.07	0.00	0.00	0.00	0.00	0.07
19	583.981	2.36	1.68	0.21	0.00	0.00	0.00	4.25
20	459.739	1.26	1.44	0.09	0.00	0.00	0.00	2.79
21	443.146	1.58	0.00	0.00	0.00	0.00	0.00	1.58
22	318.498	0.31	0.00	0.00	0.00	0.00	0.00	0.31
23	346.018	4.34	1.73	0.00	0.00	0.00	0.00	6.07
24	378.799	0.32	0.00	0.00	0.00	0.00	0.00	0.32
25	391.749	0.10	0.00	0.00	0.00	0.00	0.00	0.10
Total	11172.43	23.03	12.84	1.24	0.29	0.10	0.04	37.55
Mean		0.92	0.51	0.05	0.01	0.00	0.00	1.49
All trees		10290.37	5738.88	556.21	127.46	46.77	18.99	16646.91
Anantpur	**KASI**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.34	0.00	0.00	0.00	0.00	0.00	0.34
3	525.705	1.33	0.00	0.00	0.00	0.00	0.00	1.33
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5	376.775	0.37	0.48	0.16	0.00	0.00	0.00	1.01
6	259.412	1.93	1.16	0.77	0.39	0.00	0.00	4.24
7	451.241	1.68	0.84	0.04	0.00	0.00	0.00	2.57
8	448.002	0.36	0.04	0.00	0.00	0.00	0.00	0.40
9	562.937	1.31	0.82	0.07	0.04	0.00	0.04	2.27
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	1.00	0.12	0.04	0.00	0.00	0.00	1.17
12	532.585	0.60	0.00	0.00	0.00	0.00	0.00	0.60
13	526.514	0.49	0.08	0.04	0.04	0.00	0.00	0.65
14	431.814	0.74	0.32	0.09	0.00	0.00	0.00	1.16
15	510.731	0.55	0.43	0.20	0.04	0.00	0.04	1.25
16	540.274	1.11	0.85	0.19	0.00	0.00	0.00	2.15
17	356.135	0.06	0.00	0.00	0.00	0.00	0.00	0.06
18	382.036	0.00	0.10	0.05	0.00	0.00	0.00	0.16
19	344.393	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	418.055	0.67	0.48	0.10	0.00	0.00	0.00	1.24
21	573.055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	486.449	0.04	0.00	0.00	0.00	0.00	0.00	0.04
23	449.217	0.27	0.27	0.04	0.00	0.00	0.00	0.58
24	460.953	0.74	1.26	0.17	0.04	0.04	0.09	2.34
25	450.025	3.02	1.24	0.58	0.04	0.04	0.00	4.93
26	619.595	0.16	0.06	0.00	0.00	0.00	0.00	0.23
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.53	0.35	0.12	0.00	0.12	0.00	1.12
29	407.128	0.00	0.05	0.00	0.00	0.00	0.00	0.05
30	513.564	2.49	2.03	0.47	0.04	0.00	0.00	5.02
31	605.43	0.50	0.00	0.00	0.00	0.00	0.00	0.50
32	772.977	0.91	0.26	0.26	0.00	0.00	0.00	1.42
33	732.507	1.23	0.82	0.14	0.00	0.00	0.00	2.18
34	467.023	3.85	0.43	0.00	0.00	0.00	0.00	4.28
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	2.08	1.22	0.17	0.35	0.00	0.00	3.82
38	456.906	0.22	0.00	0.00	0.00	0.00	0.00	0.22
39	280.861	4.83	3.10	0.69	0.00	0.00	0.00	8.62
40	506.279	0.59	0.20	0.00	0.00	0.79	0.00	1.58
Total	18816.098	34.00	17.01	4.39	0.97	1.00	0.16	57.53
Mean		0.85	0.43	0.11	0.02	0.02	0.00	1.43
All trees		15994.49	8002.11	2063.09	457.32	468.18	75.96	26907.02

TOTAL	**43710.65**	**85.76**	**43.19**	**11.46**	**3.79**	**1.66**	**0.93**	**140.79**
MEAN		**0.88**	**0.44**	**0.12**	**0.04**	**0.02**	**0.01**	**1.44**
STDEV		**1.1342883**	**0.5953992**	**0.19122159**	**0.089641465**	**0.0835867**	**0.0367435**	**1.65760935**
All Block(Tree)		**38253.33**	**19262.04**	**5113.03**	**1691.36**	**742.53**	**416.97**	**62795.92**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**KURUM**							
1	384.869	0.78	0.36	0.16	0.05	0.05	0.00	1.40
2	220.156	0.27	0.64	0.73	0.45	0.36	0.00	2.45
3	433.029	2.45	1.34	0.88	0.74	0.37	1.11	6.88
4	500.613	0.52	0.56	0.08	0.00	0.00	0.00	1.16
5	539.465	1.56	0.48	1.00	0.59	0.15	0.37	4.15
6	352.898	0.15	0.11	0.00	0.00	0.00	0.00	0.26
7	425.744	0.66	0.47	0.09	0.05	0.05	0.05	1.36
8	320.927	0.12	0.12	0.06	0.00	0.06	0.00	0.37
9	245.248	0.08	0.16	0.08	0.08	0.00	0.00	0.41
10	425.339	0.05	0.00	0.09	0.00	0.00	0.00	0.14
11	452.454	0.22	0.13	0.04	0.09	0.00	0.00	0.49
12	433.434	0.83	0.74	0.28	0.32	0.05	0.09	2.31
13	261.436	0.38	0.00	0.00	0.00	0.00	0.00	0.38
14	401.058	0.49	1.22	1.46	0.00	0.00	0.00	3.17
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	0.18	0.14	0.00	0.00	0.00	0.00	0.32
18	431.814	0.51	0.09	0.00	0.00	0.00	0.00	0.60
19	299.882	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	451.249	0.13	0.13	0.22	0.18	0.00	0.00	0.66
21	454.071	2.64	0.57	0.13	0.00	0.00	0.00	3.35
22	485.64	0.21	0.45	0.25	0.33	0.29	0.04	1.56
23	335.901	0.52	0.26	0.00	0.00	0.04	0.00	0.82
24	528.942	1.17	0.57	0.23	0.00	0.04	0.00	2.00
25	486.853	1.15	0.78	0.66	0.82	0.41	0.33	4.15
26	716.722	1.34	0.98	0.53	0.33	0.36	0.11	3.66
27	394.987	0.76	0.66	0.91	0.05	0.10	0.00	2.48
28	363.428	2.09	1.27	2.09	2.09	2.09	2.09	2.09

29	556.057	0.57	0.04	0.04	0.07	0.07	0.00	0.75
30	518.824	2.20	0.62	0.69	0.89	0.54	0.54	5.47
31	333.068	0.30	0.12	0.36	0.24	0.06	0.12	1.20
32	324.974	1.91	0.49	1.66	0.68	0.25	0.18	5.17
33	401.462	0.90	0.80	0.65	0.15	0.00	0.00	2.49
Total	13822.123	25.14	14.30	13.37	8.21	5.34	5.04	61.72
Mean		0.76	0.43	0.41	0.25	0.16	0.15	2.16
All trees		10528.01	5988.76	5601.78	3438.12	2234.92	2109.16	29900.75
Kandhara	**KURUM**							
1	409.556	3.03	0.29	0.10	0.00	0.00	0.00	3.42
2	502.342	1.59	0.63	0.11	0.04	0.00	0.00	2.36
3	268.72	2.51	0.81	0.07	0.07	0.00	0.00	3.48
4	507.898	1.58	0.98	0.55	0.59	0.12	0.08	3.90
5	570.626	2.28	0.53	0.00	0.00	0.00	0.00	2.80
6	470.666	3.82	1.57	0.98	0.34	0.08	0.04	6.84
7	514.373	0.63	0.00	0.00	0.00	0.00	0.00	0.63
8	605.431	0.83	0.17	0.00	0.17	0.00	0.00	1.16
9	448.812	2.45	0.49	0.13	0.00	0.00	0.00	3.07
10	411.579	0.49	0.49	0.00	0.00	0.00	0.00	0.97
11	356.54	1.21	0.35	0.08	0.00	0.00	0.00	1.63
12	333.877	4.87	1.62	0.30	0.00	0.00	0.00	6.79
13	360.183	0.56	0.28	0.00	0.00	0.00	0.00	0.83
14	475.909	2.10	0.84	0.00	0.00	0.00	0.00	2.94
15	390.13	1.33	0.82	0.61	0.72	0.15	0.05	3.69
16	553.224	2.53	1.27	0.36	0.00	0.00	0.00	4.16
17	458.524	2.40	1.09	0.00	0.00	0.00	0.00	3.49
18	612.105	0.29	0.13	0.00	0.00	0.00	0.00	0.42
19	583.981	2.02	1.40	1.10	0.82	0.17	0.00	5.51

20	459.739	0.22	0.30	0.09	0.00	0.00	0.00	0.61
21	443.146	0.23	0.00	0.00	0.00	0.00	0.00	0.23
22	318.498	2.82	0.00	0.00	0.00	0.00	0.00	2.82
23	346.018	5.49	0.29	0.00	0.00	0.00	0.00	5.78
24	378.799	2.01	0.74	0.00	0.00	0.00	0.00	2.75
25	391.749	1.84	0.82	0.10	0.00	0.00	0.00	2.76
Total	11172.425	49.11	15.91	4.58	2.75	0.53	0.17	73.05
Mean		1.96	0.64	0.18	0.11	0.02	0.01	2.92
All trees		21947.98	7109.83	2048.74	1227.03	235.99	77.08	32646.65
Anantpur	**KURUM**							

1	431.41	0.00	0.00	0.23	0.00	0.23	0.00	0.46
2	293.407	0.34	0.68	0.00	0.00	0.34	0.00	1.36
3	525.705	0.00	0.00	0.00	0.00	0.19	0.00	0.19
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.96	0.16	0.05	0.00	0.00	0.00	1.17
6	259.412	1.16	0.77	0.39	0.00	0.00	0.00	2.31
7	451.241	0.66	0.31	0.09	0.00	0.00	0.00	1.06
8	448.002	0.98	0.22	0.04	0.00	0.00	0.00	1.25
9	562.937	1.31	0.39	0.04	0.07	0.00	0.00	1.81
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	1.12	0.12	0.00	0.00	0.00	0.00	1.25
12	532.585	2.37	0.79	0.15	0.08	0.00	0.00	3.38
13	526.514	1.37	0.84	0.19	0.04	0.00	0.00	2.43
14	431.814	3.01	1.90	0.28	0.32	0.32	0.05	5.88
15	510.731	1.92	0.35	0.00	0.00	0.00	0.00	2.27
16	540.274	1.67	1.26	0.30	0.04	0.00	0.00	3.26
17	356.135	1.24	0.56	0.00	0.06	0.00	0.00	1.85
18	382.036	1.10	0.42	0.00	0.10	0.05	0.00	1.68
19	344.393	0.17	0.00	0.00	0.00	0.00	0.06	0.23
20	418.055	2.92	1.39	0.33	0.29	0.00	0.00	4.93
21	573.055	0.42	0.31	0.10	0.03	0.00	0.00	0.87
22	486.449	0.25	0.33	0.21	0.08	0.00	0.00	0.86
23	449.217	3.20	0.85	0.04	0.00	0.00	0.00	4.09
24	460.953	1.48	0.78	0.26	0.61	0.00	0.09	3.21
25	450.025	4.93	0.49	0.18	0.04	0.04	0.09	1.20
26	619.595	0.32	0.06	0.03	0.00	0.00	0.00	0.42
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	1.41	0.29	0.06	0.00	0.00	0.00	1.76
29	407.128	0.93	0.39	0.15	0.00	0.05	0.49	1.52
30	513.564	2.06	1.29	1.21	0.82	1.01	0.27	6.66
31	605.43	0.50	0.00	0.00	0.00	0.00	0.00	0.50
32	772.977	0.26	0.52	0.52	0.13	0.00	0.00	1.42
33	732.507	1.36	0.27	1.50	0.68	0.55	0.00	4.37
34	467.023	1.50	0.00	0.00	0.00	0.00	0.00	1.50
35	624.856	0.48	0.64	0.00	0.32	0.00	0.00	1.44
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.87	0.35	0.35	0.00	0.00	0.00	1.56
38	456.906	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	280.861	5.17	1.03	0.00	0.00	0.00	0.00	6.21

40	506.279	0.20	0.59	0.00	0.00	0.79	0.00	1.58
Total	18816.098	47.64	18.36	6.69	3.71	3.58	1.04	75.96
Mean		1.19	0.46	0.17	0.09	0.09	0.03	2.03
All trees		22408.72	8638.00	3148.07	1746.04	1684.66	491.13	38116.62
TOTAL	**43810.65**	**121.88**	**48.57**	**24.65**	**14.67**	**9.45**	**6.25**	**210.73**
MEAN		**1.24**	**0.50**	**0.25**	**0.15**	**0.10**	**0.06**	**2.15**
STDEV		**1.2218183**	**0.444013**	**0.40900569**	**0.307998364**	**0.2659607**	**0.2520158**	**1.83838471**
All Block(Tree)		**54488.22**	**21713.26**	**11020.07**	**6556.35**	**4222.44**	**2794.99**	**94207.81**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**KENDU**							
1	384.869	1.71	1.56	1.92	0.42	0.42	0.05	6.08
2	220.156	3.18	1.27	11.17	1.45	0.64	0.00	8.63
3	433.029	4.94	1.43	1.43	0.92	0.32	0.32	9.38
4	500.613	3.99	1.92	1.00	0.52	0.12	0.04	7.59
5	539.465	0.78	0.78	0.78	0.41	0.11	0.11	2.97
6	352.898	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	425.744	2.35	1.32	1.50	0.70	0.14	0.33	6.34
8	320.927	4.61	3.68	2.62	1.25	0.50	0.25	12.91
9	245.248	5.80	2.12	2.37	0.90	0.16	0.25	11.60
10	425.339	15.51	11.42	6.91	2.49	0.56	0.09	36.98
11	452.454	6.63	3.09	1.50	0.35	0.18	0.09	11.84
12	433.434	7.15	2.08	1.75	0.88	0.32	0.05	12.22
13	261.436	7.95	3.79	4.92	2.27	0.00	0.00	18.94
14	401.058	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	1.28	0.00	0.00	0.00	0.00	0.00	1.28
16	513.159	6.04	1.17	0.19	0.39	0.19	0.00	7.99
17	438.29	2.19	0.87	0.87	0.50	0.18	0.37	4.97
18	431.814	2.22	0.97	2.04	0.28	0.74	0.56	6.81
19	299.882	3.34	2.00	3.34	0.00	0.00	0.33	9.01
20	451.249	3.15	1.60	1.24	0.84	0.66	0.27	7.76
21	454.071	0.79	0.66	0.44	0.35	0.35	0.04	2.64
22	485.64	1.28	1.03	1.73	0.70	0.33	0.21	5.27
23	335.901	2.68	1.01	0.48	0.42	0.06	0.12	4.76
24	528.942	0.94	0.79	0.38	0.23	0.23	0.00	2.57

25	486.853	1.07	0.29	0.70	0.37	0.16	0.21	2.79
26	716.722	0.36	0.22	0.36	0.36	0.36	0.36	0.36
27	394.987	2.33	0.91	0.35	0.20	5.37	0.05	4.35
28	363.428	2.31	1.16	1.27	0.88	0.44	0.06	5.56
29	556.057	0.36	0.22	0.18	0.14	0.00	0.00	0.90
30	518.824	0.54	0.35	0.50	0.19	0.15	0.15	19.04
31	333.068	6.25	1.20	2.28	1.20	0.84	0.12	11.89
32	324.974	0.92	0.49	1.05	0.18	0.18	0.06	2.89
33	401.462	2.84	1.79	1.10	0.60	0.35	0.25	6.92
Total	13822.123	105.50	51.17	56.37	20.40	14.08	4.72	253.25
Mean		3.20	1.55	1.71	0.62	0.43	0.14	7.65
All trees		44187.27	21433.17	23609.53	8545.80	5898.90	1978.28	105739.24
Kandhara	**KENDU**							
1	409.556	0.83	0.20	0.05	0.05	0.00	0.00	1.12
2	502.342	0.55	0.41	0.26	0.04	0.00	0.00	1.25
3	268.72	1.48	0.96	0.59	0.22	0.00	0.00	3.25
4	507.898	1.38	1.02	0.47	0.43	0.32	0.24	3.86
5	570.626	1.05	2.28	1.40	0.70	0.00	0.00	5.43
6	470.666	0.42	0.34	0.08	0.21	0.04	0.13	1.23
7	514.373	1.61	1.22	0.29	0.34	0.15	0.15	3.76
8	605.431	0.00	0.00	0.00	0.17	0.00	0.00	0.17
9	448.812	0.13	0.09	0.09	0.04	0.04	0.00	0.40
10	411.579	0.49	0.24	0.24	0.24	0.24	0.00	1.46
11	356.54	1.59	1.32	0.70	0.39	0.08	0.08	4.16
12	333.877	0.36	0.30	0.00	0.36	0.06	0.00	0.72
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	6.51	2.10	0.21	0.00	0.00	0.00	8.82
15	390.13	6.20	2.36	1.13	1.13	0.31	0.05	11.17
16	553.224	0.18	0.18	0.00	0.00	0.00	0.00	0.36
17	458.524	10.04	3.71	2.84	3.06	2.40	0.22	22.27
18	612.105	0.88	0.36	0.13	0.10	0.00	0.00	1.47
19	583.981	1.44	0.89	0.72	0.92	0.41	0.03	4.42

20	459.739	0.87	0.00	0.00	0.00	0.00	0.00	0.00
21	443.146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	318.498	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	346.018	0.29	0.00	0.00	0.00	0.00	0.00	0.29
24	378.799	2.54	0.58	0.11	0.00	0.00	0.00	3.22
25	391.749	1.48	0.77	0.05	0.00	0.00	0.00	2.30
Total	11172.425	40.33	19.33	9.36	8.40	4.05	0.89	81.14
Mean		1.61	0.77	0.37	0.34	0.16	0.04	3.29
All trees		18025.44	8636.44	4184.91	3755.75	1809.66	398.56	36810.76
Anantpur	**KENDU**							
1	431.41	0.00	0.00	0.23	0.00	0.00	0.00	0.23
2	293.407	7.16	2.73	0.34	0.00	0.00	0.00	10.22
3	525.705	6.47	1.52	0.57	0.00	0.19	0.00	8.75
4	426.556	6.56	1.88	0.94	0.47	0.00	0.00	9.85
5	376.775	1.49	2.65	1.38	0.37	0.21	0.21	6.32
6	259.412	9.25	1.54	1.93	3.47	0.77	0.00	16.96
7	451.241	4.26	4.03	3.10	2.17	0.44	0.58	14.58
8	448.002	2.50	1.74	0.89	0.40	0.45	1.03	7.01
9	562.937	5.33	2.98	1.21	0.89	0.00	0.04	10.45
10	342.78	1.17	2.04	1.46	0.58	0.00	0.00	5.25
11	480.378	5.95	2.66	1.50	0.21	0.25	0.17	10.74
12	532.585	15.63	8.53	3.00	0.34	0.08	0.41	27.98
13	526.514	4.86	4.67	2.55	1.63	0.42	1.22	15.35
14	431.814	3.61	3.71	3.47	2.55	1.71	3.20	18.71
15	510.731	4.46	3.52	2.11	0.59	0.16	0.35	11.20
16	540.274	10.29	7.14	3.70	1.07	0.37	0.52	23.10
17	356.135	13.31	6.12	3.20	1.57	0.22	0.00	24.43
18	382.036	5.39	5.60	3.82	2.57	1.57	2.20	21.15
19	344.393	7.55	7.14	4.70	1.28	0.17	0.58	21.43
20	418.055	2.54	2.77	2.39	1.29	0.43	1.00	10.43
21	573.055	18.30	7.61	4.09	1.01	0.28	0.28	31.42
22	486.449	5.22	2.22	3.12	2.59	0.78	1.93	15.87
23	449.217	18.19	8.94	4.58	0.80	0.22	0.09	32.83
24	460.953	7.59	3.51	1.78	0.95	0.95	0.43	15.23
25	450.025	9.78	4.49	2.22	1.02	0.04	0.31	17.87
26	619.595	10.46	12.62	3.55	1.00	0.16	0.19	24.76
27	377.585	8.49	5.57	4.77	2.12	0.00	0.27	20.95
28	340.757	10.98	10.45	6.46	1.41	0.47	0.23	30.11
29	407.128	4.57	2.31	0.74	0.29	0.00	0.20	8.11

30	513.564	5.37	1.40	1.83	1.40	1.05	1.71	12.77
31	605.43	27.92	22.79	4.46	0.00	0.00	0.00	55.17
32	772.977	7.24	2.20	2.20	1.29	0.91	0.26	14.10
33	732.507	6.68	2.46	1.64	1.91	1.36	1.64	15.69
34	467.023	17.56	4.07	1.28	0.00	0.00	0.00	22.91
35	624.856	3.52	2.88	1.76	2.24	1.92	2.88	15.20
36	471.475	7.21	14.64	11.03	5.52	1.48	0.00	39.88
37	578.316	9.20	7.12	3.13	0.00	0.00	0.00	19.44
38	456.906	5.65	2.17	0.65	0.00	0.00	0.00	8.48
39	280.861	2.41	2.41	0.34	0.00	0.00	0.00	5.17
40	506.279	3.16	0.79	0.40	0.00	4.35	0.00	8.69
Total	18816.098	307.29	193.66	102.54	45.02	21.43	21.92	688.82
Mean		7.68	4.84	2.56	1.13	0.54	0.55	17.30
All trees		144550.85	91098.91	48235.96	21177.26	10081.57	10312.85	325457.41
TOTAL	**43810.65**	**453.12**	**264.16**	**168.27**	**73.83**	**39.56**	**27.54**	**1023.21**
MEAN		**4.62**	**2.70**	**1.72**	**0.75**	**0.40**	**0.28**	**10.44**
STDEV		**4.9043893**	**3.5294789**	**2.03659765**	**0.925209347**	**0.7911166**	**0.5737729**	**10.1197159**
All Block(Tree)		**202567.30**	**118091.24**	**75226.23**	**33003.91**	**17687.27**	**12310.98**	**457421.64**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**KANGADA**							
1	384.869	4.73	3.85	3.48	1.56	0.47	0.26	14.34
2	220.156	2.54	0.91	2.82	0.82	1.27	0.55	8.90
3	433.029	4.16	2.36	1.94	1.66	0.69	0.18	10.99
4	500.613	4.75	2.52	2.68	1.60	0.28	0.12	11.94
5	539.465	8.16	4.52	5.01	3.37	1.74	0.78	23.58
6	352.898	1.15	0.70	0.56	0.44	0.22	0.07	3.15
7	425.744	8.13	3.10	2.21	0.89	0.28	0.14	14.76
8	320.927	10.79	6.36	5.67	1.87	0.19	0.06	24.94
9	245.248	0.08	0.16	0.25	0.74	0.00	0.16	1.39
10	425.339	2.54	0.75	0.61	0.05	0.00	0.05	3.99
11	452.454	0.40	0.09	0.04	0.09	0.04	0.04	0.71
12	433.434	2.58	1.85	0.97	0.83	0.32	0.14	6.69
13	261.436	4.17	0.76	0.38	1.14	0.00	0.00	6.44
14	401.058	8.05	4.15	1.95	1.71	1.22	1.22	15.85

15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.58	0.58	0.39	0.00	0.00	0.00	1.56
17	438.29	5.16	2.69	1.55	0.73	0.09	1.28	11.45
18	431.814	9.45	2.69	1.20	0.69	0.28	0.05	14.36
19	299.882	2.00	0.00	0.33	0.00	0.00	0.00	2.33
20	451.249	3.41	1.86	0.66	0.13	0.00	0.04	6.12
21	454.071	18.71	7.04	4.27	2.29	1.23	0.13	33.67
22	485.64	4.86	1.73	5.19	2.51	1.65	1.81	17.75
23	335.901	3.33	2.20	2.62	1.37	0.42	0.36	10.30
24	528.942	6.46	3.29	2.49	2.61	1.25	0.15	16.24
25	486.853	9.04	3.45	2.59	1.60	0.90	0.41	17.99
26	716.722	24.05	2.46	2.51	0.95	1.09	0.39	31.45
27	394.987	7.14	1.62	0.20	0.41	0.41	0.00	9.77
28	363.428	11.94	2.53	3.52	0.28	0.39	0.00	18.66
29	556.057	13.36	6.07	2.23	0.47	0.11	0.00	22.23
30	518.824	4.32	11.14	1.54	1.62	1.12	0.04	9.75
31	333.068	2.76	1.08	2.40	1.80	0.78	0.12	8.95
32	324.974	12.37	2.15	5.17	3.02	1.23	0.31	24.25
33	401.462	3.19	3.64	1.89	1.00	0.05	0.00	9.76
Total	13822.123	204.35	88.29	69.33	38.23	17.71	8.87	414.27
Mean		6.19	2.68	2.10	1.16	0.54	0.27	12.94
All trees		85593.30	36980.91	29037.86	16011.60	7419.41	3713.75	178858.27
Kandhara	**KANGADA**							
1	409.556	20.17	8.15	1.90	0.39	0.10	0.00	30.71
2	502.342	10.73	4.68	1.11	0.33	0.04	0.04	16.93
3	268.72	25.52	18.93	6.43	2.44	0.22	0.00	53.55
4	507.898	51.47	21.78	10.95	5.12	1.89	3.86	95.06
5	570.626	14.19	4.73	3.33	0.35	0.18	0.00	22.77
6	470.666	46.57	18.31	10.16	2.93	2.38	2.93	83.29
7	514.373	35.84	6.59	2.05	0.34	0.00	0.00	45.07
8	605.431	8.58	1.32	0.83	0.00	0.00	0.00	10.73
9	448.812	26.11	7.31	1.43	0.49	0.49	0.00	35.38
10	411.579	2.43	3.40	0.97	0.97	1.21	0.00	8.98
11	356.54	9.68	2.10	0.35	0.31	0.08	0.04	12.56
12	333.877	27.34	9.74	3.61	0.84	0.54	0.12	42.19
13	360.183	10.56	8.33	1.67	0.83	0.00	0.56	21.94
14	475.909	0.00	1.47	0.42	0.00	0.00	0.00	1.89
15	390.13	21.16	10.86	4.61	2.05	1.02	1.18	40.88
16	553.224	15.01	11.75	4.52	0.90	0.00	0.72	32.91

17	458.524	0.66	0.22	0.00	0.00	0.00	0.00	0.87
18	612.105	7.81	3.89	1.21	0.36	0.03	0.03	13.33
19	583.981	36.52	16.96	6.71	3.36	1.78	2.81	68.14

20	459.739	44.04	17.80	9.79	2.65	2.00	2.57	78.85
21	443.146	5.87	0.23	0.00	0.00	0.00	0.00	6.09
22	318.498	15.99	0.00	0.00	0.00	0.00	0.00	15.99
23	346.018	14.74	2.60	0.29	0.00	0.00	0.00	17.63
24	378.799	14.95	7.29	3.10	1.85	0.71	0.11	28.00
25	391.749	8.63	7.76	2.40	1.79	0.97	0.26	21.81
Total	11172.425	474.55	196.20	77.83	28.31	13.64	15.22	805.55
Mean		18.98	7.85	3.11	1.13	0.55	0.61	32.23
All trees		212075.89	87682.15	34780.27	12653.51	6096.31	6800.77	360088.91
Anantpur	**KANGADA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	1.70	0.34	0.34	0.00	0.00	0.00	2.39
3	525.705	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	1.54	0.32	0.11	0.00	0.05	0.00	2.02
6	259.412	3.86	2.70	0.39	0.77	0.39	0.00	8.10
7	451.241	0.98	0.18	0.00	0.18	0.00	0.00	1.33
8	448.002	1.16	0.45	0.00	0.00	0.00	0.04	1.65
9	562.937	13.04	7.18	1.92	0.64	0.14	0.07	22.99
10	342.78	0.58	0.00	0.00	0.00	0.00	0.00	0.58
11	480.378	3.37	1.08	0.46	0.04	0.00	0.08	5.04
12	532.585	0.30	0.00	0.00	0.00	0.00	0.00	0.30
13	526.514	0.00	0.08	0.04	0.00	0.00	0.00	0.11
14	431.814	0.09	0.32	0.14	0.00	0.00	0.00	0.51
15	510.731	6.58	4.54	0.67	0.12	0.04	0.04	11.98
16	540.274	4.15	3.18	1.26	0.07	0.04	0.04	8.74
17	356.135	0.28	0.00	0.00	0.00	0.00	0.28	0.28
18	382.036	0.00	0.05	0.00	0.00	0.00	0.00	0.05
19	344.393	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	418.055	2.49	2.63	2.58	1.63	0.38	0.29	10.00
21	573.055	2.23	0.45	0.10	0.00	0.00	0.03	2.83
22	486.449	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	449.217	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	460.953	0.43	0.17	0.00	0.00	0.00	0.00	0.61
25	450.025	7.91	0.31	0.04	0.00	0.00	9.64	7.91

26	619.595	0.26	0.10	0.03	0.00	0.00	0.00	0.39
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	407.128	0.10	0.00	0.00	0.00	0.00	0.00	0.10
30	513.564	0.19	0.00	0.04	0.00	0.00	0.00	0.23
31	605.43	0.99	0.50	0.00	0.00	0.00	0.00	0.67
32	772.977	0.13	0.00	0.00	0.00	0.00	0.00	0.13
33	732.507	0.14	0.00	0.00	0.00	0.27	0.00	0.41
34	467.023	1.28	0.00	0.00	0.00	0.00	0.00	1.28
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	456.906	0.22	0.22	0.00	0.00	0.00	0.00	0.43
39	280.861	0.00	0.34	0.00	0.00	0.00	0.00	0.34
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.098	54.01	25.15	8.11	3.45	1.31	10.52	91.40
Mean		1.35	0.63	0.20	0.09	0.03	0.26	2.56
All trees		25405.73	11828.54	3817.14	1621.83	617.40	4949.55	48240.19
TOTAL	**43810.65**	**732.91**	**309.64**	**155.27**	**69.99**	**32.67**	**34.61**	**1311.23**
MEAN		**7.48**	**3.16**	**1.58**	**0.71**	**0.33**	**0.35**	**13.38**
STDEV		**10.677402**	**4.6419189**	**2.27289242**	**1.008223076**	**0.55102**	**1.1548234**	**18.5148678**
All Block(Tree)		**327646.67**	**138423.22**	**69412.15**	**31288.51**	**14603.96**	**15470.61**	**586180.58**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)

Block/comp	Arae(ha)	30-59cm	60-89 cm	90-119cm	120-149cm	150-179cm	180+ cm	TOTAL
Ranjagarh	**KARADA**							
1	384.869	6.29	2.70	0.52	0.10	0.05	0.00	10.71
2	220.156	2.82	1.54	0.09	0.00	0.55	0.27	5.27
3	433.029	2.49	0.83	0.32	0.00	0.00	0.00	3.65
4	500.613	0.80	0.08	0.04	0.00	0.00	0.00	0.92
5	539.465	2.74	0.78	0.19	0.11	0.00	0.00	3.82
6	352.898	4.37	0.82	0.30	0.00	0.00	0.00	5.49
7	425.744	21.33	4.37	0.52	0.09	0.09	0.09	26.50
8	320.927	27.68	8.48	1.31	0.00	0.00	0.00	37.47
9	245.248	0.33	0.00	0.00	0.00	0.00	0.08	0.41
10	425.339	4.28	0.56	0.33	0.05	0.00	0.00	5.22
11	452.454	0.75	0.04	0.09	0.00	0.00	0.00	0.93

12	433.434	7.61	0.78	0.14	0.00	0.00	0.00	8.53
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	2.44	0.49	0.00	0.00	0.00	0.00	2.93
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	2.10	0.55	0.14	0.00	0.00	0.00	2.78
18	431.814	15.84	1.11	0.00	0.00	0.00	0.00	16.95
19	299.882	8.34	0.33	0.00	0.00	0.00	0.00	8.67
20	451.249	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	454.071	13.82	1.45	0.22	0.04	0.00	0.00	15.54
22	485.64	4.04	0.41	0.25	0.08	0.00	0.00	4.78
23	335.901	1.85	0.06	0.00	0.00	0.00	0.06	1.96
24	528.942	1.06	0.83	0.08	0.00	0.00	0.00	1.96
25	486.853	0.08	0.04	0.00	0.00	0.00	0.00	0.12
26	716.722	1.87	0.45	0.06	0.03	0.03	0.00	2.43
27	394.987	0.91	0.15	0.00	0.00	0.00	0.00	1.06
28	363.428	0.22	0.11	0.17	0.00	0.00	0.00	0.50
29	556.057	0.04	0.07	0.04	0.00	0.00	0.00	0.14
30	518.824	0.62	0.19	0.00	0.00	0.00	0.00	0.81
31	333.068	0.42	0.00	0.06	0.18	0.00	0.06	0.72
32	324.974	0.80	0.12	0.00	0.00	0.00	0.00	0.92
33	401.462	3.19	0.50	0.10	0.00	0.00	0.00	3.78
Total	13822.123	139.12	27.86	4.93	0.69	0.72	0.57	174.97
Mean		4.22	0.84	0.15	0.02	0.02	0.02	5.27
All trees		58269.20	11670.86	2066.45	289.25	301.14	237.84	72834.73
Kandhara	**KARADA**							
1	409.556	7.67	3.08	0.73	0.10	0.00	0.00	11.57
2	502.342	4.31	1.70	0.37	0.00	0.00	0.00	6.38
3	268.72	2.14	0.44	0.00	0.07	0.00	0.00	1.18
4	507.898	2.01	1.06	0.08	0.08	0.00	0.00	3.23
5	570.626	18.91	5.78	2.45	0.18	0.00	0.00	27.32
6	470.666	0.17	0.13	0.08	0.00	0.00	0.00	0.38
7	514.373	1.37	0.39	0.05	0.00	0.00	0.00	1.81
8	605.431	0.50	0.33	0.00	0.00	0.00	0.33	1.16
9	448.812	16.84	4.01	1.34	0.13	0.04	0.00	22.37
10	411.579	8.98	7.28	0.73	0.00	0.00	0.00	16.99
11	356.54	2.10	0.39	0.08	0.00	0.00	0.00	2.57
12	333.877	4.93	1.98	0.84	0.00	0.00	0.00	7.75
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00

14	475.909	1.47	0.84	0.00	0.00	0.00	0.00	2.31
15	390.13	2.77	1.23	0.20	0.10	0.00	0.00	4.30
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	6.33	0.87	0.00	0.00	0.00	0.00	7.21
18	612.105	0.39	0.07	0.00	0.00	0.00	0.00	0.46
19	583.981	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	459.739	0.91	0.44	0.04	0.00	0.00	0.00	1.39
21	443.146	7.22	7.22	0.23	0.00	0.00	0.00	14.67
22	318.498	13.48	0.31	0.31	0.00	0.00	0.00	14.11
23	346.018	4.05	0.87	0.29	0.00	0.00	0.00	5.20
24	378.799	1.58	0.21	0.00	0.00	0.00	0.00	1.80
25	391.749	1.94	0.41	0.00	0.00	0.00	0.00	2.35
Total	11172.425	110.08	39.04	7.83	0.66	0.04	0.33	156.51
Mean		4.40	1.56	0.31	0.03	0.00	0.01	6.31
All trees		49195.79	17446.36	3497.61	295.69	19.92	147.49	70498.00
Anantpur	**KARADA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	525.705	3.80	0.57	0.00	0.00	0.00	0.00	4.38
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	2.55	1.01	0.21	0.00	0.00	0.00	3.77
6	259.412	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	451.241	7.14	1.91	0.35	0.18	0.09	0.18	9.84
8	448.002	3.13	2.23	0.00	0.00	0.00	0.00	5.36
9	562.937	10.31	3.02	0.32	0.21	0.04	0.00	13.89
10	342.78	0.88	0.00	0.00	0.00	0.00	0.00	0.88
11	480.378	6.87	2.25	0.17	0.00	0.00	0.00	9.28
12	532.585	8.45	1.16	0.00	0.00	0.00	0.00	9.62
13	526.514	3.11	0.19	0.04	0.00	0.00	0.00	3.34
14	431.814	8.89	6.16	0.79	0.05	0.00	0.00	15.93
15	510.731	6.58	4.54	0.67	0.12	0.04	0.04	11.98
16	540.274	13.96	2.74	0.07	0.00	0.00	0.00	16.77
17	356.135	1.29	1.12	0.00	0.00	0.00	0.00	2.41
18	382.036	8.48	1.68	0.05	0.00	0.00	0.00	10.21
19	344.393	0.41	0.00	0.12	0.00	0.00	0.00	0.52
20	418.055	3.11	1.24	0.00	0.00	0.00	0.00	4.35
21	573.055	2.03	0.59	0.10	0.00	0.00	0.00	2.72
22	486.449	0.00	0.00	0.00	0.00	0.00	0.04	0.04

23	449.217	6.23	2.71	0.36	0.00	0.00	0.00	9.30
24	460.953	3.04	0.61	0.04	0.00	0.00	0.00	3.69
25	450.025	9.20	1.69	0.18	0.04	0.00	0.00	11.11
26	619.595	2.58	0.39	0.00	0.00	0.00	2.97	0.00
27	377.585	1.33	0.00	0.00	0.00	0.00	0.00	1.33
28	340.757	1.06	0.29	0.00	0.00	0.00	0.00	1.35
29	407.128	1.92	0.34	0.00	0.00	0.00	0.00	2.26
30	513.564	4.71	1.95	0.16	0.00	0.16	0.00	6.97
31	605.43	0.99	0.00	0.00	0.00	0.00	0.00	0.99
32	772.977	0.65	0.00	0.00	0.00	0.00	0.00	0.65
33	732.507	14.19	4.91	1.36	0.27	0.14	0.00	20.87
34	467.023	1.28	0.43	0.00	0.00	0.00	0.00	1.71
35	624.856	1.44	0.64	0.00	0.00	0.00	0.00	2.08
36	471.475	2.76	1.70	0.00	0.00	0.00	0.00	4.45
37	578.316	1.22	0.35	0.00	0.00	0.00	0.00	1.56
38	456.906	1.30	0.00	0.00	0.00	0.00	0.00	1.30
39	280.861	13.79	2.07	0.00	0.00	0.00	0.00	15.86
40	506.279	0.59	0.59	0.00	0.00	1.19	0.00	2.37
Total	18816.098	159.25	49.09	4.99	0.87	1.64	3.23	213.17
Mean		3.98	1.23	0.12	0.02	0.04	0.08	5.47
All trees		74909.87	23090.32	2346.73	410.01	771.75	1518.15	102924.06
TOTAL	**43810.65**	**408.45**	**115.99**	**17.75**	**2.22**	**2.40**	**4.13**	**544.65**
MEAN		**4.17**	**1.18**	**0.18**	**0.02**	**0.02**	**0.04**	**5.56**
STDEV		**5.2555891**	**1.7389244**	**0.36664279**	**0.05326673**	**0.1327886**	**0.302674**	**6.99179272**
All Block(Tree)		**182594.62**	**51852.63**	**7934.56**	**994.16**	**1074.77**	**1844.16**	**243483.44**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**MAHULA**							
1	384.869	2.49	2.13	4.73	3.22	2.03	0.88	15.49
2	220.156	2.82	1.18	4.00	2.54	1.09	0.91	12.54
3	433.029	1.94	1.20	3.19	2.49	1.02	2.12	11.96
4	500.613	2.56	1.16	2.12	2.00	0.84	0.92	9.58
5	539.465	1.41	0.63	0.78	0.41	0.11	0.67	4.00
6	352.898	1.15	0.41	0.89	0.78	0.93	1.56	5.71
7	425.744	6.39	4.28	5.12	4.14	1.36	1.60	22.89
8	320.927	2.49	1.25	1.43	1.43	0.31	0.75	7.67

9	245.248	8.17	3.59	3.76	5.39	1.72	2.29	24.92
10	425.339	11.42	5.03	3.57	1.50	0.52	1.41	23.45
11	452.454	6.93	5.21	4.68	2.78	0.80	1.02	21.42
12	433.434	8.07	2.77	1.29	0.92	0.51	0.32	13.88
13	261.436	2.27	1.14	2.65	1.52	0.76	0.00	8.33
14	401.058	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	1.28	0.00	1.03	0.51	0.00	1.79	4.61
16	513.159	7.99	1.75	2.34	1.36	0.19	1.17	14.81
17	438.29	3.01	0.87	1.00	0.82	0.23	1.46	7.39
18	431.814	1.11	0.65	1.53	0.51	0.42	2.22	6.44
19	299.882	1.33	1.00	2.00	0.67	0.00	4.00	9.01
20	451.249	1.99	0.80	0.80	0.84	0.53	0.89	5.85
21	454.071	1.89	1.06	1.14	1.45	1.63	0.13	7.31
22	485.64	1.15	0.70	1.77	0.78	0.49	1.48	6.38
23	335.901	2.38	2.86	3.87	1.67	1.07	1.19	13.04
24	528.942	0.94	1.06	0.76	0.98	0.98	0.19	4.91
25	486.853	0.62	0.53	0.41	0.25	0.21	0.00	2.01
26	716.722	2.40	1.48	0.70	0.45	0.42	0.20	5.64
27	394.987	1.11	1.72	0.96	0.71	0.41	0.10	5.01
28	363.428	7.70	3.91	3.41	1.60	1.38	0.50	18.49
29	556.057	2.98	0.79	0.43	0.18	0.04	0.00	4.42
30	518.824	1.77	1.77	1.81	0.62	0.85	0.12	6.94
31	333.068	0.66	0.66	2.04	1.14	0.96	0.78	6.25
32	324.974	0.98	0.18	0.55	0.62	0.18	0.25	2.77
33	401.462	1.89	2.79	2.54	2.34	1.15	0.95	11.65
Total	13822.123	101.34	54.55	67.31	46.62	23.10	31.85	324.77
Mean		3.07	1.65	2.04	1.41	0.70	0.97	9.84
All trees		42446.70	22848.42	28191.30	19527.21	9677.46	13341.58	136032.68
Kandhara	**MAHULA**							
1	409.556	1.27	0.83	0.34	0.05	0.05	0.00	2.54
2	502.342	1.23	1.04	0.80	0.12	0.00	0.00	3.19
3	268.72	2.37	2.14	2.14	2.44	1.33	0.37	10.80
4	507.898	1.65	0.59	1.18	0.51	0.51	1.54	5.99
5	570.626	0.53	0.70	2.63	1.23	0.18	0.18	5.43
6	470.666	1.19	0.59	0.64	0.42	0.42	0.51	3.78
7	514.373	0.24	0.34	0.49	0.20	0.05	0.39	1.71
8	605.431	0.33	0.00	0.00	0.00	0.00	0.00	0.33
9	448.812	0.00	0.09	0.18	0.04	0.09	0.04	0.45
10	411.579	0.49	0.24	0.24	0.49	0.73	0.00	2.18

11	356.54	2.76	2.18	1.48	0.43	0.27	0.23	7.35
12	333.877	0.48	0.30	0.06	0.00	0.06	0.12	1.02
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	0.00	1.47	0.42	0.00	0.00	0.00	2.94
15	390.13	2.51	1.54	1.90	0.56	0.10	0.10	6.71
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	6.77	4.80	2.84	0.44	0.00	0.00	14.85
18	612.105	1.05	1.27	0.13	0.03	0.03	0.00	2.52
19	583.981	0.41	0.17	0.27	0.14	0.10	0.03	1.13

20	459.739	0.04	0.04	0.00	0.00	0.00	0.00	0.04
21	443.146	1.58	0.45	0.00	0.00	0.00	0.00	2.03
22	318.498	0.94	0.00	0.00	0.00	0.00	0.00	0.94
23	346.018	1.45	0.29	0.00	0.00	0.00	0.00	1.73
24	378.799	1.80	0.90	0.00	0.00	0.00	0.00	2.69
25	391.749	1.74	1.02	0.36	0.00	0.00	0.00	3.12
Total	11172.425	30.82	21.01	16.09	7.09	3.93	3.52	83.46
Mean		1.23	0.84	0.64	0.28	0.16	0.14	3.29
All trees		13772.43	9388.31	7191.49	3170.65	1755.63	1571.32	36757.28
Anantpur	**MAHULA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	1.70	1.02	1.02	0.00	0.00	0.00	3.75
3	525.705	1.90	0.95	0.00	0.00	0.38	0.19	3.42
4	426.556	4.45	0.70	0.23	0.23	0.00	0.00	5.63
5	376.775	3.93	2.81	2.39	0.96	0.80	1.22	12.10
6	259.412	11.95	5.01	8.10	2.70	1.16	0.00	28.91
7	451.241	2.22	3.10	3.50	1.99	1.02	1.11	12.94
8	448.002	1.92	2.32	1.52	1.12	0.36	2.46	9.69
9	562.937	7.11	4.48	3.30	2.49	0.75	1.31	19.44
10	342.78	2.04	2.04	0.88	1.46	0.58	0.29	7.30
11	480.378	3.54	2.00	1.37	0.42	0.21	0.62	8.16
12	532.585	9.73	6.12	4.09	1.54	1.16	1.92	24.56
13	526.514	4.44	3.84	3.08	1.67	0.61	1.37	15.00
14	431.814	3.10	3.89	3.06	2.87	2.18	3.84	18.94
15	510.731	3.92	1.84	2.23	1.14	0.20	1.06	10.38
16	540.274	4.37	6.48	5.44	1.63	0.30	1.92	20.14
17	356.135	2.25	2.70	3.65	1.07	0.67	0.79	11.12
18	382.036	5.39	4.82	3.72	2.93	1.83	1.68	20.37

19	344.393	6.39	8.54	5.92	4.12	1.10	2.09	28.17
20	418.055	2.58	2.06	2.63	2.44	1.10	0.29	11.10
21	573.055	9.22	7.40	3.81	0.59	0.52	0.14	21.68
22	486.449	0.82	0.45	1.73	1.23	0.49	2.59	7.32
23	449.217	5.56	3.69	3.83	2.40	0.76	0.49	16.73
24	460.953	1.82	1.69	1.48	0.95	0.48	0.48	6.90
25	450.025	6.36	4.18	0.09	1.47	0.80	0.76	13.64
26	619.595	6.71	6.26	6.13	2.20	0.61	1.00	22.92
27	377.585	6.10	4.24	0.53	1.06	0.00	0.00	11.94
28	340.757	5.05	5.99	6.75	3.46	0.94	1.06	23.24
29	407.128	2.80	1.87	0.98	0.49	0.15	0.79	7.08
30	513.564	2.41	1.25	1.44	1.36	0.82	2.26	9.54
31	605.43	8.92	5.78	1.49	0.17	0.66	0.17	17.18
32	772.977	3.10	2.20	1.42	1.68	1.29	0.78	10.48
33	732.507	1.36	0.00	0.95	0.95	0.41	1.77	5.46
34	467.023	4.93	3.21	1.93	0.86	0.21	0.00	11.13
35	624.856	6.56	2.88	4.64	5.28	5.28	7.04	31.69
36	471.475	12.73	5.52	2.97	3.82	0.42	0.42	25.88
37	578.316	0.69	0.69	0.17	0.00	0.00	0.00	1.56
38	456.906	1.96	1.74	0.87	0.00	0.00	0.22	4.78
39	280.861	1.38	0.69	0.00	0.34	0.00	1.03	3.45
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.098	171.43	124.46	97.35	59.10	28.25	43.14	523.72
Mean		4.29	3.11	2.43	1.48	0.71	1.08	13.10
All trees		80639.03	58544.15	45791.79	27800.39	13289.42	20294.36	246490.88
TOTAL	**43810.65**	**303.58**	**200.01**	**180.74**	**112.81**	**55.28**	**78.51**	**931.96**
MEAN		**3.10**	**2.04**	**1.84**	**1.15**	**0.56**	**0.80**	**9.51**
STDEV		**2.9110958**	**1.9424936**	**1.75325129**	**1.199917046**	**0.7064763**	**1.0635277**	**7.78521294**
All Block(Tree)		**135716.46**	**89415.43**	**80801.19**	**50433.55**	**24714.73**	**35098.29**	**416629.78**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	Arae(ha)	30-59cm	60-89 cm	90-119cm	120-149cm	150-179cm	180+ cm	TOTAL
Ranjagarh	MUNDI							
1	384.869	0.00	0.05	0.00	0.00	0.00	0.00	0.05
2	220.156	0.09	0.55	0.27	0.09	0.45	0.45	1.91
3	433.029	0.69	0.83	0.28	0.00	0.00	0.05	1.85
4	500.613	0.60	1.56	0.52	0.04	0.00	0.04	2.76
5	539.465	1.00	0.44	0.11	0.07	0.04	0.00	1.67
6	352.898	0.04	0.00	0.04	0.00	0.07	0.26	0.41
7	425.744	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	320.927	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	245.248	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	425.339	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	452.454	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	433.434	0.09	0.05	0.05	0.00	0.00	0.00	0.18
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.19	0.00	0.19
17	438.29	0.05	0.00	0.00	0.00	0.00	0.00	0.05
18	431.814	0.46	0.14	0.00	0.00	0.09	0.23	0.93
19	299.882	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	451.249	0.04	0.00	0.00	0.00	0.00	0.00	0.04
21	454.071	0.35	0.26	0.04	0.00	0.00	0.00	0.66
22	485.64	0.16	0.12	0.00	0.04	0.00	0.00	0.33
23	335.901	0.77	0.00	0.00	0.00	0.00	0.00	0.77
24	528.942	0.26	0.26	0.19	0.11	0.15	0.00	0.98
25	486.853	0.04	0.08	0.00	0.00	0.00	0.00	0.12
26	716.722	0.20	0.08	0.00	0.00	0.03	0.03	0.31
27	394.987	0.05	0.15	0.00	0.00	0.00	0.00	0.20
28	363.428	0.44	0.06	0.00	0.00	0.00	0.00	0.50
29	556.057	0.22	0.11	0.11	0.04	0.00	0.00	0.47
30	518.824	0.27	0.00	0.08	0.00	0.00	0.00	0.35
31	333.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	324.974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	401.462	0.80	0.15	0.10	0.25	0.10	0.00	1.39
Total	13822.123	6.63	4.90	1.78	0.64	1.13	1.06	16.12
Mean		0.20	0.15	0.05	0.02	0.03	0.03	0.37
All trees		2777.36	2051.49	745.79	269.88	473.96	443.73	5114.19

Kandhara	MUNDI							
1	409.556	0.24	0.05	0.00	0.00	0.00	0.00	0.29
2	502.342	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	268.72	0.22	0.00	0.00	0.00	0.00	0.00	0.22
4	507.898	0.16	0.24	0.00	0.00	0.00	0.00	0.39
5	570.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	470.666	0.00	0.04	0.00	0.00	0.04	0.00	0.08
7	514.373	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	605.431	0.17	0.00	0.00	0.00	0.00	0.00	0.17
9	448.812	0.04	0.04	0.04	0.00	0.00	0.00	0.13
10	411.579	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	356.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	333.877	0.30	0.30	0.00	0.00	0.06	0.12	0.78
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	1.05	1.47	0.42	0.00	0.00	0.00	2.94
15	390.13	0.10	0.00	0.05	0.00	0.00	0.00	0.15
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	1.31	0.87	0.44	0.00	0.00	0.00	2.62
18	612.105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	583.981	0.27	0.14	0.27	0.03	0.00	0.07	0.51
20	459.739	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	443.146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	318.498	0.63	0.00	0.00	0.00	0.00	0.00	0.63
23	346.018	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	378.799	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	391.749	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	11172.425	4.50	3.15	1.23	0.03	0.10	0.19	8.93
Mean		0.18	0.13	0.05	0.00	0.00	0.01	0.36
All trees		2009.95	1409.35	548.21	15.31	45.85	84.33	3990.52
Anantpur	MUNDI							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.34	0.34	0.34	0.00	0.00	0.00	1.02
3	525.705	0.38	0.38	0.19	0.00	0.00	0.00	0.95
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	259.412	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	451.241	0.00	0.04	0.00	0.00	0.00	0.00	0.04
8	448.002	0.00	0.00	0.00	0.00	0.00	0.00	0.00

9	562.937	1.71	1.31	0.64	0.14	0.07	0.00	3.87
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	532.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	526.514	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	431.814	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	510.731	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	540.274	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	356.135	0.00	0.11	0.00	0.00	0.00	0.00	0.11
18	382.036	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	344.393	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	418.055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	573.055	0.73	0.38	0.21	0.10	0.03	0.00	1.47
22	486.449	0.16	0.00	0.00	0.00	0.00	0.00	0.16
23	449.217	0.36	0.09	0.09	0.00	0.00	0.00	0.53
24	460.953	0.26	0.17	0.22	0.09	0.13	0.04	0.91
25	450.025	0.04	0.44	0.44	0.44	0.44	0.04	0.09
26	619.595	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	407.128	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	513.564	0.04	0.00	0.00	0.00	0.00	0.00	0.04
31	605.43	0.66	0.00	0.00	0.00	0.00	0.00	0.66
32	772.977	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	732.507	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	467.023	0.86	0.00	0.00	0.00	0.00	0.00	0.86
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.17	0.00	0.17	0.00	0.00	0.00	0.35
38	456.906	0.43	0.22	0.00	0.00	0.00	0.00	0.65
39	280.861	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.098	6.15	3.50	2.30	0.78	0.68	0.09	11.72
Mean		0.15	0.09	0.06	0.02	0.02	0.00	0.34
All trees		2892.93	1646.95	1083.87	366.02	320.15	41.32	6351.24
TOTAL	**43810.65**	**17.28**	**11.55**	**5.31**	**1.46**	**1.91**	**1.34**	**36.77**
MEAN		**0.18**	**0.12**	**0.05**	**0.01**	**0.02**	**0.01**	**0.38**

STDEV		**0.3164801**	**0.2877931**	**0.12635476**	**0.056432874**	**0.0704944**	**0.0589099**	**0.70825589**
All Block(Tree)		**7724.24**	**5164.59**	**2374.45**	**651.21**	**855.98**	**597.23**	**16437.98**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**MAI**							
1	384.869	1.46	1.30	1.61	0.88	0.57	0.21	6.55
2	220.156	0.27	0.00	0.09	0.45	0.27	0.00	1.09
3	433.029	2.96	1.89	1.43	0.92	0.42	0.05	7.67
4	500.613	1.56	1.08	1.24	0.84	0.16	0.00	4.87
5	539.465	1.19	0.59	1.04	0.70	0.11	0.26	3.89
6	352.898	1.26	0.93	0.70	0.15	0.00	0.07	3.11
7	425.744	7.66	4.14	1.27	0.33	0.09	0.09	13.53
8	320.927	5.92	3.68	1.56	0.50	0.00	0.12	11.78
9	245.248	8.01	1.63	0.25	0.25	0.00	0.00	10.13
10	425.339	3.01	1.36	0.56	0.14	0.05	0.09	5.22
11	452.454	2.96	2.43	0.80	0.18	0.09	0.00	6.45
12	433.434	4.34	3.14	1.25	0.42	0.05	0.00	9.18
13	261.436	2.65	1.89	0.38	0.00	0.00	0.00	4.92
14	401.058	0.49	0.73	0.98	0.00	0.00	0.00	2.20
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	0.12	0.00	0.00	0.00	0.00	0.00	0.12
18	431.814	0.37	0.23	0.05	0.14	0.42	0.23	1.44
19	299.882	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	451.249	1.46	0.62	0.58	0.53	0.18	0.13	3.32
21	454.071	0.92	0.44	0.35	0.04	0.13	0.00	1.89
22	485.64	0.62	0.70	0.74	0.58	0.12	0.08	2.84
23	335.901	0.89	0.36	0.65	0.30	0.18	0.06	2.44
24	528.942	0.19	0.23	0.08	0.11	0.04	0.00	0.64
25	486.853	0.12	0.16	0.16	0.21	0.00	0.00	0.66
26	716.722	0.59	0.42	0.56	0.42	0.22	0.03	2.23
27	394.987	0.15	0.05	0.25	0.30	0.10	0.00	0.86
28	363.428	0.77	0.28	0.28	0.22	0.06	0.06	1.65
29	556.057	0.50	0.57	0.14	0.14	0.00	0.00	1.36
30	518.824	0.39	0.39	0.42	0.35	0.35	0.12	2.00
31	333.068	0.18	0.06	0.12	0.00	0.00	0.00	0.35

32	324.974	0.25	0.06	0.37	0.25	0.12	0.06	1.11
33	401.462	0.80	0.80	0.80	0.45	0.15	0.00	2.99
Total	13822.123	52.04	30.16	18.69	9.79	3.87	1.67	116.51
Mean		1.58	0.91	0.57	0.30	0.12	0.05	3.52
All trees		21795.05	12630.70	7830.14	4102.11	1621.54	698.21	48677.75
Kandhara	**MAI**							
1	409.556	3.61	1.51	0.39	0.10	0.05	0.00	5.66
2	502.342	0.70	0.18	0.00	0.00	0.00	0.00	0.89
3	268.72	1.70	1.26	0.74	0.52	0.07	0.00	4.29
4	507.898	1.26	0.91	0.95	0.87	0.32	0.12	4.41
5	570.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	470.666	0.72	0.68	0.64	0.85	0.04	0.04	2.97
7	514.373	0.29	0.24	0.05	0.05	0.00	0.00	0.73
8	605.431	0.50	0.17	0.00	0.50	0.00	0.50	0.99
9	448.812	1.38	0.58	0.71	0.09	0.04	0.00	2.81
10	411.579	0.73	0.24	0.73	0.49	0.73	0.00	2.91
11	356.54	0.35	0.08	0.00	0.00	0.00	0.00	0.43
12	333.877	0.42	0.90	0.78	0.18	0.12	0.00	2.40
13	360.183	0.56	0.56	0.00	0.00	0.00	0.00	1.11
14	475.909	21.85	17.44	12.61	6.30	2.73	0.00	60.92
15	390.13	3.38	2.15	1.84	1.13	0.72	0.82	10.04
16	553.224	1.81	1.08	0.18	0.00	0.00	0.00	3.07
17	458.524	1.09	1.09	0.00	0.00	0.00	0.00	2.18
18	612.105	0.13	0.03	0.00	0.00	0.00	0.00	0.16
19	583.981	1.85	0.55	1.47	1.03	0.45	0.10	5.45
20	459.739	7.40	3.09	1.70	1.22	0.35	0.00	13.75
21	443.146	0.68	0.00	0.00	0.00	0.00	0.00	0.68
22	318.498	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	346.018	0.00	0.29	0.00	0.00	0.00	0.00	0.29
24	378.799	1.85	0.42	0.00	0.00	0.00	0.00	2.27
25	391.749	0.61	0.31	0.00	0.00	0.00	0.00	0.92
Total	11172.425	52.87	33.76	22.78	13.31	5.62	1.58	129.35
Mean		2.11	1.35	0.91	0.53	0.22	0.06	5.18
All trees		23626.88	15087.62	10182.28	5946.47	2509.34	705.26	57873.16
Anantpur	**MAI**							
1	431.41	3.01	4.17	0.70	0.23	0.00	0.00	8.11
2	293.407	1.70	1.70	1.36	0.00	0.00	0.00	4.77
3	525.705	2.85	1.14	0.57	0.19	0.00	0.00	4.76

4	426.556	3.05	1.17	0.94	0.47	0.00	0.00	5.63
5	376.775	1.27	0.64	0.05	0.05	0.00	0.00	2.02
6	259.412	13.88	8.48	0.77	1.16	0.00	0.00	24.29
7	451.241	3.24	4.48	1.55	0.13	0.00	0.00	9.40
8	448.002	4.78	3.35	1.88	0.13	0.00	0.00	10.13
9	562.937	1.71	1.31	0.64	0.14	0.07	0.00	3.87
10	342.78	2.33	0.00	0.29	0.00	0.00	0.00	2.63
11	480.378	5.12	3.91	1.42	0.04	0.04	0.00	10.53
12	532.585	1.65	1.05	0.15	0.00	0.00	0.00	2.85
13	526.514	2.13	0.80	0.15	0.00	0.00	0.00	3.08
14	431.814	1.44	1.11	0.46	0.09	0.00	0.00	3.10
15	510.731	0.35	0.00	0.04	0.00	0.00	0.00	0.39
16	540.274	0.70	0.33	0.04	0.00	0.00	0.00	1.07
17	356.135	0.62	0.11	0.00	0.00	0.00	0.00	0.73
18	382.036	0.94	0.94	0.05	0.00	0.16	0.10	2.20
19	344.393	0.23	0.00	0.23	0.06	0.23	0.23	0.29
20	418.055	1.96	1.29	0.24	0.00	0.00	0.05	3.54
21	573.055	2.41	1.05	0.28	0.14	0.00	0.00	3.88
22	486.449	1.44	1.32	1.32	0.86	2.92	0.00	7.85
23	449.217	1.56	1.33	0.98	0.40	0.00	0.09	4.36
24	460.953	2.00	2.65	0.69	0.48	0.09	0.00	7.12
25	450.025	1.87	0.58	0.18	0.09	0.00	0.13	2.84
26	619.595	4.58	2.94	1.10	0.10	0.00	0.00	8.07
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	1.23	0.70	0.18	0.06	0.00	0.06	2.23
29	407.128	1.18	0.59	0.59	0.05	0.05	0.15	2.60
30	513.564	1.83	1.13	1.01	1.13	0.93	0.16	6.19
31	605.43	4.29	3.14	0.66	0.00	0.00	0.00	0.53
32	772.977	4.14	1.16	0.91	0.91	0.52	0.00	7.63
33	732.507	2.59	1.23	1.09	1.23	0.00	0.00	6.14
34	467.023	4.50	1.07	0.00	0.43	0.00	0.00	5.57
35	624.856	0.48	0.64	0.96	0.96	0.48	0.00	3.52
36	471.475	2.55	1.48	1.27	0.64	0.42	0.00	6.36
37	578.316	1.04	1.91	1.56	0.35	0.00	0.00	4.86
38	456.906	12.39	5.43	0.87	0.00	0.00	0.00	18.70
39	280.861	1.72	1.03	1.03	0.00	0.00	0.00	3.79
40	506.279	0.20	0.20	0.00	0.00	0.40	0.00	0.79
Total	18816.098	104.97	65.59	26.21	10.51	6.31	0.97	206.43
Mean		2.62	1.64	0.66	0.26	0.16	0.02	5.34

All trees		49376.90	30852.96	12328.71	4944.44	2967.64	455.84	100477.96
TOTAL	**43810.65**	**209.87**	**129.50**	**67.69**	**33.61**	**15.80**	**4.21**	**452.30**
MEAN		**2.14**	**1.32**	**0.69**	**0.34**	**0.16**	**0.04**	**4.62**
STDEV		**3.098443**	**2.14194**	**1.32665512**	**0.700590611**	**0.4290041**	**0.1092814**	**7.05561344**
All Block(Tree)		**93822.40**	**57894.79**	**30259.54**	**15025.67**	**7061.17**	**1883.92**	**202198.51**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**MISC.**							
1	384.869	24.79	9.67	5.77	2.29	1.30	0.62	44.69
2	220.156	13.45	9.18	7.18	4.54	2.91	2.45	39.70
3	433.029	26.00	8.82	5.59	2.49	1.76	3.19	47.85
4	500.613	12.42	6.23	4.51	2.08	0.68	0.96	26.88
5	539.465	21.91	10.97	8.49	4.56	2.48	3.04	51.46
6	352.898	9.94	3.71	2.08	0.85	0.44	0.52	17.54
7	425.744	42.67	17.53	8.04	2.91	0.47	2.35	73.97
8	320.927	71.20	23.25	9.16	6.61	0.94	1.31	112.47
9	245.248	15.36	3.76	1.39	2.53	0.33	1.80	25.16
10	425.339	19.22	7.24	3.71	1.22	0.42	1.08	32.89
11	452.454	11.09	3.89	2.83	0.97	0.27	0.35	19.39
12	433.434	32.56	9.73	5.26	2.77	1.11	0.78	52.21
13	261.436	22.35	6.82	6.44	3.03	0.38	0.00	39.02
14	401.058	16.59	6.34	5.61	1.71	1.71	2.20	34.15
15	390.13	54.86	3.59	3.33	1.79	1.03	2.05	66.65
16	513.159	15.98	3.51	3.31	0.78	0.00	0.97	24.75
17	438.29	19.39	7.76	5.34	1.10	0.14	1.41	35.14
18	431.814	38.49	16.12	7.50	2.45	1.02	3.66	69.25
19	299.882	18.35	5.67	5.00	1.00	0.33	1.33	31.69
20	451.249	33.46	14.01	9.04	3.94	3.50	3.50	67.46
21	454.071	76.45	18.93	8.36	3.83	2.16	0.57	110.30
22	485.64	30.23	11.98	8.03	2.72	2.55	5.19	60.70
23	335.901	18.46	9.88	6.55	1.19	1.37	0.60	38.05
24	528.942	27.04	11.93	5.74	2.79	1.13	0.79	49.43
25	486.853	38.20	19.55	16.02	12.57	11.63	13.39	111.37
26	716.722	35.16	13.90	10.35	7.39	4.49	4.69	75.99

27	394.987	34.63	20.20	18.23	14.73	10.73	5.67	104.21
28	363.428	34.18	15.57	13.32	11.39	7.15	3.63	85.25
29	556.057	18.35	8.30	3.77	1.29	0.79	1.01	33.51
30	518.824	33.92	11.83	10.37	6.48	5.82	2.31	70.74
31	333.068	20.90	10.21	7.87	4.08	3.36	2.46	48.88
32	324.974	39.69	8.06	11.75	6.65	4.18	1.72	72.13
33	401.462	32.92	14.59	4.88	2.39	0.50	0.50	55.78
Total	13822.123	960.21	352.73	234.83	127.15	77.07	76.12	1828.63
Mean		29.10	10.69	7.12	3.85	2.34	2.31	55.41
All trees		402184.52	147742.00	98358.37	53256.90	32282.99	31883.12	765924.14
Kandhara	**MISC.**							
1	409.556	78.27	23.54	8.89	2.83	0.78	0.24	114.55
2	502.342	36.14	10.29	5.20	1.25	0.33	1.00	54.21
3	268.72	50.74	28.11	11.69	4.81	1.48	0.59	97.41
4	507.898	54.07	25.79	11.66	5.20	2.21	7.05	105.97
5	570.626	37.83	11.03	9.46	1.40	1.40	0.35	61.47
6	470.666	47.47	20.35	12.07	4.50	1.83	1.78	88.00
7	514.373	59.38	16.11	4.20	1.37	0.29	1.07	82.42
8	605.431	29.87	12.54	6.11	0.83	1.16	0.83	51.32
9	448.812	64.57	17.16	7.17	2.18	0.85	0.62	92.56
10	411.579	28.64	16.02	5.10	1.46	2.91	0.49	54.61
11	356.54	27.49	5.09	2.06	1.28	0.58	0.62	37.13
12	333.877	58.41	25.00	10.28	3.43	1.26	0.30	98.68
13	360.183	33.06	17.22	7.22	3.33	0.28	0.00	1.67
14	475.909	0.00		0.00	0.00	0.00	0.00	0.00
15	390.13	48.72	21.62	11.37	3.94	2.36	5.02	93.03
16	553.224	26.94	19.17	7.96	1.08	0.36	1.63	57.14
17	458.524	30.13	17.90	8.52	1.09	0.66	0.00	58.30
18	612.105	25.81	9.67	3.72	1.37	0.16	0.20	40.93
19	583.981	50.87	20.86	11.13	4.21	2.43	5.31	94.83
20	459.739	50.78	21.50	11.88	3.70	3.22	5.40	52.96
21	443.146	14.67	0.68	0.00	0.00	0.00	0.23	15.58
22	318.498	20.38	0.94	0.31	0.00	0.00	0.00	21.63
23	346.018	11.56	11.27	1.16	0.00	0.29	0.00	24.28
24	378.799	26.11	8.14	3.57	1.81	0.77	0.27	40.68
25	391.749	19.10	5.16	1.79	0.92	0.77	0.46	28.19
Total	11172.425	931.01	365.16	162.50	52.01	26.37	33.46	1467.56
Mean		37.24	14.61	6.50	2.08	1.05	1.34	62.80

All trees		416066.18	163190.50	72622.49	23243.44	11784.80	14951.82	701628.29
Anantpur	**MISC.**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	9.88	4.43	0.68	1.02	0.00	0.00	15.68
3	525.705	11.60	8.75	2.09	0.19	0.76	0.57	23.97
4	426.556	4.92	0.94	0.94	0.23	0.00	0.00	7.03
5	376.775	22.24	14.60	3.56	1.80	0.69	0.69	43.58
6	259.412	10.02	3.08	2.70	1.93	0.39	0.00	18.12
7	451.241	42.46	26.95	12.01	5.85	1.37	2.17	90.82
8	448.002	23.08	11.07	2.81	0.00	0.00	0.00	36.96
9	562.937	45.31	20.54	8.32	2.98	0.82	0.99	78.96
10	342.78	32.68	3.21	4.38	1.75	0.00	0.00	42.02
11	480.378	40.34	19.57	5.33	1.79	0.29	0.96	68.28
12	532.585	39.81	13.67	3.38	0.60	0.15	0.08	57.69
13	526.514	12.73	10.26	4.25	2.92	0.84	2.24	33.20
14	431.814	23.11	15.38	7.27	4.82	3.38	5.84	59.80
15	510.731	73.62	26.82	7.05	1.92	0.63	1.49	111.53
16	540.274	31.95	18.99	7.96	8.29	0.93	0.00	68.12
17	356.135	16.34	13.03	6.12	5.84	3.26	1.29	49.25
18	382.036	19.48	14.66	4.14	2.46	2.20	2.98	48.90
19	344.393	11.32	2.56	0.93	0.52	0.12	0.35	15.80
20	418.055	20.76	11.39	6.41	3.59	2.58	3.25	49.42
21	573.055	17.63	7.16	2.16	0.66	0.38	0.07	28.07
22	486.449	18.21	9.83	1.81	2.96	2.43	6.00	49.75
23	449.217	30.38	13.39	5.92	1.29	0.49	0.13	51.60
24	460.953	42.44	20.13	10.59	4.73	3.47	5.12	86.48
25	450.025	75.11	26.18	12.22	2.89	0.89	1.64	118.93
26	619.595	29.34	9.78	2.84	0.52	0.10	0.03	42.61
27	377.585	14.32	6.37	3.18	1.33	0.53	0.27	25.99
28	340.757	32.40	11.50	3.29	1.23	1.41	0.53	50.36
29	407.128	26.73	6.49	3.05	0.54	0.20	0.69	37.69
30	513.564	40.27	16.75	9.74	4.98	3.00	10.59	85.33
31	605.43	58.47	39.31	5.29	0.33	0.00	0.00	103.40
32	772.977	20.83	5.56	2.33	1.55	1.94	1.03	33.25
33	732.507	45.02	14.73	9.00	2.73	2.05	6.55	80.08
34	467.023	30.19	21.41	7.28	1.71	0.00	0.00	60.60
35	624.856	32.81	16.01	7.36	6.56	4.64	5.12	72.50
36	471.475	41.37	15.49	9.97	1.48	0.21	0.00	68.52

37	578.316	22.22	9.72	3.65	0.69	0.35	0.00	36.63
38	456.906	53.48	15.43	4.57	1.52	0.00	0.22	75.22
39	280.861	30.69	12.41	6.21	2.07	0.69	1.38	53.45
40	506.279	16.99	3.95	1.58	0.79	23.31	0.00	46.61
Total	18816.098	1170.59	521.49	202.35	89.10	64.47	62.28	2126.21
Mean		29.26	13.04	5.06	2.23	1.61	1.56	52.76
All trees		550647.89	245312.33	95184.94	41913.96	30326.22	29297.67	992683.03
TOTAL	**43810.65**	**3061.81**	**1239.39**	**599.68**	**268.26**	**167.91**	**171.86**	**5422.39**
MEAN		**31.24**	**12.65**	**6.12**	**2.74**	**1.71**	**1.75**	**55.33**
STDEV		**17.133323**	**7.3191246**	**3.72901842**	**2.600250445**	**2.9510332**	**2.3396243**	**28.844558**
All Block(Tree)		**1368772.68**	**554065.54**	**268085.43**	**119926.15**	**75065.45**	**76829.26**	**2424064.60**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**PIASAL**							
1	384.869	0.26	0.21	0.05	0.00	0.00	0.00	0.52
2	220.156	0.00	0.55	0.00	0.00	0.00	0.00	0.55
3	433.029	1.52	0.97	0.65	0.83	1.62	2.26	7.85
4	500.613	0.24	0.08	0.00	0.00	0.00	0.00	0.52
5	539.465	0.67	0.26	0.11	0.04	0.00	0.00	1.08
6	352.898	0.07	0.19	0.00	0.04	0.04	0.04	0.33
7	425.744	4.56	1.55	0.52	0.05	0.00	0.00	6.67
8	320.927	3.05	0.87	0.19	0.00	0.06	0.00	4.18
9	245.248	3.68	0.16	0.08	0.00	0.00	0.00	3.92
10	425.339	0.94	0.99	0.66	0.00	0.00	0.00	2.58
11	452.454	3.05	3.75	2.34	0.31	0.00	0.09	9.54
12	433.434	2.21	1.52	0.83	0.05	0.05	0.00	4.66
13	261.436	2.27	3.41	1.14	0.00	0.00	0.00	6.82
14	401.058	1.95	0.00	0.00	0.00	0.00	0.00	1.95
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	2.53	0.97	0.39	0.00	0.00	0.00	3.90
17	438.29	2.69	0.78	0.05	0.09	0.00	0.05	3.65
18	431.814	1.30	0.00	0.00	0.00	0.00	0.00	1.53
19	299.882	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	451.249	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	454.071	0.48	0.48	0.48	0.48	0.48	0.48	0.48

22	485.64	0.70	0.12	0.12	0.16	0.00	0.00	1.11
23	335.901	0.06	0.30	0.00	0.00	0.00	0.00	0.36
24	528.942	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	486.853	0.33	0.08	0.00	0.00	0.00	0.00	0.41
26	716.722	0.59	0.33	0.03	0.00	0.00	0.00	0.95
27	394.987	0.25	0.10	0.00	0.00	0.00	0.00	0.35
28	363.428	0.33	0.11	0.00	0.00	0.00	0.00	0.44
29	556.057	0.65	0.22	0.04	0.00	0.00	0.00	0.90
30	518.824	0.81	0.39	0.15	0.00	0.00	0.00	1.35
31	333.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	324.974	0.31	0.12	0.25	0.06	0.00	0.00	0.74
33	401.462	0.45	0.10	0.00	0.00	0.00	0.00	0.55
Total	13822.123	35.96	18.61	8.07	2.11	2.25	2.92	67.89
Mean		1.09	0.56	0.24	0.06	0.07	0.09	2.11
All trees		15060.58	7796.84	3379.42	883.57	942.59	1222.37	29164.68
Kandhara	**PIASAL**							
1	409.556	0.29	0.05	0.05	0.00	0.00	0.00	0.39
2	502.342	0.00	0.04	0.00	0.00	0.00	0.00	0.04
3	268.72	1.48	0.67	0.00	0.00	0.00	0.00	2.14
4	507.898	0.95	0.47	0.16	0.08	0.00	8.03	1.58
5	570.626	0.18	0.00	0.00	0.00	0.00	0.00	0.18
6	470.666	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	514.373	0.00	0.15	0.00	0.00	0.00	0.00	0.15
8	605.431	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	448.812	0.04	0.04	0.00	0.00	0.00	0.00	0.09
10	411.579	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	356.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	333.877	0.12	0.06	0.12	0.06	0.00	0.00	0.36
13	360.183	1.39	0.28	0.00	0.00	0.00	0.00	1.67
14	475.909	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	0.20	0.26	0.00	0.00	0.00	0.00	0.46
16	553.224	0.18	0.00	0.00	0.00	0.00	0.00	0.18
17	458.524	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	612.105	0.16	0.20	0.00	0.00	0.00	0.00	0.36
19	583.981	0.17	0.14	0.00	0.00	0.00	0.00	0.31

20	459.739	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	443.146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	318.498	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	346.018	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	378.799	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	391.749	0.20	0.10	0.00	0.00	0.00	0.00	0.31
Total	11172.425	5.37	2.44	0.33	0.14	0.00	8.03	8.20
Mean		0.21	0.10	0.01	0.01	0.00	0.32	0.65
All trees		2400.20	1092.31	145.93	62.05	0.00	3590.10	7290.59
Anantpur	**PIASAL**							
1	431.41	5.80	10.43	3.25	0.70	0.23	0.00	20.40
2	293.407	2.39	2.73	0.00	0.00	0.00	0.00	5.11
3	525.705	17.31	7.61	2.47	0.38	0.00	0.00	27.77
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.21	0.00	0.00	0.00	0.00	0.00	0.21
6	259.412	5.78	3.47	1.16	0.39	0.00	0.00	10.79
7	451.241	0.49	0.44	0.09	0.00	0.00	0.00	1.02
8	448.002	0.04	0.04	0.00	0.00	0.00	0.00	0.09
9	562.937	0.25	0.11	0.00	0.00	0.00	0.00	3.91
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.50	0.21	0.00	0.00	0.00	0.00	0.71
12	532.585	0.19	0.00	0.00	0.00	0.00	0.00	0.19
13	526.514	0.42	0.11	0.00	0.00	0.00	0.00	0.53
14	431.814	0.83	0.32	0.09	0.00	0.00	0.00	1.25
15	510.731	0.12	0.04	0.04	0.00	0.00	0.00	0.16
16	540.274	0.15	0.07	0.00	0.00	0.00	0.00	0.22
17	356.135	0.00	0.22	0.11	0.11	0.11	0.06	0.62
18	382.036	0.00	0.10	0.00	0.00	0.00	0.00	0.10
19	344.393	0.23	0.17	0.00	0.00	0.00	0.00	0.41
20	418.055	0.33	0.00	0.14	0.00	0.00	0.00	0.48
21	573.055	0.03	0.07	0.03	0.00	0.00	0.00	0.14
22	486.449	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	449.217	0.40	0.00	0.09	0.00	0.00	0.00	0.49
24	460.953	0.13	0.09	0.09	0.00	0.00	0.00	0.30
25	450.025	0.40	0.09	0.00	0.00	0.00	0.00	0.49
26	619.595	0.36	0.10	0.00	0.00	0.00	0.00	0.45
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.94	0.59	0.06	0.00	0.00	0.00	1.58
29	407.128	0.00	0.10	0.00	0.00	0.00	0.00	0.10

30	513.564	0.70	0.35	0.00	0.04	0.00	0.00	1.09
31	605.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	772.977	0.95	0.55	0.40	0.00	0.00	0.00	1.64
33	732.507	0.14	0.14	0.00	0.00	0.41	0.00	0.68
34	467.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	3.13	0.52	0.00	0.00	0.00	0.00	3.65
38	456.906	0.87	0.00	0.00	0.00	0.00	0.00	0.87
39	280.861	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	506.279	1.19	0.59	0.40	0.00	2.17	0.00	4.35
Total	18816.098	44.27	29.27	8.42	1.61	2.93	0.06	89.80
Mean		1.11	0.73	0.21	0.04	0.07	0.00	2.16
All trees		20824.94	13767.49	3960.44	758.58	1376.41	26.42	40714.28
TOTAL	**43810.65**	**85.60**	**50.33**	**16.81**	**3.86**	**5.18**	**11.01**	**165.89**
MEAN		**0.87**	**0.51**	**0.17**	**0.04**	**0.05**	**0.11**	**1.69**
STDEV		**2.0507696**	**1.4323128**	**0.50418419**	**0.133017983**	**0.2787267**	**0.8413889**	**3.89071562**
All Block(Tree)		**38266.40**	**22498.31**	**7516.69**	**1726.05**	**2314.12**	**4921.07**	**74159.78**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	Arae(ha)	30-59cm	60-89 cm	90-119cm	120-149cm	150-179cm	180+ cm	TOTAL
Ranjagarh	SAL							
1	384.869	36.64	9.35	5.14	4.16	1.04	0.10	56.44
2	220.156	21.53	15.08	13.26	5.81	4.54	2.82	62.14
3	433.029	18.61	8.68	11.69	14.55	13.72	24.76	92.00
4	500.613	23.08	7.95	11.02	9.54	2.68	1.48	56.15
5	539.465	15.94	7.12	6.82	6.01	3.41	5.34	44.64
6	352.898	5.26	1.11	0.44	0.59	1.11	1.37	9.90
7	425.744	27.82	6.06	5.55	3.57	2.91	2.30	48.21
8	320.927	22.32	13.59	14.03	7.48	2.93	1.25	61.60
9	245.248	42.40	11.36	13.48	20.67	7.68	8.74	104.25
10	425.339	107.85	39.29	25.80	13.44	5.69	3.52	195.58
11	452.454	52.87	15.50	6.63	3.67	2.21	1.33	82.20
12	433.434	56.78	24.12	13.10	6.83	3.14	1.11	105.07
13	261.436	91.67	30.30	13.26	10.61	3.41	1.14	150.38
14	401.058	25.61	12.44	0.98	0.49	1.22	0.24	40.98
15	390.13	14.87	4.87	1.03	0.51	1.28	2.05	24.61
16	513.159	19.49	15.98	8.77	3.51	4.87	4.48	51.26
17	438.29	47.46	12.96	5.84	1.64	0.23	1.19	69.31
18	431.814	9.73	4.96	2.87	1.16	0.32	0.37	19.41
19	299.882	6.34	2.00	0.33	0.33	0.00	0.67	9.67
20	451.249	35.46	21.67	20.21	9.04	4.30	7.49	98.17
21	454.071	50.88	22.49	8.36	4.93	2.51	0.44	89.61
22	485.64	14.78	9.31	9.80	7.58	9.02	6.05	56.54
23	335.901	20.07	9.88	8.69	3.93	2.98	2.08	47.63
24	528.942	13.10	7.33	4.87	5.93	3.32	0.53	35.08
25	486.853	73.66	34.75	36.23	19.31	13.64	13.06	186.54
26	716.722	48.19	20.18	15.52	13.03	7.53	7.65	112.09
27	394.987	52.81	28.76	24.91	19.29	14.28	11.14	151.20
28	363.428	51.40	23.39	28.67	18.00	8.14	9.47	139.07
29	556.057	32.15	50.61	36.24	27.19	6.93	1.90	144.25
30	518.824	16.38	11.68	8.48	6.01	4.93	2.31	49.81
31	333.068	6.06	5.34	10.21	8.05	9.31	4.74	43.72
32	324.974	7.02	6.28	13.42	11.94	11.88	8.86	59.39
33	401.462	7.92	8.91	12.80	12.85	6.42	3.54	52.44
Total	13822.123	1076.15	503.32	398.45	281.64	167.59	143.52	2549.35
Mean		32.61	15.03	12.07	8.53	5.08	4.35	77.67
All trees		450747.46	207746.51	166893.241	117966.5417	70194.785	60113.91	1073564.29

Kandhara	SAL							
1	409.556	3.52	0.88	0.20	0.00	0.00	0.00	4.59
2	502.342	9.48	2.69	0.30	0.04	0.00	0.00	12.50
3	268.72	18.57	8.28	2.22	0.30	0.00	0.00	30.10
4	507.898	33.12	14.73	7.25	3.82	1.30	1.65	61.87
5	570.626	20.14	11.38	2.98	0.35	0.18	0.00	35.03
6	470.666	14.53	7.86	2.93	1.32	0.51	0.13	27.28
7	514.373	7.47	3.81	0.78	0.10	0.05	0.00	12.21
8	605.431	18.65	6.11	1.82	0.33	0.33	0.17	27.39
9	448.812	2.41	0.85	0.18	0.00	0.04	0.00	3.48
10	411.579	4.13	11.65	0.49	0.73	0.00	0.00	16.99
11	356.54	32.66	11.90	3.15	0.47	0.23	0.23	48.64
12	333.877	4.51	2.28	0.60	0.12	0.06	0.00	7.57
13	360.183	0.28	0.56	0.00	0.00	0.00	0.00	0.83
14	475.909	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	13.68	6.61	1.49	0.10	0.10	0.00	21.98
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	27.51	15.07	4.80	0.87	0.00	0.00	48.25
18	612.105	16.50	7.64	3.14	0.98	0.07	0.07	28.39
19	583.981	8.46	4.08	2.23	0.89	0.34	0.86	16.86
20	459.739	4.22	1.96	0.83	0.30	0.04	0.00	7.35
21	443.146	16.03	2.26	0.23	0.00	0.00	0.00	18.51
22	318.498	17.24	0.63	0.00	0.00	0.00	0.00	17.87
23	346.018	35.55	12.43	2.02	0.00	0.29	0.00	50.29
24	378.799	9.88	5.34	0.79	0.05	0.00	0.00	16.06
25	391.749	4.95	4.14	0.66	0.36	0.05	0.05	10.21
Total	11172.425	323.47	143.11	39.06	11.12	3.60	3.15	524.25
Mean		12.94	5.72	1.56	0.44	0.14	0.13	20.93
All trees		144556.13	63957.47	17455.42	4971.41	1606.76	1408.89	233838.86
Anantpur	SAL							
1	431.41	430.00	213.03	7.65	3.48	0.70	0.23	655.08
2	293.407	143.83	78.73	21.47	2.04	0.68	0.00	246.76
3	525.705	155.98	67.72	12.94	3.99	2.85	0.57	244.06
4	426.556	93.53	57.67	7.74	2.11	0.23	0.00	161.28
5	376.775	32.12	20.33	11.25	3.82	0.58	0.42	68.53
6	259.412	94.06	28.91	11.95	7.71	3.47	0.00	146.11
7	451.241	13.30	16.45	13.92	5.50	1.33	0.80	51.29
8	448.002	18.39	8.71	3.35	2.01	0.36	1.12	33.93

9	562.937	52.27	21.32	9.63	3.41	0.85	0.57	88.41
10	342.78	44.65	12.84	7.30	2.63	0.88	0.29	68.57
11	480.378	52.50	20.61	3.54	2.08	0.29	0.58	79.61
12	532.585	62.16	21.75	8.34	2.07	0.19	0.45	94.95
13	526.514	21.65	17.09	12.88	5.13	1.41	2.05	60.21
14	431.814	18.99	15.79	9.40	5.09	2.92	4.54	56.74
15	510.731	102.48	39.94	13.31	2.15	0.74	0.82	159.46
16	540.274	33.13	36.06	31.17	5.26	4.15	82.11	105.99
17	356.135	29.77	11.46	27.29	19.99	11.12	5.28	104.91
18	382.036	19.06	8.85	10.47	4.92	3.04	2.93	47.17
19	344.393	18.00	10.05	7.61	4.30	1.22	3.02	44.20
20	418.055	24.54	13.11	6.79	3.78	2.39	1.96	52.58
21	573.055	21.05	21.05	16.62	6.32	2.13	0.28	67.46
22	486.449	30.06	13.07	7.52	5.22	3.82	4.65	64.35
23	449.217	40.30	21.93	12.54	2.94	0.44	0.09	78.25
24	460.953	25.38	15.53	8.50	3.21	2.99	3.08	58.71
25	450.025	73.42	51.20	34.35	5.33	1.02	2.22	167.55
26	619.595	52.10	28.83	9.88	2.16	0.55	0.61	94.13
27	377.585	15.92	4.77	3.45	2.65	0.80	0.00	27.59
28	340.757	68.73	30.58	10.51	0.94	0.65	0.76	114.87
29	407.128	43.00	10.52	2.70	0.49	0.39	0.20	57.30
30	513.564	43.85	24.15	17.72	11.61	4.32	7.28	106.59
31	605.43	53.52	8.42	5.62	0.00	0.00	0.00	67.56
32	772.977	68.82	22.51	8.15	3.62	1.16	2.07	106.34
33	732.507	29.74	10.50	4.77	4.37	3.14	4.23	56.75
34	467.023	24.63	16.92	7.28	0.00	0.00	0.00	50.96
35	624.856	36.01	18.25	9.44	9.60	4.80	8.32	86.43
36	471.475	124.73	47.31	17.82	2.12	0.85	0.85	193.68
37	578.316	31.42	14.76	3.82	0.69	0.00	0.00	50.69
38	456.906	92.83	48.48	2.61	0.65	0.00	0.00	144.57
39	280.861	4.83	1.72	0.34	0.00	0.00	0.00	6.90
40	506.279	106.06	22.52	3.16	0.99	132.73	0.00	265.46
Total	18816.098	2446.82	1153.42	424.82	154.39	199.19	142.39	4435.92
Mean		61.17	28.84	10.62	3.86	4.98	3.56	113.03
All trees		1150991.27	542571.96	199834.72	72627.10	93701.80	66981.42	2126708.27
TOTAL	**43810.65**	**3846.44**	**1799.85**	**862.33**	**447.16**	**370.38**	**289.06**	**7509.52**
MEAN		**39.25**	**18.37**	**8.80**	**4.56**	**3.78**	**2.95**	**76.63**

STDEV		**51.09653**	**24.813411**	**8.40496412**	**5.508237198**	**13.572701**	**8.849231**	**82.0964**
All Block(Tree)		**1719540.10**	**804619.12**	**385502.12**	**199901.82**	**165576.88**	**129225.72**	**3357112.59**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**SISOO**							
1	384.869	0.26	0.31	0.10	0.00	0.00	0.00	0.68
2	220.156	0.18	0.00	0.27	0.00	0.00	0.00	0.45
3	433.029	2.31	1.20	0.14	0.09	0.00	0.00	3.74
4	500.613	0.24	0.16	0.00	0.00	0.00	0.00	0.40
5	539.465	0.37	0.22	0.04	0.00	0.00	0.00	0.63
6	352.898	0.00	0.00	0.04	0.00	0.00	0.00	0.04
7	425.744	0.09	0.00	0.00	0.00	0.00	0.00	0.09
8	320.927	0.44	0.06	0.06	0.00	0.00	0.00	0.56
9	245.248	0.82	0.16	0.00	0.00	0.00	0.08	1.06
10	425.339	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	452.454	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	433.434	0.28	0.18	0.05	0.00	0.00	0.00	0.51
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	0.24	0.00	0.00	0.00	0.00	0.00	0.24
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	0.37	0.05	0.00	0.09	0.00	0.00	0.50
18	431.814	2.04	0.19	0.05	0.00	0.00	0.00	2.27
19	299.882	2.00	0.00	0.00	0.00	0.00	0.00	2.00
20	451.249	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	454.071	0.57	0.09	0.00	0.00	0.00	0.00	0.66
22	485.64	0.91	0.37	0.04	0.00	0.00	0.00	1.32
23	335.901	0.30	0.12	0.12	0.00	0.00	0.00	0.54
24	528.942	0.42	0.11	0.04	0.00	0.00	0.00	0.57
25	486.853	0.82	0.33	0.08	0.00	0.04	0.04	1.27
26	716.722	0.53	0.50	0.20	0.00	0.00	0.00	1.23
27	394.987	0.41	0.00	0.05	0.15	0.15	0.00	0.76
28	363.428	0.83	0.39	0.00	0.00	0.00	0.00	1.21
29	556.057	0.26	0.18	0.00	0.00	0.00	0.00	0.44
30	518.824	0.31	0.23	0.08	0.00	0.00	0.00	0.62
31	333.068	0.36	0.12	0.24	0.00	0.00	0.06	0.78
32	324.974	0.80	0.12	0.18	0.00	0.00	0.00	1.11

33	401.462	1.00	0.25	0.05	0.05	0.00	0.00	1.34
Total	13822.123	17.14	5.34	1.82	0.39	0.19	0.18	25.02
Mean		0.43	0.13	0.05	0.01	0.00	0.00	0.62
All trees		5921.46	1846.20	629.55	133.16	66.69	63.18	8569.72
Kandhara	**SISOO**							
1	409.556	0.78	0.15	0.00	0.00	0.00	0.00	0.93
2	502.342	0.04	0.00	0.00	0.00	0.00	0.00	0.04
3	268.72	0.30	0.00	0.00	0.00	0.00	0.00	0.30
4	507.898	0.87	0.43	0.00	0.00	0.00	0.00	1.30
5	570.626	0.18	0.35	0.35	0.00	0.00	0.00	0.88
6	470.666	0.08	0.00	0.00	0.00	0.00	0.00	0.08
7	514.373	0.24	0.10	0.05	0.00	0.00	0.00	0.39
8	605.431	0.66	0.33	0.00	0.00	0.00	0.00	0.99
9	448.812	0.45	0.18	0.27	0.09	0.00	0.00	0.98
10	411.579	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	356.54	0.08	0.00	0.00	0.00	0.00	0.00	0.08
12	333.877	0.30	0.12	0.00	0.00	0.00	0.00	0.42
13	360.183	0.56	0.00	0.00	0.00	0.00	0.00	0.56
14	475.909	1.05	1.26	0.00	0.00	0.00	0.00	2.31
15	390.13	0.77	0.20	0.00	0.00	0.00	0.00	0.97
16	553.224	0.18	0.18	0.00	0.00	0.00	0.00	0.36
17	458.524	1.09	1.75	0.44	0.00	0.00	0.00	3.28
18	612.105	0.03	0.03	0.00	0.00	0.00	0.00	0.07

	583.981	1.51	0.92	0.07	0.00	0.00	0.00	2.50
20	459.739	0.96	0.74	0.00	0.00	0.00	0.00	1.70
21	443.146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	318.498	4.70	0.00	0.00	0.00	0.00	0.00	4.70
23	346.018	0.00	0.29	0.00	0.00	0.00	0.00	0.29
24	378.799	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	391.749	0.10	0.05	0.00	0.00	0.00	0.00	0.15
Total	11172.425	14.92	7.09	1.17	0.09	0.00	0.00	23.27
Mean		0.60	0.28	0.05	0.00	0.00	0.00	0.93
All trees		6666.82	3167.10	523.83	39.90	0.00	0.00	10397.64
Anantpur	**SISOO**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	525.705	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5	376.775	0.16	0.00	0.00	0.00	0.00	0.00	0.16
6	259.412	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	451.241	1.91	0.75	0.09	0.00	0.00	0.00	2.75
8	448.002	0.18	0.04	0.09	0.00	0.00	0.00	0.31
9	562.937	0.25	0.04	0.00	0.00	0.00	0.00	0.28
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.29	0.17	0.00	0.00	0.00	0.00	0.46
12	532.585	1.09	0.00	0.00	0.00	0.00	0.00	1.09
13	526.514	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	431.814	0.56	0.37	0.09	0.00	0.00	0.00	1.02
15	510.731	2.23	0.39	0.00	0.00	0.00	0.00	2.62
16	540.274	0.04	0.00	0.00	0.00	0.00	0.37	0.04
17	356.135	0.06	0.00	0.00	0.00	0.00	0.00	0.06
18	382.036	0.21	0.05	0.05	0.00	0.00	0.00	0.31
19	344.393	0.06	0.00	0.00	0.00	0.00	0.00	0.06
20	418.055	0.34	0.00	0.00	0.00	0.00	0.00	0.34
21	573.055	0.10	0.00	0.00	0.00	0.00	0.00	0.10
22	486.449	0.12	0.04	0.00	0.00	0.00	0.00	0.16
23	449.217	0.40	0.27	0.00	0.00	0.00	0.00	0.67
24	460.953	0.56	0.43	0.26	0.13	0.04	0.00	1.43
25	450.025	1.38	0.36	0.04	0.00	0.00	0.00	1.78
26	619.595	0.16	0.03	0.00	0.00	0.00	0.16	0.19
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	407.128	0.00	0.00	0.00	0.00	0.00	0.05	0.05
30	513.564	0.70	0.27	0.04	0.00	0.00	0.00	1.01
31	605.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	772.977	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	732.507	3.55	0.27	0.00	0.00	0.68	0.00	4.50
34	467.023	0.86	0.43	0.00	0.00	0.00	0.00	1.28
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.17	0.35	0.00	0.00	0.00	0.00	0.52
38	456.906	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	280.861	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.098	15.38	4.27	0.67	0.13	0.73	0.58	21.21
Mean		0.38	0.11	0.02	0.00	0.02	0.01	0.54
All trees		7233.07	2006.48	313.60	61.23	341.29	273.18	10228.84

TOTAL	**43810.65**	**47.43**	**16.70**	**3.66**	**0.60**	**0.92**	**0.76**	**69.50**
MEAN		**0.48**	**0.17**	**0.04**	**0.01**	**0.01**	**0.01**	**0.71**
STDEV		**0.7507594**	**0.2900933**	**0.08084964**	**0.025606221**	**0.0705893**	**0.0420512**	**0.96339723**
All Block(Tree)		**21203.70**	**7463.48**	**1636.49**	**270.37**	**410.61**	**341.35**	**31069.99**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**SIDHA**							
1	384.869	2.13	0.83	0.52	0.10	0.00	0.00	3.59
2	220.156	0.36	0.00	0.18	0.45	0.09	0.00	1.09
3	433.029	1.66	0.46	0.18	0.09	0.00	0.00	2.40
4	500.613	1.56	0.36	0.24	0.12	0.08	0.08	2.44
5	539.465	1.45	0.41	0.56	0.33	0.19	0.11	82.00
6	352.898	1.78	1.15	0.26	0.19	0.22	0.04	3.63
7	425.744	4.61	1.03	0.66	0.09	0.00	0.09	6.48
8	320.927	5.55	1.00	1.18	0.12	0.19	0.00	8.04
9	245.248	8.17	1.06	0.16	0.00	0.00	0.00	9.40
10	425.339	1.93	0.52	0.52	0.05	0.00	0.00	3.01
11	452.454	1.86	0.44	0.00	0.04	0.00	0.00	2.34
12	433.434	6.27	1.52	0.55	0.05	0.05	0.00	8.44
13	261.436	2.65	1.52	0.38	0.00	0.00	0.00	4.55
14	401.058	0.98	0.73	0.24	0.00	0.00	0.00	1.95
15	390.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	0.14	0.23	0.09	0.05	0.00	0.00	0.50
18	431.814	1.48	0.83	0.42	0.23	0.05	0.23	3.24
19	299.882	1.00	0.00	0.00	0.00	0.00	0.00	1.00
20	451.249	3.81	1.29	0.75	1.11	0.31	0.09	7.31
21	454.071	3.04	1.23	0.70	0.26	0.22	0.00	5.46
22	485.64	2.47	0.91	0.49	0.29	0.25	0.04	4.45
23	335.901	1.13	0.24	0.24	0.12	0.00	0.00	1.73
24	528.942	2.91	0.94	0.87	0.34	0.19	0.00	5.25
25	486.853	1.93	1.23	0.49	0.25	0.21	0.04	4.15
26	716.722	2.04	0.87	0.84	0.33	0.28	0.11	4.46
27	394.987	1.42	0.56	0.20	0.20	0.00	0.00	2.38

28	363.428	2.59	1.49	0.44	0.83	0.22	0.00	5.56
29	556.057	0.86	0.50	0.07	0.00	0.00	0.00	1.44
30	518.824	1.16	0.81	0.62	0.66	0.23	0.00	3.43
31	333.068	1.68	0.90	1.56	0.24	0.24	0.06	4.68
32	324.974	0.86	0.18	0.86	0.49	0.25	0.06	2.71
33	401.462	0.85	0.45	0.20	0.15	0.00	0.00	1.64
Total	13822.123	70.30	23.69	14.49	7.19	3.25	0.96	198.75
Mean		2.13	0.72	0.44	0.22	0.10	0.03	3.64
All trees		29447.14	9920.57	6069.45	3010.97	1359.80	401.20	50312.53
Kandhara	**SIDHA**							
1	409.556	0.34	0.05	0.00	0.00	0.00	0.00	0.39
2	502.342	0.59	0.11	0.04	0.00	0.00	0.00	0.74
3	268.72	2.88	1.70	0.67	0.00	0.00	0.00	5.25
4	507.898	3.66	2.56	1.61	0.43	0.24	0.00	8.51
5	570.626	0.35	0.18	0.00	0.00	0.00	0.00	0.53
6	470.666	4.50	2.04	1.40	0.55	0.00	0.00	8.50
7	514.373	1.03	0.59	0.20	0.00	0.00	0.00	1.81
8	605.431	0.83	0.17	0.17	0.00	0.00	0.00	1.16
9	448.812	4.32	0.89	0.13	0.09	0.00	0.00	5.44
10	411.579	2.67	0.73	0.00	0.24	0.49	0.00	4.13
11	356.54	0.66	0.51	0.08	0.00	0.00	0.00	1.24
12	333.877	3.61	0.48	0.24	0.00	0.00	0.00	4.33
13	360.183	6.11	3.61	0.28	0.00	0.00	0.00	10.56
14	475.909	2.52	0.84	0.00	0.00	0.00	0.00	3.36
15	390.13	4.66	2.61	2.66	0.67	0.10	0.00	10.71
16	553.224	0.72	0.00	0.36	0.00	0.00	0.00	1.08
17	458.524	1.75	1.53	0.00	0.00	0.00	0.00	3.28
18	612.105	0.26	0.03	0.00	0.00	0.00	0.00	0.29

19	583.981	5.45	3.01	1.61	0.72	0.07	0.00	10.86
20	459.739	4.13	2.74	1.39	0.48	0.00	0.00	8.75
21	443.146	2.48	0.00	0.23	0.23	0.00	0.00	2.71
22	318.498	3.76	0.63	0.00	0.00	0.00	0.00	4.39
23	346.018	2.31	0.00	0.00	0.00	0.00	0.00	2.31
24	378.799	1.95	0.53	0.00	0.00	0.00	0.00	2.48
25	391.749	1.53	0.41	0.00	0.00	0.00	0.00	1.94
Total	11172.425	63.09	25.94	11.06	3.41	0.89	0.00	104.72
Mean		2.52	1.04	0.44	0.14	0.04	0.00	4.18

All trees		28196.22	11591.17	4944.17	1522.69	398.94	0.00	46653.19
Anantpur	**SIDHA**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.34	0.00	0.00	0.00	0.00	0.34
3	525.705	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.05	0.00	0.00	0.00	0.00	0.05	0.11
6	259.412	2.31	0.77	0.00	0.00	0.00	0.00	3.08
7	451.241	0.09	0.13	0.00	0.00	0.00	0.00	0.22
8	448.002	0.27	0.09	0.04	0.04	0.09	0.00	0.54
9	562.937	2.67	0.53	0.18	0.00	0.00	0.00	3.38
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	1.58	0.25	0.00	0.00	0.00	0.00	1.83
12	532.585	1.24	0.30	0.04	0.00	0.00	0.00	1.58
13	526.514	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	431.814	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	510.731	0.59	0.31	0.31	0.00	0.00	0.00	1.21
16	540.274	0.15	0.19	0.04	0.00	0.00	0.04	0.41
17	356.135	0.00	0.11	0.11	0.00	0.00	0.00	0.22
18	382.036	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	344.393	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	418.055	0.34	1.38	0.00	0.00	0.00	0.00	1.72
21	573.055	0.03	0.10	0.00	0.03	0.00	0.00	0.17
22	486.449	1.81	0.70	0.16	0.21	0.00	0.00	2.88
23	449.217	1.11	0.44	0.44	0.09	0.00	0.00	2.09
24	460.953	0.35	0.48	0.00	0.04	0.00	0.00	0.87
25	450.025	0.49	0.18	0.09	0.00	0.00	0.00	0.76
26	619.595	0.48	0.19	0.03	0.00	0.00	0.00	0.71
27	377.585	1.33	1.33	0.80	0.27	0.00	0.00	3.71
28	340.757	0.12	0.12	0.12	0.12	0.12	0.00	0.35
29	407.128	1.28	0.34	0.25	0.00	0.00	0.00	1.87
30	513.564	2.96	1.71	0.97	0.70	0.12	0.00	6.47
31	605.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	772.977	2.85	0.39	0.65	0.00	0.00	0.00	3.88
33	732.507	3.27	0.95	0.82	0.27	0.00	0.00	5.32
34	467.023	3.00	1.07	0.00	0.00	0.00	0.00	4.07
35	624.856	1.12	0.32	0.00	0.00	0.00	0.00	1.44
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.52	0.35	0.00	0.00	0.00	0.00	1.39

38	456.906	0.43	0.00	0.00	0.00	0.00	0.00	0.43
39	280.861	3.79	1.03	0.00	0.34	0.00	0.00	5.17
40	506.279	0.00	0.20	0.00	0.20	0.00	0.00	0.40
Total	18816.098	34.23	14.32	5.05	2.32	0.32	0.09	56.62
Mean		0.86	0.36	0.13	0.06	0.01	0.00	1.42
All trees		16104.18	6735.47	2376.05	1089.70	152.20	42.38	26634.54
TOTAL	**43810.65**	**167.63**	**63.94**	**30.61**	**12.91**	**4.46**	**1.05**	**360.09**
MEAN		**1.71**	**0.65**	**0.31**	**0.13**	**0.05**	**0.01**	**3.67**
STDEV		**1.6894841**	**0.7236818**	**0.46655897**	**0.217593648**	**0.0940657**	**0.0331611**	**8.4565647**
All Block(Tree)		**74939.71**	**28584.50**	**13681.94**	**5772.46**	**1995.05**	**468.49**	**160979.25**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**SIMILI**							
1	384.869	0.00	0.00	0.05	0.10	0.05	0.00	0.21
2	220.156	0.09	0.00	0.18	0.00	0.00	0.00	0.27
3	433.029	1.11	0.42	0.37	0.09	0.00	0.00	1.99
4	500.613	0.28	0.20	0.36	0.08	0.04	0.00	0.96
5	539.465	0.22	0.04	0.15	0.19	0.00	0.07	0.67
6	352.898	0.19	0.00	0.07	0.00	0.00	0.00	0.26
7	425.744	0.56	0.09	0.00	0.00	0.00	0.00	0.66
8	320.927	0.69	0.12	0.12	0.00	0.00	0.00	0.94
9	245.248	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	425.339	0.05	0.00	0.00	0.00	0.00	0.00	0.05
11	452.454	0.09	0.04	0.04	0.04	0.00	0.00	0.22
12	433.434	0.32	0.46	0.32	0.09	0.00	0.00	1.20
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	0.49	0.49	1.71	0.24	0.00	0.00	2.44
15	390.13	0.00	0.26	0.00	0.00	0.00	0.00	0.26
16	513.159	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	438.29	0.09	0.18	0.09	0.05	0.00	0.00	0.41
18	431.814	0.28	0.09	0.56	0.19	0.05	0.00	1.16
19	299.882	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	451.249	0.80	1.24	1.02	0.40	0.04	0.00	3.50
21	454.071	0.40	0.31	0.31	0.18	0.13	0.00	1.32

22	485.64	0.04	0.21	0.21	0.00	0.25	0.04	0.74
23	335.901	0.00	0.24	0.06	0.00	0.00	0.00	0.30
24	528.942	0.00	0.00	0.11	0.00	0.04	0.04	0.19
25	486.853	0.12	0.25	0.04	0.04	0.12	0.00	1.31
26	716.722	0.81	0.42	0.50	0.45	0.11	0.00	2.29
27	394.987	0.30	0.30	0.10	0.25	0.05	0.00	1.01
28	363.428	1.27	0.94	0.72	0.17	0.17	0.00	3.25
29	556.057	0.25	0.22	0.22	0.07	0.00	0.00	0.75
30	518.824	0.50	0.39	0.66	0.46	0.12	0.00	2.12
31	333.068	0.00	0.00	0.01	0.00	0.00	0.00	0.01
32	324.974	0.18	0.18	0.31	0.25	0.06	0.12	1.11
33	401.462	0.05	0.30	0.35	0.20	0.10	0.00	1.00
Total	13822.123	9.18	7.38	8.63	3.53	1.33	0.28	30.58
Mean		0.28	0.22	0.26	0.11	0.04	0.01	0.92
All trees		3843.28	3090.77	3615.02	1479.96	556.26	116.19	12701.48
Kandhara	**SIMILI**							
1	409.556	0.24	0.10	0.00	0.00	0.00	0.00	0.34
2	502.342	0.11	0.00	0.00	0.00	0.00	0.00	0.11
3	268.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	507.898	0.79	1.10	1.02	0.55	0.16	0.00	3.62
5	570.626	0.00	0.18	0.00	0.00	0.00	0.00	0.18
6	470.666	0.59	0.64	0.76	0.64	0.17	0.04	2.85
7	514.373	0.00	0.10	0.00	0.00	0.00	0.00	0.10
8	605.431	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	448.812	0.00	0.09	0.00	0.04	0.00	0.00	0.13
10	411.579	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	356.54	0.00	0.04	0.00	0.00	0.00	0.00	0.04
12	333.877	0.18	0.06	0.00	0.06	0.06	0.00	0.30
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	0.63	1.26	0.21	0.00	0.00	0.00	2.10
15	390.13	0.56	0.72	0.97	0.82	0.46	0.10	3.64
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	0.22	0.44	0.00	0.00	0.00	0.00	0.66
18	612.105	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	583.981	0.96	0.92	1.13	1.06	0.00	0.00	4.08
20	459.739	0.13	0.44	0.30	0.48	0.00	0.00	1.35
21	443.146	0.45	0.00	0.00	0.00	0.00	0.23	0.68
22	318.498	0.00	0.00	0.00	0.00	0.00	0.00	0.00

23	346.018	0.00	0.00	0.00	0.29	0.00	0.00	0.29
24	378.799	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	391.749	0.05	0.00	0.00	0.00	0.00	0.00	0.05
Total	11172.425	4.92	6.07	4.41	3.94	0.85	0.37	20.50
Mean		0.20	0.24	0.18	0.16	0.03	0.01	0.82
All trees		2199.63	2714.05	1969.62	1762.00	379.26	165.66	9163.37
Anantpur	**SIMILI**							
1	431.41	0.46	0.00	0.00	0.00	0.00	0.00	0.46
2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	525.705	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.05	0.11	0.05	0.00	0.00	0.00	0.21
6	259.412	0.00	0.39	0.00	0.00	0.00	0.00	0.39
7	451.241	0.04	0.13	0.00	0.00	0.00	0.00	0.18
8	448.002	0.00	0.04	0.00	0.00	0.00	0.00	0.04
9	562.937	0.14	0.18	0.11	0.00	0.00	0.00	0.43
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.12	0.17	0.00	0.00	0.00	0.00	0.29
12	532.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	526.514	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	431.814	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	510.731	0.27	0.08	0.16	0.00	0.00	0.00	0.51
16	540.274	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	356.135	0.00	0.00	0.00	0.06	0.06	0.00	0.11
18	382.036	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	344.393	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	418.055	0.00	0.10	0.00	0.00	0.00	0.00	0.10
21	573.055	0.00	0.03	0.00	0.00	0.00	0.00	0.03
22	486.449	0.25	0.66	1.07	0.53	0.12	0.04	2.67
23	449.217	0.04	0.09	0.00	0.00	0.00	0.00	0.13
24	460.953	0.65	0.35	0.04	0.43	0.17	0.00	2.08
25	450.025	0.13	0.04	0.04	0.00	0.00	0.04	0.27
26	619.595	0.06	0.06	0.03	0.00	0.00	0.00	0.16
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	340.757	0.06	0.00	0.06	0.00	0.00	0.00	0.12
29	407.128	0.10	0.10	0.00	0.00	0.00	0.00	0.20
30	513.564	0.74	1.25	1.60	0.51	0.16	0.00	4.24
31	605.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	772.977	0.52	1.03	0.26	0.91	0.00	0.00	2.72

33	732.507	0.00	0.95	0.82	0.95	0.14	0.00	2.86
34	467.023	0.21	0.00	0.00	0.00	0.00	0.00	0.21
35	624.856	0.00	0.32	0.48	0.64	0.16	0.00	1.60
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	1.04	0.87	0.17	0.00	0.00	0.00	2.08
38	456.906	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	280.861	0.00	0.34	0.00	0.00	0.00	0.00	0.34
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.098	4.91	7.29	4.89	4.03	0.81	0.09	22.45
Mean		0.12	0.18	0.12	0.10	0.02	0.00	0.54
All trees		2310.74	3430.52	2301.15	1896.46	378.82	40.25	10160.69
TOTAL	**43810.65**	**19.01**	**20.74**	**17.93**	**11.51**	**2.98**	**0.73**	**73.53**
MEAN		**0.19**	**0.21**	**0.18**	**0.12**	**0.03**	**0.01**	**0.75**
STDEV		**0.2912998**	**0.3215706**	**0.34872725**	**0.23420386**	**0.0695358**	**0.0296377**	**1.0793773**
All Block(Tree)		**8498.38**	**9273.99**	**8015.55**	**5144.48**	**1333.11**	**327.98**	**32873.08**

TREE (Per Ha), BY SPECIES & GIRTH CLASS IN ENUMERATED COMPARTMENTS (98)								
Block/comp	**Arae(ha)**	**30-59cm**	**60-89 cm**	**90-119cm**	**120-149cm**	**150-179cm**	**180+ cm**	**TOTAL**
Ranjagarh	**TEAK**							
1	384.869	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	220.156	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	433.029	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	500.613	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	539.465	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	352.898	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	425.744	0.23	0.14	0.05	0.09	0.00	0.09	0.61
8	320.927	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	245.248	95.59	3.19	0.08	0.00	0.00	0.00	99.10
10	425.339	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	452.454	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	433.434	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	261.436	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	401.058	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	66.91	0.26	0.00	0.00	0.00	0.00	67.16
16	513.159	11.50	0.00	0.00	0.00	0.00	0.00	11.50
17	438.29	3.24	0.46	0.00	0.00	0.00	0.00	3.70

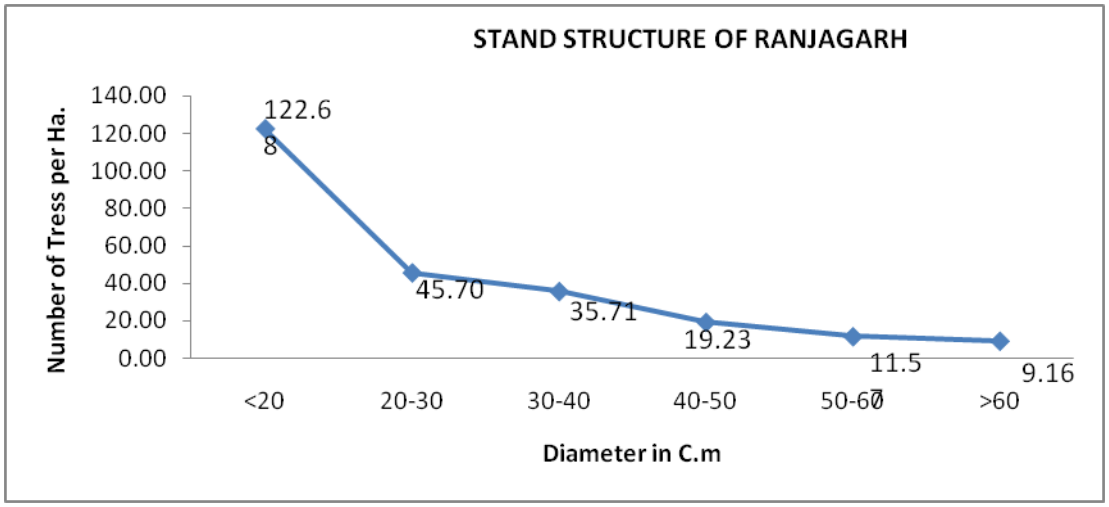
18	431.814	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	299.882	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	451.249	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	454.071	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	485.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	335.901	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	528.942	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	486.853	0.04	0.00	0.00	0.00	0.00	0.00	0.04
26	716.722	0.11	0.00	0.00	0.00	0.00	0.00	0.11
27	394.987	2.68	0.51	0.15	0.15	0.00	0.00	3.49
28	363.428	1.05	0.17	0.00	0.00	0.00	0.00	1.21
29	556.057	0.32	0.11	0.00	0.00	0.00	0.00	0.43
30	518.824	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	333.068	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	324.974	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	401.462	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	13822.123	181.67	4.82	0.28	0.25	0.00	0.09	187.36
Mean		5.51	0.15	0.01	0.01	0.00	0.00	5.68
All trees		76094.10	2018.50	117.53	102.99	0.00	39.37	78475.15
Kandhara	**TEAK**							
1	409.556	27.54	0.88	0.00	0.00	0.00	0.00	28.42
2	502.342	19.03	4.17	0.26	0.00	0.00	0.00	23.45
3	268.72	0.00	0.07	0.00	0.00	0.00	0.00	0.07
4	507.898	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	570.626	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	470.666	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	514.373	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	605.431	4.79	2.31	0.50	0.00	0.00	0.00	7.59
9	448.812	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	411.579	0.00	0.24	0.00	0.00	0.00	0.00	0.24
11	356.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	333.877	0.72	0.00	0.00	0.00	0.00	0.00	0.72
13	360.183	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	475.909	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	390.13	25.36	7.27	0.00	0.00	0.00	0.00	32.63
16	553.224	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	458.524	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	612.105	0.00	0.00	0.00	0.00	0.00	0.00	0.00

19	583.981	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	459.739	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	443.146	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	318.498	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	346.018	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	378.799	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	391.749	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	11172.425	77.43	14.95	0.75	0.00	0.00	0.00	93.13
Mean		3.10	0.60	0.03	0.00	0.00	0.00	3.73
All trees		34604.56	6680.01	336.60	0.00	0.00	0.00	41621.16
Anantpur	**TEAK**							
1	431.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	293.407	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	525.705	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	426.556	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	376.775	0.42	0.05	0.00	0.00	0.00	0.00	0.48
6	259.412	37.01	4.63	0.00	0.00	0.00	0.00	41.63
7	451.241	0.00	0.00	0.00	0.04	0.00	0.00	0.04
8	448.002	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	562.937	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	342.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	480.378	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	532.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	526.514	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	431.814	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	510.731	0.43	0.04	0.04	0.00	0.00	0.00	0.51
16	540.274	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	356.135	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	382.036	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	344.393	0.41	0.00	0.00	0.00	0.00	0.00	0.41
20	418.055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	573.055	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	486.449	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	449.217	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	460.953	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	450.025	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	619.595	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	377.585	0.00	0.00	0.00	0.00	0.00	0.00	0.00

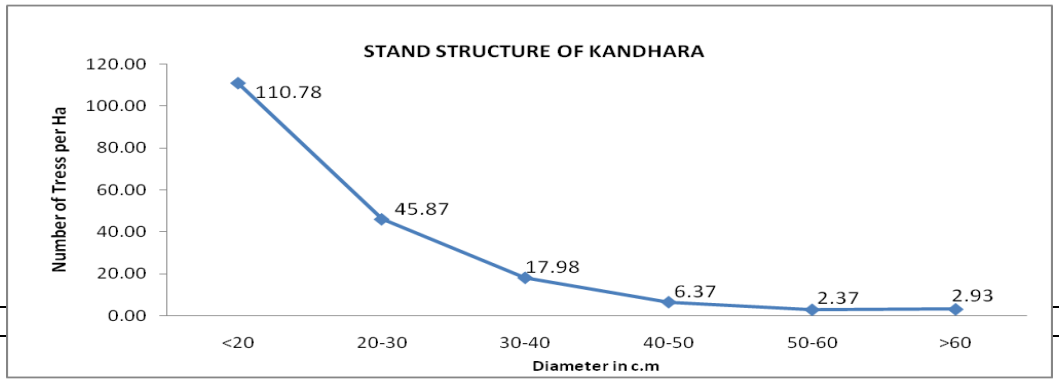
28	340.757	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	407.128	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	513.564	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	605.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	772.977	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	732.507	0.14	0.00	0.00	0.00	0.00	0.00	0.14
34	467.023	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	624.856	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	471.475	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	578.316	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	456.906	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	280.861	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	506.279	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	18816.098	38.41	4.72	0.04	0.04	0.00	0.00	43.21
Mean		0.96	0.12	0.00	0.00	0.00	0.00	1.08
All trees		18066.69	2219.50	18.42	20.85	0.00	0.00	20325.46
TOTAL	**1299.49**	**297.51**	**24.48**	**1.07**	**0.29**	**0.00**	**0.09**	**323.70**
MEAN		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
STDEV		**13.042533**	**1.0431855**	**0.05952692**	**0.018732995**	**0**	**0.0096427**	**13.684868**
All Block(Tree)		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

ANNEXURE-XX

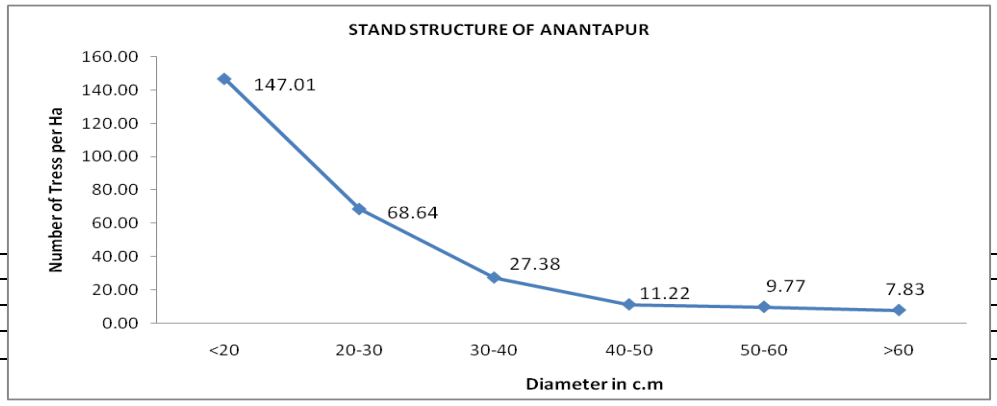
ABSTRACT OF ENUMERATION REASULTS									
No of trees Species - Wise , Girth class-Wise and Block Wise Per Hectare									
Block : Ranjagarh									
Range : K.Nagar East					Total Area Enumerated (Ha)			614.729 Ha	
					Total no.of Compartments			33	
Area of comartments where enumeration was under taken (Ha) - 13822.12 Ha.									
Sl.No	Species	30-59	60-89cm	90-119 cm	120-149cm	150-179 cm	180 above cm	Total	% Age
1	ASAN	9.89	3.16	1.36	0.70	0.33	0.24	15.68	6.43
2	AMLA	0.38	0.09	0.01	0.01	0.00	0.00	0.49	0.20
3	BELA	1.14	0.49	0.15	0.03	0.10	0.00	1.91	0.78
4	BANDHAN	0.27	0.13	0.05	0.01	0.29	0.01	0.76	0.31
5	BAHADA	0.71	0.43	0.25	0.13	0.04	0.03	1.59	0.65
6	CHARA	10.56	1.69	0.35	0.06	0.01	0.00	12.67	5.19
7	DHAURA	5.92	2.32	2.33	1.15	0.90	0.30	12.92	5.29
8	GAMBHARI	0.20	0.09	0.07	0.03	0.03	0.00	0.42	0.17
9	HARIDA	0.52	0.29	0.24	0.08	0.04	0.01	1.18	0.48
10	JAMUN	1.85	0.90	0.55	0.35	0.19	0.13	3.97	1.63
11	KASI	0.87	0.40	0.18	0.08	0.02	0.02	1.57	0.64
12	KURUM	0.76	0.43	0.41	0.25	0.16	0.15	2.16	0.89
13	KENDU	3.20	1.55	1.71	0.62	0.43	0.14	7.65	3.13
14	KANGADA	6.19	2.68	2.10	1.16	0.54	0.27	12.94	5.30
15	KARADA	4.22	0.84	0.15	0.02	0.02	0.02	5.27	2.16
16	MAHULA	3.07	1.65	2.04	1.41	0.70	0.97	9.84	4.03
17	MUNDI	0.20	0.15	0.00	0.05	0.02	0.03	0.45	0.18
18	MAI	1.58	0.91	0.57	0.30	0.12	0.05	3.53	1.45
19	MISC	29.10	10.69	7.12	3.85	2.34	2.31	55.41	22.70
20	PIASAL	1.09	0.56	0.24	0.06	0.07	0.09	2.11	0.86
21	SAL	32.61	15.03	12.07	8.53	5.08	4.35	77.67	31.82
22	SISOO	0.43	0.13	3.05	0.01	0.00	0.00	3.62	1.48
23	SIDHA	2.13	0.72	0.44	0.22	0.10	0.03	3.64	1.49
24	SIMILI	0.28	0.22	0.26	0.11	0.04	0.01	0.92	0.38
25	TEAK	5.51	0.15	0.01	0.01	0.00	0.00	5.68	2.33
	TOTAL	**122.68**	**45.70**	**35.71**	**19.23**	**11.57**	**9.16**	**244.05**	**100.00**
% Age		**50.27**	**18.72**	**14.63**	**7.88**	**4.74**	**3.75**	**100.00**	



ABSTRACT OF ENUMERATION REASULTS									
No of trees Species - Wise , Girth class-Wise and Block Wise Per Hectare									
Block : Kandhara									
Range : Hindol					Total Area Enumerated (Ha)			376.956 Ha	
					Total no.of Compartments			25	
Area of comartments where enumeration was under taken (Ha)- 11172.43 Ha									
Sl.No	Species	30-59	60-89cm	90-119 cm	120-149cm	150-179 cm	180 above cm	Total	% Age
1	ASAN	6.93	3.39	1.44	0.33	0.07	0.03	12.19	6.53
2	AMLA	0.36	0.13	0.02	0.01	0.00	0.00	0.52	0.28
3	BELA	2.82	0.98	0.14	0.02	0.00	0.00	3.96	2.12
4	BANDHAN	0.35	0.14	0.05	0.01	0.00	0.00	0.55	0.29
5	BAHADA	1.13	0.52	0.25	0.15	0.05	0.06	2.16	1.16
6	CHARA	3.31	1.19	0.25	0.01	0.00	0.00	4.76	2.55
7	DHAURA	5.75	2.47	1.06	0.43	0.16	0.15	10.02	5.37
8	GAMBHARI	0.22	0.08	0.01	0.01	0.01	0.00	0.33	0.18
9	HARIDA	0.50	0.19	0.15	0.07	0.01	0.00	0.92	0.49
10	JAMUN	1.21	0.54	0.22	0.09	0.05	0.01	2.12	1.14
11	KASI	0.92	0.51	0.05	0.01	0.00	0.00	1.49	0.80
12	KURUM	1.96	0.64	0.18	0.11	0.02	0.01	2.92	1.56
13	KENDU	1.61	0.77	0.37	0.34	0.16	0.04	3.29	1.76
14	KANGADA	18.98	7.85	3.11	1.13	0.55	0.61	32.23	17.27
15	KARADA	4.40	1.56	0.31	0.03	0.00	0.01	6.31	3.38
16	MAHULA	1.23	0.84	0.64	0.28	0.16	0.14	3.29	1.76
17	MUNDI	0.18	0.13	0.05	0.00	0.00	0.01	0.37	0.20
18	MAI	2.11	1.35	0.91	0.53	0.22	0.06	5.18	2.78
19	MISC	37.24	14.61	6.50	2.06	1.05	1.34	62.80	33.65
20	PIASAL	0.21	0.10	0.01	0.01	0.00	0.32	0.65	0.35
21	SAL	12.94	5.72	1.56	0.44	0.14	0.13	20.93	11.21
22	SISOO	0.60	0.28	0.05	0.00	0.00	0.00	0.93	0.50
23	SIDHA	2.52	1.04	0.44	0.14	0.04	0.00	4.18	2.24
24	SIMILI	0.20	0.24	0.18	0.16	0.03	0.01	0.82	0.44
25	TEAK	3.10	0.60	0.03	0.00	0.00	0.00	3.73	2.00
	TOTAL	**110.78**	**45.87**	**17.98**	**6.37**	**2.72**	**2.93**	**186.65**	**100.00**
% Age		**59.35**	**24.58**	**9.63**	**3.41**	**1.46**	**1.57**	**100.00**	



No of trees Species - Wise , Girth class-Wise and Block Wise Per Hectare									
Block :Anatapur									
Range : K.Nagar West & Mohabirod					**Total Area Enumerated (Ha)**			**607.733 Ha**	
					Total no.of Compartments			**40**	
Area of comartments where enumeration was under taken (Ha)- 18815.52 Ha									
Sl.No	Species	30-59	60-89cm	90-119 cm	120-149cm	150-179 cm	180 above cm	Total	% Age
1	ASAN	8.47	4.63	1.52	0.59	0.60	0.25	16.06	5.91
2	AMLA	0.19	0.03	0.01	0.01	0.00	0.00	0.24	0.24
3	BELA	0.65	0.29	0.05	0.01	0.01	0.00	1.01	0.37
4	BANDHAN	0.23	0.09	0.01	0.00	0.00	0.00	0.33	0.12
5	BAHADA	0.43	0.19	0.07	0.04	0.01	0.00	0.74	0.27
6	CHARA	13.88	3.49	0.68	0.07	0.14	0.01	18.27	6.72
7	DHAURA	4.58	2.54	1.59	0.73	0.53	0.33	10.30	3.79
8	GAMBHARI	0.17	0.07	0.01	0.00	0.01	0.00	0.26	0.10
9	HARIDA	0.38	0.21	0.09	0.02	0.00	0.00	0.70	0.26
10	JAMUN	2.08	1.29	0.88	0.35	0.15	0.09	4.84	1.78
11	KASI	0.85	0.43	0.11	0.02	0.02	0.00	1.43	0.53
12	KURUM	1.19	0.46	0.17	0.09	0.09	0.03	2.03	0.75
13	KENDU	7.68	4.84	2.56	1.13	0.54	0.55	17.30	6.36
14	KANGADA	1.35	0.63	0.20	0.09	0.03	0.26	2.56	0.94
15	KARADA	3.98	1.23	0.12	0.02	0.04	0.08	5.47	2.01
16	MAHULA	4.29	3.11	2.43	1.48	0.71	1.08	13.10	4.82
17	MUNDI	0.15	0.09	0.06	0.02	0.02	0.00	0.34	0.13
18	MAI	2.60	1.64	0.66	0.26	0.16	0.02	5.34	1.96
19	MISC	29.26	13.04	5.06	2.23	1.61	1.56	52.76	19.41
20	PIASAL	1.11	0.73	0.21	0.04	0.07	0.00	2.16	0.79
21	SAL	61.17	28.84	10.62	3.86	4.98	3.56	113.03	41.58
22	SISOO	0.38	0.11	0.02	0.00	0.02	0.01	0.54	0.20
23	SIDHA	0.86	0.36	0.13	0.06	0.01	0.00	1.42	0.52
24	SIMILI	0.12	0.18	0.12	0.10	0.02	0.00	0.54	0.20
25	TEAK	0.96	0.12	0.00	0.00	0.00	0.00	1.08	0.40
	TOTAL	**147.01**	**68.64**	**27.38**	**11.22**	**9.77**	**7.83**	**271.85**	**100.00**
	% Age	**54.08**	**25.25**	**10.07**	**4.13**	**3.59**	**2.88**	**100.00**	



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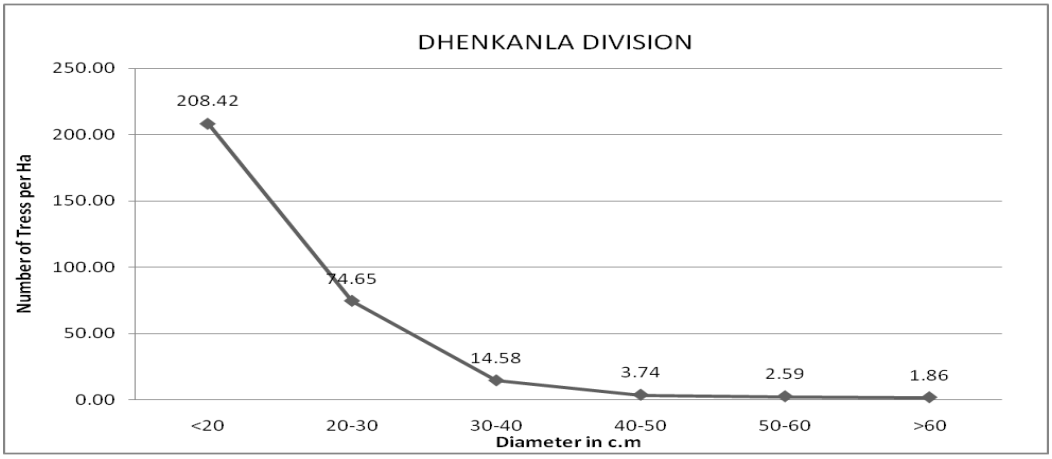
Sl.No	Species	30-59	60-89cm	90-119 cm	120-149cm	150-179 cm	180 above cm	Total	% Age
1	ASAN	9.21	3.44	0.61	0.08	0.02	0.01	13.67	4.54
2	AMLA	0.58	0.35	0.01	0.09	0.00	0.00	0.68	0.68
3	BELA	3.34	0.97	0.03	0.00	0.00	0.00	4.28	1.42
4	BANDHAN	0.58	0.21	0.03	0.02	0.02	0.02	0.79	0.79
5	BAHADA	2.65	1.02	0.25	0.14	0.04	0.01	4.12	1.37
6	CHARA	10.94	2.32	0.07	0.01	0.01	0.00	13.91	4.61
7	DHAURA	4.04	1.83	0.07	0.14	0.11	0.01	6.04	2.00
8	GAMBHARI	0.07	0.01	0.00	0.00	0.00	0.00	0.09	0.03
9	HARIDA	0.58	0.11	0.04	0.01	0.01	0.00	0.73	0.24
10	JAMUN	3.32	1.22	0.21	0.06	0.02	0.05	5.17	1.72
11	KASI	1.78	0.42	0.07	0.01	0.00	0.00	1.75	0.58
12	KURUM	2.05	0.60	0.07	0.03	0.00	0.01	2.77	0.92
13	KENDU	5.16	2.17	0.42	0.16	0.04	0.06	7.66	2.54
14	KANGADA	6.82	2.09	0.55	0.21	0.05	0.02	9.78	3.24
15	KARADA	2.76	1.68	0.04	0.00	0.00	0.01	3.19	1.06
16	MAHULA	4.77	1.88	0.63	0.20	0.10	0.09	7.62	2.53
17	MUNDI	0.06	0.01	0.01	0.00	0.00	0.00	0.08	0.03
18	MAI	3.42	1.62	0.64	0.14	0.05	0.03	5.90	1.96
19	MISC	55.67	16.63	3.61	1.22	1.67	0.82	77.33	25.66
20	PIASAL	0.39	0.29	0.03	0.01	0.00	0.01	1.15	0.38
21	SAL	79.49	31.93	6.66	0.92	0.34	0.18	119.74	39.73
22	SISOO	0.74	0.28	0.01	0.00	0.00	0.00	0.99	0.33
23	SIDHA	3.75	1.40	0.07	0.01	0.01	0.00	5.14	1.71
24	SIMILI	0.34	0.40	0.15	0.08	0.02	0.02	1.15	0.38
25	TEAK	5.91	1.77	0.30	0.20	0.08	0.51	7.68	2.55
	TOTAL	**208.42**	**74.65**	**14.58**	**3.74**	**2.59**	**1.86**	**301.41**	**100.00**
	% Age	**68.14**	**24.64**	**4.64**	**1.14**	**0.82**	**0.62**	**100.00**	



ANNEXURE-XXI (A)

AREA & WORKING PRESCRIPTIONS OF ALL FOREST BLOCKS OF DHENKANAL DIVISION

Sl. No	Range	Name of the R.F	Comp. No	Area as per Notification		Area adopted in WP	Selection WC (in Ha.)	Eco-Restoration w.c	Plantn. WC	Protection W.C	Bamboo (OL)W.C	W L/ NTFP (OL) W.C	JFM (OL) W.C
				Notification No	Area (in Ha.)								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	-9	(10)	(11)	(12)	(13)	14
1	Dhenkanal	Belabania	1	440994/D-2F-189(M/20/59) dt.22.12.1959	566.98	603.80	0.00	563.80	40	0			
2		Charkhola	1-2	-do-	817.09	808.36	0.00	80.76	639.20	88.40			
3		Ghantabaja	1-4	-do-	1251.74	1274.4	0.00	405.66	515.00	353.74			
9		Godabole	1	-do-	380.42	436.60	0.00	7.60	429.00	0			
5		Jaripal	1	-do-	275.60	289.80	0.00	151.80	138.00	0			
6		Kankadahada	1	-do-	380.42	380.40	0.00	40.40	340.00	0			
7		Korian	1	-do-	393.37	387.70	0.00	387.70	0.00	0			
8		Kotaberena	1	-do-	1003.66	1039.70	0.00	479.70	560.00	0			
9		Matharagadi	1	-do-	299.50	285.31	0.00	55.31	30.00	200.00			
10		Matiamundia	1	-do-	1110.78	1110.90	0.00	725.90	385.00	0			
11		Mayuri	1-2	-do-	991.52	957.11	0.00	477.34	479.775	0			
12		Megha	1	-do-	615.15	603.90	0.00	192.90	411.00	0			
13		Nimidha	1	-do-	155.00	160.70	0.00	37.70	123.00	0			
14		Patapuri	1	-do-	477.55	506.70	0.00	204.90	301.80	0			
15		Saptasajya	1-3	-do-	2224.23	2096.75	0.00	504.37	838.60	753.78			
16		Sulia	1	-do-	259.00	259.00	0.00	259.00	0.00	0			
17		Tamanda	1	-do-	550.39	566.17	0.00	265.17	301.00	0			
18		Kapilas(Part)	1-4	-do-	1820.13	1820.13	0.00	0.00	0.00	0.00			
18					**13572.53**	**13587.43**	**0.00**	**4840.01**	**5531.38**	**1395.92**			
19	Kapilas	Kapilas (Part)	5-23,27	-do-	9364.96	9042.01	0.00	0.00	0.00	51.67			
		Ramei	1-4	-do-	1877.81	1877.81	0.00	1237.01	640.80	0.00			
					11242.77	**10919.82**	**0.00**	**1237.01**	**640.80**	**51.67**			
	Sadangi	Kapilas(Part)	24-26,28	-do-	1749.12	1749.12	0.00	0.00	0.00	0.00			
20		Aswakhola	1-6	-do-	2571.46	2464.62	0.00	1469.20	201.00	794.42			
21		Baliposi	1	-do-	267.10	267.10	0.00	0.00	40.00	227.10			
22		Bega	1	-do-	550.39	569.80	0.00	377.80	192.00	0.00			
23		Gondia	1	-do-	934.86	926.80	0.00	696.80	230	0.00			
24		Kankira	1	-do-	453.26	474.30	0.00	374.30	100	0.00			
25		Lahada-A	1	-do-	1327.42	1339.60	0.00	489.60	600	250			
26		Lahada-B	1	-do-	2662.35	2428.00	0.00	1958.00	470.00	0.00			
27		Nischinta	1	-do-	712.27	696.90	0.00	0.00	0.00	696.9			
28		Raigoda	1	-do-	363.42	363.40	0.00	243.40	120	0.00			

29		Raitola	1	-do-	518.02	535.00	0.00	175.00	360.00	0.00			
30		Rupabalia	1	-do-	914.62	961.20	0.00	797.20	164.00	0.00			
31		Sadangi A	1	R(O)-838/70 dt.26.10. 1970	54.72	60.70	0.00	20.70	40.00	0.00			
32		Sadangi B	1	440994/D-2F189(M/20/59 dt.22.12.1959	428.98	448.00	0.00	78.00	370.00	0.00			
					13507.99	**13284.54**	**0.00**	**6680.00**	**2887.00**	**1968.42**			
33	K.Nagar (E)	Birasal	1	-do-	1780.68	1362.90	0.00	1292.90	70	0			
34		Jiridamali	1	-do-	783.21	815.06	0.00	565.06	250	0			
35		Moulabhanja	1	-do-	1372.74	1367.48	0.00	701.50	665.98	0			
36		Ranjagarh	1-33	-do-	16414.63	13822.10	7140.92	535.38	427	5718.8			
					20351.26	**17367.54**	**7140.92**	**3094.84**	**1412.98**	**5718.8**			
37	Bhuban	Balibo	1	-do-	667.76	659.70	0.00	230.70	229.00	200			
38		Bhairpur	1	-do-	469.45	490.50	0.00	0.00	365.00	125.5			
39		Bhuban	1	-do-	460.14	457.30	0.00	0.00	330.00	127.3			
40		Dholapada	1	-do-	372.32	372.30	0.00	192.30	130.00	50			
41		Tipiloi	1	-do-	825.59	947.00	0.00	277.00	470.00	200			
42		Sunajhari (Part)	4-6	-do-	1233.53	1278.85	0.00	781.85	297.00	200			
					4028.79	**4205.65**	**0.00**	**1481.85**	**1821.00**	**902.8**			
	K.Nagar (W)	Sunajhari (Part)	1-3		1511.15	1511.15	0.00	1094.71	25.00	391.436			
43		Anlabereni	1	-do-	492.52	502.20	0.00	342.20	160.00	0			
44		Kadalipal	1	-do-	246.06	246.00	0.00	61.00	35.00	150			
45		Kankili	1	-do-	1732.52	1786.30	0.00	1546.30	240.0	0			
46		Machhia	1	-do-	278.84	279.00	0.00	60.00	219	0			
47		Madhi	1	-do-	420.89	457.70	0.00	217.70	40.00	200			
48		Nadabir	1	-do-	137.60	145.70	0.00	0.00	0.00	145.70			
49		Siarimalia	1	-do-	1400.26	1405.10	0.00	1119.10	286.00	0			
50		Sundarkhol	1-6	-do-	2153.00	2206.42	0.00	1493.74	0.00	712.676			
51		Suniamaru	1	-do-	1724.02	1855.20	0.00	1320.20	535.00	0			
52		Anantapur(Part)	1-20,25-28,32 part	-do-	10699.102	10699.102	3419.599	914.82	681.997	5682.689			
					20795.962	**21093.87**	**3419.599**	**8169.77**	**2222.00**	**7282.501**			
	Mahabirod	Anatapur(Part)	21-24,29-31,32 Part ,33-40	-do-	9316.958	8116.998	2376.80	1000.486	681.283	4058.427			

53		Barabank(N)	1	-do-	469.45	433.80	0.00	118.800	165.00	150			
54		Barabanka(S)	1	-do-	922.72	974.50	0.00	429.500	545	0			
55		Dolia	1	-do-	1776.23	1766.23	0.00	1352.230	414	0			
56		Khalpal	1	-do-	688.80	692.90	0.00	417.900	275	0			
57		Talcher Boarder	1	-do-	784.31	784.30	0.00	159.300	275.00	350			
					13958.468	**12768.73**	**2376.80**	**3478.216**	**2355.283**	**4558.427**			
58	Hindol	Ambithi	1	11F-47/68/12087/CF dt.12.06.69	464.60	447.60	0.00	323.60	124.00	0			
59		Bompa	1-5	-do-	2355.35	1653.60	0.00	1353.60	300	0			
60		Hitinda	1-2	-do-	798.88	705.79	0.00	470.80	234.990	0	705.79		
61		Kai	1	-do-	2619.22	2266.30	0.00	1203.09	863.213	200			
62		Kandhara	1-25	-do-	11172.96	11172.94	2333.973	884.11	3113.813	4841.049	7260.823		
63		Kansara	1	-do-	51.37	50.60	0.00	40.42	10.180	0.00			
64		Nandania	1	-do-	641.85	527.70	0.00	207.70	120.00	200			
65		Patalo	1-2	-do-	801.31	660.47	0.00	505.47	155.00	0			
					18905.54	**17485.00**	**2333.97**	**4988.78**	**4921.196**	**5241.05**			
					11636331	110712.58	15271.29	33970.48	21791.63	27119.59	7966.613	98152.86	38.19380
		V F (217 nos)			1478.18	1478.18	0	1478.18	0	0	0	1478.18	
		PF (04 no)			**124.46**	**124.46**	**0**	**0**	**124.46**	**0**	**0**	**124.46**	**0**
				G. total	**11637933.64**	**112315.22**	**15271.29**	**35448.66**	**21916.09**	**27,119.59**	**7,966.61**	**99755.50**	**38,19380**

ABSTRACT (in Ha.)

(1)	Area included in Selection Working Circle -		15.271.29
(2)	Area included in Eco-Restotation Working Circle -	(R.F-42613.42+Others23385.35)	35,448.66
(3)	Area included in Plantation Working Circle -		21.916.09

(4)	Area included in Protection Working Circle -	27,119.59
(5)	Area included in Bamboo (Over lapping) Working Circle -	7,966.61
(6)	Area included in Wild Life (Over lapping) Working Circle -	99755.50
(7)	Area included in N.T.F. P. (Over Lapping) Working Circle -	99755.50
(8)	Area included in J.F.M. (Over Lapping) Working Circle -	38193.80
(8)	Part of Kapilash R.F area excluded being declaired Sanctury (RF-12,611.26,)	12,559.59

N.B: Exact area under different working circles will be decided after verification and enumeration in the field.

ANNEXURE – XXI (B)

ANNEXURE XXI(B) COMPARTMENT WISE AREA & WORKING PRESCRIPTIONS OF ALL BLOCKS TO DIFFERENT W.C. (In Ha.)							
Block	Comp No	Area in (Ha)	Selection W.C	Ecorestoration W.C	Plantation W.C	Protection W.C	Bamboo (OL) W.C
Dhenkanal Range							
Belabania	1	603.8	0	563.8	40	0	0
Charkhola	1	260.4	0	0	172	88.4	0
	2	547.96	0	80.76	467.2	0	0
		808.36	0	80.76	639.2	88.4	0
Ghantabaja	1	341.16	0	153.81	187.35	0	0
	2	309.6	0	144.9	164.7	0	0
	3	369.9	0	106.95	162.95	100	0
	4	253.74	0	0	0	253.74	0
		1274.4	0	405.66	515	353.74	0
Godabalua	1	436.6	0	7.6	429	0	0
Jaripal	1	289.8	0	151.8	138	0	0
Kankadahada	1	380.4	0	40.4	340	0	0
Korian	1	387.7	0	387.7	0	0	0
Kotaberena	1	1039.7	0	479.7	560	0	0
Matharagadi	1	285.31	0	55.31	30	200	0
Matiamundia	1	1110.9	0	725.9	385	0	0
Mayuri	1	522.46	0	284.77	237.687	0	0
	2	434.65	0	192.56	242.09	0	0
		957.11	0	477.335	479.775	0	0
Megha	1	603.9	0	192.9	411	0	0
Nimidha	1	160.7	0	37.7	123	0	0
Patapuri	1	506.7	0	204.9	301.8	0	0
Saptasajya	1	548.78	0	0	45	503.78	0
	2	752.33	0	160.14	592.19	0	0
	3	795.64	0	344.23	201.41	250	0
		2096.75	0	504.37	838.6	753.78	0
Sulia	1	259	0	259	0	0	0
Tamanda	1	566.17	0	265.17	301	0	0
Kapilash	1	385.28	0	0	0	0	0
	2	348.45	0	0	0	0	0
	3	491.9	0	0	0	0	0
	4	594.5	0	0	0	0	0

		1820.13	0	0	0	0	0
Range Total		13587.43	0	4840.005	5531.375	1395.92	0
Kapilash Range	5	381.23	0	0	0	0	0
	6	413.2	0	0	0	0	0
	7	500.61	0	0	0	0	0
	8	478.35	0	0	0	7	0
	9	450.43	0	0	0	0	0
	10	533.2	0	0	0	16	0
	11	349.25	0	0	0	0	0
	12	414.41	0	0	0	0	0
	13	452.04	0	0	0	0	0
	14	729.67	0	0	0	0	0
	15	323.35	0	0	0	0	0
	16	367.87	0	0	0	0	0
	17	418.86	0	0	0	0	0
	18	447.59	0	0	0	0	0
	19	686.37	0	0	0	0	0
	20	472.68	0	0	0	0	0
	21	394.17	0	0	0	0	0
	22	397.41	0	0	0	28.67	0
	23	393.03	0	0	0	0	0
	27	438.29	0	0	0	0	0
		9042.01	0	0	0	51.67	0
Ramei	1	325.79	0	0	325.79	0	0
	2	466.21	0	290.94	175.27	0	0
	3	491.31	0	361.57	129.74	0	0
	4	594.5	0	584.5	10	0	0
		1877.81	0	1237.01	640.8	0	0
Range Total		**10919.82**	**0**	**1237.008**	**640.802**	**51.67**	**0**
Sadangi Range							
Kapilash	24	322.54	0	0	0	0	0
	25	511.57	0	0	0	0	0
	26	449.21	0	0	0	0	0
	28	465.8	0	0	0	0	0
		1749.12	0	0	0	0	0
Aswakhola	1	375.56	0	0	0	375.56	0
	2	418.86	0	0	0	418.86	0
	3	384.07	0	384.07	0	0	0
	4	269.12	0	258.12	11	0	0

	5	571.84	0	542.465	29.375	0	0
	6	445.17	0	284.55	160.625	0	0
		2464.62	0	1469.2	201	794.42	
Baliposi	1	267.1	0	0	40	227.1	0
Bega	1	569.8	0	377.8	192	0	0
Gondia	1	926.8	0	696.8	230	0	0
Khankira	1	474.3	0	374.3	100	0	0
Lahada 'A'	1	1339.6	0	489.6	600	250	0
Lahada 'B'	1	2428	0	1958	470	0	0
Nischinta	1	696.9	0	0	0	696.9	0
Raigoda	1	363.4	0	243.4	120	0	0
Raitola	1	535	0	175	360	0	0
Rupabalia	1	961.2	0	797.2	164	0	0
Sadangi 'A'	1	60.7	0	20.7	40	0	0
Sadangi 'B'	1	448	0	78	370	0	0
Range Total		**13284.54**	**0**	**6680**	**2887**	**1968.42**	**0**
K.Nagar E Range							
Birasal	1	1362.9	0	1292.9	70	0	0
Jiridamali	1	815.06	0	565.06	250	0	0
Maulabhanja	1	1367.48	0	701.5	665.98	0	0
Ranjagarh	1	384.86	384.86	0	0	0	0
	2	220.15	220.15	0	0	0	0
	3	433.02	433.02	0	0	0	0
	4	500.61	0	0	0	500.61	0
	5	539.47	0	0	0	539.47	0
	6	352.9	352.9	0	0	0	0
	7	425.74	0	0	0	425.74	0
	8	320.92	0	0	0	320.92	0
	9	245.24	0	0	0	245.24	0
	10	425.33	0	0	0	425.33	0
	11	452.46	452.46	0	0	0	0
	12	433.43	433.43	0	0	0	0
	13	261.43	0	231.43	30	0	0
	14	401.06	0	71.06	330	0	0
	15	390.13	0	0	0	390.13	0
	16	513.16	0	0	0	513.16	0
	17	438.3	0	0	0	438.3	0
	18	431.81	431.81	0	0	0	0
	19	299.89	0	232.89	67	0	0

	20	451.24	0	0	0	451.24	0
	21	454.08	0	0	0	454.08	0
	22	485.64	0	0	0	485.64	0
	23	335.9	335.9	0	0	0	0
	24	528.94	0	0	0	528.94	0
	25	486.86	486.86	0	0	0	0
	26	716.72	716.72	0	0	0	0
	27	394.99	394.99	0	0	0	0
	28	363.42	363.42	0	0	0	0
	29	556.06	556.06	0	0	0	0
	30	518.82	518.82	0	0	0	0
	31	333.07	333.07	0	0	0	0
	32	324.98	324.98	0	0	0	0
	33	401.47	401.47	0	0	0	0
		13822.1	7140.92	535.38	427	5718.8	
Range Total		**17367.54**	**7140.92**	**3094.84**	**1412.98**	**5718.8**	
Bhuban Range							
Balibo	1	659.7	0	230.7	229	200	0
Bhairpur	1	490.5	0	0	365	125.5	0
Bhuban	1	457.3	0	0	330	127.3	0
Dholapada	1	372.3	0	192.3	130	50	0
Tipiloi	1	947	0	277	470	200	0
Sunajhari (part)	4	413.198	0	291.51	121.69	0	0
	5	409.962	0	333.71	76.25	0	0
	6	455.692	0	156.63	99.06	200	0
		1278.852	0	781.85	297	0	
Range Total		**4205.65**	**0**	**1481.85**	**1821**	**902.8**	
K.Nagar W Range							
Sunajhari (part)	1	539.869	0	539.869	0	0	0
	2	416.436	0	0	25	391.436	0
	3	554.843	0	554.843	0	0	0
		1511.15	0	1094.712	25	391.436	0
Anlabereni	1	502.2	0	342.2	160	0	0
Kadalipal	1	246	0	61	35	150	0
Kankili	1	1786.3	0	1546.3	240	0	0
Machhia	1	279	0	60	219	0	0
Madhi	1	457.7	0	217.7	40	200	0
Nandabir	1	145.7	0	0	0	145.7	0
Siarimalia	1	1405.1	0	1119.1	286	0	0

Sundarkhol	1	418.864	0	418.864	0	0	0
	2	436.265	0	436.265	0	0	0
	3	390.94	0	0	0	390.94	0
	4	321.736	0	0	0	321.736	0
	5	338.733	0	338.733	0	0	0
	6	299.882	0	299.882	0	0	0
		2206.42	0	1493.744	0	712.676	0
Suniamaru	1	1855.2	0	1320.2	535	0	0
Anantapur (Part)	1	431.41	0	391.41	40	0	0
	2	293.407	0	253.407	40	0	0
	3	525.705	0	0	0	525.705	0
	4	426.556	0	0	0	426.556	0
	5	376.775	0	0	0	376.775	0
	6	259.412	0	0	159.412	100	0
	7	451.241	0	0	0	451.241	0
	8	448.002	0	0	0	448.002	0
	9	562.937	0	0	0	562.937	0
	10	342.78	0	0	0	342.78	0
	11	480.378	480.378	0	0	0	0
	12	532.585	0	0	0	532.585	0
	13	526.514	486.514	0	40	0	0
	14	431.814	431.814	0	0	0	0
	15	510.731	0	0	0	510.731	0
	16	540.274	540.274	0	0	0	0
	17	356.135	356.135	0	0	0	0
	18	382.036	382.036	0	0	0	0
	19	344.393	344.393	0	0	0	0
	20	418.055	398.055	0	20	0	0
	25	450.025	0	0	0	450.025	0
	26	619.595	0	0	25	594.595	0
	27	377.585	0	0	332.585	45	0
	28	340.757	0	0	25	315.757	0
	32P	270	0	270	0	0	0
		10699.1	3419.599	914.817	681.997	5682.689	
Range Total		**21093.87**	**3419.599**	**8169.773**	**2222**	**7282.501**	**0**
Mahabirod Range							
Anatapur (p)	21	573.055	573.055	0	0	0	0
	22	486.449	486.449	0	0	0	0

	23	449.217	449.217	0	0	0	0
	24	460.953	460.953	0	0	0	0
	29	407.128	407.128	0	0	0	0
	30	513.564	0	0	0	513.564	0
	31	605.43	0	0	80	525.43	0
	32-P	502.977	0	462.977	40	0	0
	33	732.509	0	537.509	195	0	0
	34	467.023	0	0	50	417.023	0
	35	624.856	0	0	40	584.856	0
	36	471.475	0	0	0	471.475	0
	37	578.316	0	0	61.78	516.536	0
	38	456.906	0	0	0	456.906	0
	39	280.861	0	0	0	280.861	0
	40	506.279	0	0	214.503	291.776	0
		8116.998	2376.802	1000.486	681.283	4058.427	0
Barbanka North	1	433.8	0	118.8	165	150	0
Barbanka South	1	974.5	0	429.5	545	0	0
Dolia	1	1766.23	0	1352.23	414	0	0
Khalpal	1	692.9	0	417.9	275	0	0
Talcher Boarder	1	784.3	0	159.3	275	350	0
Range total		**12768.728**	**2376.802**	**3478.216**	**2355.283**	**4558.427**	**0**
Hindol Range							
Ambithi	1	447.6	0	323.6	124	0	0
Bompa	1	344.395	0	274.4	70	0	0
	2	186.971	0	146.971	40	0	0
	3	254.961	0	204.961	50	0	0
	4	497.376	0	437.376	60	0	0
	5	369.897	0	289.9	80	0	0
		1653.6	0	1353.6	300	0	0
Hitinda	1	286.527	0	62.527	224	0	286.527
	2	419.263	0	408.263	11	0	419.263
		705.79	0	470.79	235	0	705.79
Kai	1	2266.3	0	1203.09	863.213	200	-
Kandhara	1	409.556	0	0	0	409.556	0
	2	502.342	442.342	0	60	0	502.342
	3	268.72	0	163.72	0	105	268.72
	4	507.898	0	0	0	507.898	507.898
	5	570.626	0	470.626	100	0	570.626
	6	470.666	470.666	0	0	0	470.666

	7	514.373	0	0	0	514.373	514.373
	8	605.431	0	0	605.431	0	605.431
	9	448.812	448.812	0	0	0	448.812
	10	411.579	0	50	361.58	0	0
	11	356.54	0	0	0	356.54	356.54
	12	333.877	231.88	0	102	0	0
	13	360.183	0	0	360.183	0	0
	14	475.909	0	50	425.909	0	0
	15	390.534	280.534	0	110	0	0
	16	553.224	0	0	283.312	269.91	553.224
	17	458.524	0	0	130	328.524	0
	18	612.216	0	0	40	572.216	0
	19	583.981	0	0	0	583.981	583.981
	20	459.739	459.739	0	0	0	0
	21	443.146	0	0	203.383	239.763	443.146
	22	318.498	0	0	135.758	182.74	318.498
	23	346.018	0	149.76	196.258	0	346.018
	24	378.799	0	0	0	378.799	378.799
	25	391.749	0	0	0	391.749	391.749
		11172.94	2333.973	884.106	3113.814	4841.049	7260.823
Kansara	1	50.6	0	40.42	10.18	0	0
Nandania	1	527.7	0	207.7	120	200	0
Potalo	1	295.835	0	180.835	115	0	0
	2	364.635	0	324.635	40	0	0
		660.47	0	505.47	155	0	0
Range Total		**17485**	**2333.973**	**4988.776**	**4921.207**	**5241.049**	
Grand total		**110712.58**	**15271.294**	**33970.468**	**21791.647**	**27119.587**	**7966.613**

N B: Out of total Kapilas RF area of 12,611.26 Ha.an area of 12,559.59 Ha has been declared as sanctury, hence no prescription made and area not included in any WC.

ANNEXURE – XXII

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.

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 lantations)	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 orests	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:	3.1	Status natural regeneration	A	X	X
	3.2	Incidence of forest fires	A	X	X

Maintenance and enhancement of ecosystem function and vitality	3.3	Extent of livestock grazing (a) Forest area open for grazing	A	X	X
		(b) No of livestock grazing in forest	B	X	X
	3.4	Occurrence of weeds in forest (a) Area(b) Weed type	B	X	X
	3.5	Incidences of pest and diseases	B	X	---
Criterion 4: Conservation and maintenance of soil and water resources	4.1	Area under watershed treatment	A	X	X
	4.2	Area prone to soil erosion	B	X	X
	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
	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:	8.1	Existence of policy and legal framework	A	X	X
Adequacy of Policy, Legal and Institutional framework	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 Managem*ent

ANNEXURE – XXIII

Government of Orissa
Forest &Environment Department
****

RESOLUTION

No.IF-Affn.17/2008- 1 7 4 5 4 /F&E
Dated, Bhubaneswar the 22nd October, 2008
Sub: JOINT FOREST MANAGEMENT RESOLUTION, 2008

1. Introduction

Forests are one of the complex eco-systems. The role of forest in conservation ofenvironment and economic prosperity of mankind is well established. Economic growthand environment protection are inextricably linked. For surviving on the earth we ought tolive in harmony with Nature. Conservation of environment and protection of forest andwildlife have already been enshrined in our Constitution. Orissa has 58136 Sq. kms offorest area. 31.07 % of its geographical area is under forest cover Forests play a verysignificant role in the socio-economic and cultural life of the people of the State.However, over the past few decades, the forests of Orissa are under heavy biotic pressure.The rich bio-diversity of the State is at risk. Man-animal conflict is on the rise. Hence,preservation and development of the rich sylvan heritage of the State is a priority of theState Government.The National Forest Policy, 1988 envisages co-operation of the people inconservation and development of forests. The Government of Orissa have already adoptedthe policy of Joint Forest Management (JFM) and sought community participation forprotection, regeneration and management of the forest wealth. Joint Forest Managementis not only a tool for forest regeneration, but also a means of employment generation and social empowerment of the forest-fringe dwellers.The State Government enacted the Orissa Village Forest Rules, 1985 whichprescribed for a Management Plan for every village forest and sought co-operation of thecommunityin protection of these forests. In 1988, the State Government had passed aresolution to formally introduce a Scheme of Protection of peripheral Reserve Forest areaswith participation of the adjoining villagers by forming a Village Level Forest Protection

Committee. The scope of this resolution was enlarged in 1990 to include the Protected Forests. To make the forest-people interface, more effective and transparent, theGovernment of Orissa in Forest & Environment Department issued a resolution dated3.7.1993. This resolution dealt in a fairly exhaustive manner the involvement all localcommunities in protection of adjoining forests, formation of Van Samrakhyana Samiti(V.S.S.), duties and responsibilities of the V.S.S. and their Executive Committees and therole of Forest epartment and Gram Punchayats, preparation of Joint Forest Managementplan, usufructory benefits for the V.S.S. and provisions of MOU and ***related issues***.Subsequently another Government esolution dated 30.09.1996 tried to confer specificrights in favour of the Village Committees in respect of various ***products.***However, these Resolutions in the past did not cover the ational parks andSanctuaries. The Mangrove Wetlands and the Protected Areas (PA) of the State thoughneed the participatory mode of management, require a different approach. In past allattempts to protect the PA from human interventions by coercion has resulted in hostile attitude of the people towards wildlife and forest staff. It has been realized that people

living near the PA, while deriving little benefit from conservation, have paid enormouscosts in terms of lost access to their life support systems. Further, there is restriction onharvesting of forest produce in the National Parks and Sanctuaries as per the orders ofHon'ble Supreme Court. It has therefore become essential to have a site specific,culturally sensitive and participatory approach, which would ultimately provide economicincentives to increase the net local benefit from conservation and sustainable resource use.Ecodevelopment is a strategy for securing support of the local communities

and otherstakeholders for the protected area management. The activities to be taken up underecodevelopment should have a strong Conservation-Development (C-D) linkage and mayinclude Ecotourism and Off-farm activities as well as providing specific alternatives tolocal biomass dependencies on the PA.

The biodiversity rich Mangroves on the long coastal tract of Orissa are of immensevalue which provides ecological, livelihood and food security. Sustainable managementof these vital and Life sustaining resources involving all the stakeholders by introductionof site specific participatory management practices is essential. Mangrove forests arefragile inter tidal ecosystem with characteristic salt tolerant vegetation. Sharing of forestproduce with the participant user communities is an important ingredient of JFM. But theslow growing mangroves offer a very limited scope of providing wood and NTFP that may serve as an incentive for ensuring participation of people. Hence Eco-developmentapproach is essential which will focus on development of alternate resources and alternatelivelihood security options.Joint Forest Management is an evolving concept encompassing socio-cultural andeconomic dimensions. With the changing scenario of Forest Management, increasingawareness among people and experiences gained from the past management practices, it is now felt necessary that the State Government resolution on Joint Forest Managementneeds revision to make it more effective.

1. Selection of Area:

i. The forests of the State shall be grouped into the following two categories:

a) Forest Area (Reserve Forest, Protected forests, Village forest and Revenue forests)

b) Protected Area (National Park and Sanctuaries) excluding Core Area, and Mangrove Wetland

ii. Only such forest area shall be brought under the Joint Forest Management (JFM) where villagers of the adjacent villages or cluster of villages are *willing* ***and/or*** can be motivated to offer active cooperation, in management, protection and regeneration of the forests.

iii. For the first category, villages located adjacent to such forest boundary should be considered as far as possible. For the second category, the villages located within the National Park/ Sanctuaries as well as adjacent to the same will be involved in protection and management of the wildlife and habitat.

iv. The Reserve Forests and Protected forests, Village forests and Revenue forests having crown density of less than 40% will be treated as degraded forest land and brought under JFM**.**

v. A committee consisting of the DFO, ACF, and concerned RO & Forester, here in after referred to as Divisional Level Committee (DLC) will decide the extent of area that may be assigned to any Joint Forest Management Committee (JFMC). While deciding the extent of area to be assigned, the committee shall take in to account the extent and density of forest area available at the site, the number of adjacent villages, their conflicting claims, if any, and users' regime. In case a group of villages decide to constitute one JFMC jointly, then a large area can be assigned according to their capacity to protect.

3. Constitution of Joint Forest Management Committee

i Ordinarily there will be one Joint Forest Management Committee (JFMC) for a single village or a group of villages. However, depending upon the

population and number of hamlets/Sahi and community composition more than one JFMC can be constituted in a village to have harmonious coexistence. The Committee constituted for the first category of forest will be known as Van Samrakshyana Samiti (VSS) while the Committee constituted for the second category will be known as Eco-development Committee (EDC).

ii. (a.) Any forest officer not below the rank of a Forester shall request the Gram Panchayat (GP) to convene a meeting of all the adult members of all households residing in the hamlet/village/cluster of villages located as specified in Para 1 (iii) above.

(b) The concept of Joint Forest Management including all rights and responsibilities of JFMC members and the Forest Department will be explained in this meeting,

(c) If a minimum of 60% of the adult members of the hamlet/village/cluster of villages agree to constitute a JFMC then a resolution to this effect shall be passed and adopted in the meeting in the prescribed format (Form-1).

(d) The Forester/Forest Ranger will send the resolution of the ***meeting*** along with his recommendation in Form-2 to the DFO for his consideration and constitution of the JFMC**.**

(e) *The proposal shall be discussed in the meeting of DLC. After evaluating the motivation level of the villagers and taking in to account other relevant factors the committee may recommend the constitution of JFMC along with extent of forest area to be assigned. The proceedings of the meeting shall be recorded, signed by all participants and made available in the concerned file. There after the DFO shall issue an office order constituting the JFMC mentioning therein a registration number and the extent of area to be assigned.*

iii All adults of the hamlet/village(s) are eligible to become members of the JFMC on payment of enrolment fee of Rs.1/- per person. The JFMC shall be considered functional if at least 60% adults enroll themselves as members.

iv. The concerned Forester or VFW as may be assigned by the Divisional Forest Officer shall be the ex-officio Member Secretary of the ***JFMC***. The elected Chairperson and Vice-Chairperson of the Executive Committee will also be the Chairperson, and Vice-Chairperson of the ***JFMC.***

2. Constitution of the Executive Committee (EC)

i. On receipt of DFO's office order in regard to constitution of JFMC, the Member Secretary will contact the Sarpanch/ward member(s) and other important persons of the hamlet/village(s) for calling a General Body (GB) meeting of the Gram Sabha to elect the EC.

ii. The GB shall elect the Chairprson, the Vice-Chairperson and the Treasurer and another 8 (eight) members (Total – 11 members) (representatives) to constitute Executive Committee. Of this at least 5 shall be women members. The number of SC & ST members in the Executive Body shall be in proportion to their membership in JFMC.

ii. Either the Chairperson or Vice-Chairperson shall be a woman.

iv. The composition of the EC shall be as follows:

1. Chairperson 1 Elected	Member
2. Vice-Chairperson 1 Elected	Member
3. Treasurer 1 Elected	Member
4. Ward Member (s) Ex-officio	Member (s)
5. Members 7 Elected	Members
6. Forester/VFW (Member Secretary) Ex-officio	Member
7. Concerned Forest Guard Ex-officio	Member
8. Village opinion leader 1 Elected	Member

v. The Range Officer concerned will act as the Returning Officer for conducting the election of the EC. It shall be the responsibility of the Returning Officer to ensure that the representation in the EC is strictly in accordance with reservation specified in para-ii above.

vi. The EC will have tenure of 3 years at a time.

5. Meeting

i. General Body (GB)

a. The GB meeting of the JFMC shall be held at least once in every six months. It can also be called as and when required.

b. The Chairperson with an advance notice of one week will convene the GB.

c. The Chairperson or Vice-Chairperson, if former is absent, shall preside over all the meetings of JFMC (GB).

d. 50% of the members of the JFMC will constitute the quorum for the GB, out of which at least 40% should be women,

e. Under special circumstances, special meeting of the JFMC can beconvened provided at least one third of the members agree to convenesuch a meeting and make such a request to the Chairperson in writing.Where the Chairperson does not convene the meeting, the concernedMember Secretary shall convene the GB meeting with the approval of theRange officer. In all such cases, a 3 days notice indicating the purpose ofthe said meeting shall be circulated to all the members of the JFMC.

f. The proceedings of the meeting shall be recorded in a register in Oriya language and shall be maintained by the Member Secretary. All decisionstaken in such meetings shall be recorded in shape of resolution whichshall be duly signed by the Chairperson, the Vice-Chairperson and theMember Secretary. A copy of the resolution will be forwarded to theRange Officer as well as to the DFO.

The next Executive Committee shall be elected by GB at least one monthbefore the tenure of the current EC expires. It shall be binding on the partof the Chairperson to convene this meeting.

ii . Executive Committee (EC)

a) The Member Secretary with the consent of the Chairperson shall call the meeting of the EC at least once in 2 months.

b) The meeting will be presided over by the Chairperson or by the Vice-Chairperson, if former is absent.

c) The quorum for any meeting of the EC shall be 50% of its membership, out of which at least 2 shall be women.

d) The Member Secretary or in his absence the Treasurer/ Forest Guard shall record the proceedings of the meeting in Oriya in a register to be duly signed by all the participating members. A copy of the proceedings will

be forwarded to the Range Officer as well as to the DFO.

6. Duties and responsibilities of JFMC

i) The members of the JFMC shall individually and collectively ensure protection of the forests against fire, grazing, illicit felling, theft of forest produce, poaching of wildlife and encroachment of the forest land. They should also ensure protection of Wildlife staying outside their assigned forests.

ii) The JFMC may adopt its own patrolling system and regulate entry to the forest by the people and domestic cattle.

v) It shall be the duty of all members of the JFMC to prevent forest and wild life offence and pass on relevant information and intelligence in this regard to the forest officials.

iv) The members of the JFMC shall actively help the forest officials in apprehending any person committing forest offence and in giving proper evidence against any such person in the court of law.

v) The JFMC members shall help the forest department officials in protection and maintenance of the forest boundary pillars.

vi) The JFMC shall prepare the micro plan and annual work plan for integrated development of the village (s) and for the conservation, development and sustainable management of the assigned forests and its wildlife. Summary of the micro-plan should be available in Oriya.

vii) The members of the JFMC shall try to ensure gradual reduction in the dependence of the villagers on forests for their sustenance.

viii) The JFMC shall have the powers to remove and/or substitute any elected (non-official) member of the EC by a simple majority of the members present and voting if the concerned member does not discharge his/her duties satisfactorily. The members of the JFMC shall also have the power to remove and replace the Chairperson of the JFMC by simple majority of members of the JFMC present and voting if the concerned ***Chairperson*** does not discharge his or her duties properly. In such cases a GB meeting will be convened as per procedure laid down in para 5(i)(e). The concerned Range Officer shall act as Returning Officer on all such occasions.

ix) In case of a forest diversion proposal under Forest Conservation Act, 1980 covering a portion of the forest assigned to a JFMC the Range Officer shall inform the EC in writing and ask for its opinion. The EC should discuss all aspects of the proposal in a special GB of the JFMC and forward itsopinion on the said proposal to the concerned Range Officer who in turnwould send the same to the DFO. The concerned DFO while forwardingthe proposal onwards shall attach the comments of the VSS with it forconsideration of the State Government/Government. of India.

7. Duties and responsibilities of the Executive Committee (EC)

i. The EC shall carry out the day-to-day business of the JFMC as per provisions of the Resolution. It shall be responsible for managing and implementing Micro plan and annual plan and other decisions of the JFMC.

ii. The EC shall be responsible for protection of the forests assigned to the JFMC and for apprehending the offenders. If the members of the

VSS/EDC play a significant role in detection of forest offence and seizure of the forest produce within their village limits, they will be entitled for a fixed percentage of the value of the forest produce (except in case of WL Tophies) so seized as per procedure laid down in para - 11(iii) and (iv).

iii. The EC in consultation with the GB shall evolve methodology on all issues relating to membership, conflict resolution, encroachment, customary rights and benefit sharing.

iv. The EC of the VSS shall execute/carry out various silvicultural operations, intermediate and final felling as and when so advised by the Range Officer in accordance with the provisions of the management plan/ micro plan.

v. The EC shall be responsible to account for and manage the funds and other resources received from the Government, other agencies and funds internally generated, if any. For this purpose a joint account called VSS account/EDC account shall be opened in any commercial, rural or cooperative Bank recognised by the RBI or in any post office, which shall be operated, jointly by the Chairperson and the Member Secretary of the JFMC. Utilisation Certificate relating to the expenditure incurred shall also be jointly signed by the Chairperson and the Member-Secretary and submitted to the concerned authorities whenever required.

vi. The EC shall be responsible for managing funds received by JFMC by maintaining and operating VSS/ EDC account as per the procedure detailed in Annexure A.

vii. The EC shall establish marketing linkage to various NTFP items and other micro-enterprise products for securing better returns to the beneficiaries.

8. Role of the Forest Department.

i. To assign & demarcate the forest area in favour of VSS/ EDC.

ii. To register the JFMC and maintain close liaison with them.

iii. To ensure that the activities of the JFMC are in accordance with the JFM resolution and all other Acts and Rules of the State Government and Government of India in force.

iv. To take subsequent legal action as per rule in cases where JFMC members have handed over the offenders and forest produce involved in offence.

v. To ensure capacity building of VSS members on different aspects of forest management, planning, silviculture, nursery technology, forest laws accounting and book keeping etc. in a transparent manner.

vi. To provide technical help to the JFMC member in preparation and implementation of the Micro plan/ annual work programme and approval of the same.

vii. To sign Memorandum of Understanding with the JFMC and ensure sharing of benefit amongst all members in case of VSS only.

viii. To motivate villagers to become active partner in the JFM programme of the State and organise village level meetings for this purpose.

ix. To conduct election of office bearers and ensure appropriate participation of the weaker sections including women in all benefit sharing and decision making process of the JFMC.

x. To establish coordination with other department/agencies for successful implementation of micro plan and related area development programme.

xi. To guide the EC in discharge of their duties and resolving disputes.

9. Dissolution, reconstitution and supersession of JFMC

i. Based on the report of the Range Officer or otherwise the DFO may dissolve, reconstitute or supersede any ***JFMC*** within his jurisdiction if in his opinion the activities of the VSS is detrimental to forest protection and

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management. He may then order for restoration of management of the assigned forest with the forest department. The appeal against such order shall lie with the Conservator of forests whose decision shall be final.

iii. If the work of the EC of any VSS is found to be against the principles of regeneration and proper management of forest, the DFO may dissolve and reconstitute the EC after due enquiry and recording his finding to this effect. The appeal against such order shall lie with the Conservator of forests whose decision shall be final.

iii On receipt of a report from the concerned Range Officer regarding irregularities by any member(s) of the EC or member (s) of the subcommittee appointed by the EC, the DFO may divest the said member (s) of their powers temporarily pending finalisation of enquiry to this effect.

10. Joint Forest Management Plan (Micro Plan)

i. After constitution of the EC, as soon as possible, a Micro-plan shall be prepared by the members of the Committee through a participatory process involving VSS Members and with the field officers of the Forest Department.

ii. The Micro plan shall be drafted in a prescribed format in Oriya language for the integrated development of the village/villagers constituting the JFMC as well as for conservation, sustainable management of the assigned forests based on local circumstances, priorities and assessed annual returns, with participation and involvement of line departments.

iii. The Micro plan shall prescribe various, soil and moisture conservation measures, silvicultural operations, afforestation measures and steps to be taken for livelihood support of the forest dependent communities. It shall also incorporate formation of SHGs and micro-enterprise that may be feasibly undertaken based on locally available resources by them. In case of EDC, the Eco- development Plan may include activities such as:– ecotourism, farm forestry, Agro forestry, Silvi-pasture development, promotion of fuel-efficient device, veterinary care to the village cattle population, development of pisciculture, poultry etc., mushroom cultivation, tassar cultivation, micro-credit facility and mobile health care facility etc.

iv. The micro plan shall indicate the choice of species in different plantation models subject to forest laws in vogue. It shall contain a detailed regeneration and harvesting plan, which shall be consistent with the overall prescription of the working plan covering the area or the Wildlife Management Plan of the Protected area.

v. The micro plan shall also detail out the various NTFP items that can be collected. This shall be done with due regard to the carrying capacity, productivity and biodiversity of the local ecosystem.

vi. The draft Micro plan prepared by the EC shall be agreed upon the GB after deliberation.

vii. The draft Micro plan as approved by the VSS and signed by the Chairperson shall be submitted by the Member Secretary to the Range Officer concerned who shall examine the micro plan from technical, social, financial and legal angle. The RO may refer back to the EC any suggested modifications for consideration and necessary amendment of the draft micro plan. The EC will discuss the suggested changes, incorporate the same in the draft Micro plan and resubmit the same to the RO.

viii. After evaluating the Micro plan on technical, legal. Social and financial considerations, the RO shall accord his approval on the Micro plan. A copy of the approved Micro plan shall be kept for reference and record in each of the offices of the DFO. Range Officer, VSS and Member-Secretary.

ix. For implementation of the approved Micro plan, an annual work plan (April-March) with estimates of cost and returns shall be prepared by the EC. The annual work plan for the coming financial year shall be submitted latest by the end of December each year by the Member-Secretary to the Range Officer. The annual Work plan will be approved by the competent authority depending upon its financial outlay.

x. The finance required for implementation of micro plan / annual work plan may be borne by the State Government through the Forest department or may be received from Government of India or may be incurred from VSS account. Contributions from other Departments of the Government. District Rural Development Agency, Integrated Tribal Development Agency can also be accepted for this purpose. However contributions from National/ International donor agencies can be accepted with approval of Government.

xi. Micro plan shall normally be for a period of 10 years with provision of mid-term review.

11. Usufruct benefits for the VSS

i. The VSS shall be entitled to the usufructuary benefits from the assigned forestsas under.

a. Usufructs like fallen leaves, fodder grasses, thatch grass, broom grass, thorny fencing materials, brushwood, fallen lops, tops and twigs to be used as fuel shall be available to the members free of cost.

b. All intermediate yield in the shape of small wood, poles, firewood etc as may be obtained as a result of silvicultural operations shall be made available to the VSS members in a manner as may be decided by EC including the option of at ‘a price’. The funds so obtained shall be deposited in the VSS account. In case there is substantial quantity of surplus material, the EC may sell the surplus material under intimation to the DFO concerned.

c. In case of Kendu leaves and specified forest produce, leased items of NTFP, if any, the VSS members will have the right to collect the same from the assigned forest but these items shall have to the delivered to the departmental

agencies or lessee on payment of prescribed rates for the collection of such items.

d. In case of a major harvest or final felling in the assigned forest, the same shall be taken up by the forest department strictly as per the prescription of theworking plan/ duly approved micro plan. In case of natural calamities,harvesting of wind-fallen trees shall be treated as final harvest. The produceso obtained shall be sold/disposed off by the forest department or by agents ofthe forest department. The VSS will be entitled to 50% share of the sale priceafter deduction of proportionate harvesting cost and this will be deposited intheir "VSS account". Provided that the VSS may also opt for 50% of theforest produce so harvested if it is for their bonafide domestic use and theyagree to pay the proportionate cost of harvesting. In respect of the villagewoodlots raised under the SIDA Social Forestry Project on land notified asVillage Forest and brought under JFM, the VSS shall be entitled to 100% ofthe usufructs in the final harvest of the plantation while they will be entitledfor 50% of the share as usual during subsequent rotations.

ii. The EC shall be responsible for the distribution of the usufructuary benefits equally or equitably among the members of the VSS as may be decided by it.

iii. In cases where member/ a group of members of the JFMC play a major role in the collection of intelligence, detection and seizure of illegal forest produce in transit the concerned JFMC shall be entitled to the prescribed percentage of the sale price of the forest produce as per Rule 4 (3) of the Orissa Rewards for Detection of Forest Offences Rules, 2004. Such amount shall be deposited by the DFO to the “VSS account/EDC account" after disposal of the seized produce following due procedure of law.

iv. Collection of money by any member or members of the VSS in relation to forest produce except as per provision of para 11(iii) as mentioned above will be illegal and would be dealt as per law.

12. Transit of harvested forest product

All forest produce requiring permits for transit as per provisions of Orissa Timber and Other Produce Transit Rules, 1980 shall be removed from theassigned forest area in accordance with a permit to be issued jointly by anyauthorized member of the EC and the Member-Secretary of the area in theprescribed format (Form-4). The permit shall be valid only within the limits of thearea to which the VSS members belong and no second permit shall be issued inlieu thereof.

13. Conflict Resolution:

In case of intra village conflict in matters of implementation of Joint ForestManagement, the Executive Committee of the VSS/ EDC shall endeavour toamicably resolve the conflict. If it fails to resolve the conflict, it shall bring thesame to the notice of the Forest Range Officer with its recommendation of actionto be taken. In case of inter village conflict, the same would be referred to thePanhayat Samiti for resolving the conflict. In case of a dispute amongst thevillages of different Panchayats, the same should be referred to the DivisionalLevel Steering Committee and their decisions would be final.

14. Memorandum of Understanding (MoU)

i. To ensure smooth working relationship between the Forest Department and the JFM committees and also to bring in a sense of ownership, mpowerment and accountability a MoU shall be signed between the FD

and JFMC.

ii. The VSS/ EDC through its EC shall execute a MoU with the Forest department for active participation in the task of protection, regeneration and management of the assigned forest area and for implementation of the programme as per the Joint management Plan (Micro plan).

iii. The Chairperson of the VSS will sign the MoU on behalf of the VSS while the Range Officer concerned will sign the same on behalf of forest department. Other members at the EC will also be signatory to the MoU as witness while the concerned local forest officials such as: - the Forester/VFW and Forest Guard will also sign MoU as witness.

iv. The MoU shall be in the prescribed form (Form-5).

15. Steering Committee

i. There shall be a Steering Committee at the Forest Division Level and another at the State Level.

ii. Forest Division Level Steering Committee: This committee shall comprise of the following members:-

a) Conservators of Forests :	Chairperson
b) Divisional Forest Officer (Territorial or Wildlife) :	Member Secretary
c) Representative of Collector, preferably ADM dealing with land matters :	Member
d) Deputy Director (Agriculture) :	Member
e) Chief District Veterinary Officer :	Member
f) PO, DRDA :	Member
g) PA, ITDA :	Member
h) Deputy Director (Horticulture) :	Member
i) Soil Conservation Officer :	Member
j) Executive Engineer (RWSS/PHED) :	Member
k) District Inspector of Schools :	Member
l) 2 NGOs (to be nominated by the DFO) :	Member
m) 5 VSS (Chairperson/ Vice-Chairperson : (at least 2 women) (to be nominated by DFO)	Member

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n) Chairperson of two Panchayat Samities to be nominated by Collector in rotation.

o) Prakruti Mitra and Prakruti Bandhu Awardees : Member (One to be nominated by DFO).

iii. The tenure of the non-official members will be three years.

iv. The Divisional Level Steering Committee will meet at least once in six months and shall monitor functioning of the VSS, implementation of micro plans and suggest measures of improvement.

v. The Committee shall ensure coordination of all concerned departments/ agencies at the district/sub-divisional levels for proper implementation of the JFM programme.

vi. State Level Steering Committee: The constitution of the State Level Steering Committee shall be as under:

1. Minister (Forest) :	Chairperson

2. Chief Secretary/Addl. Chief Secretary (Supervising Forest) :	Vice Chairperson
3. Principal Secretary, F & E Dept. :	Member
4. Principal CCF :	Member
5. PCCF (WL) :	Member
6. 2 C.Fs. from field to be nominated by PCCF :	Member
7. Secretary, Revenue Dept. :	Member
8. Secretary, Home Deptt. :	Member
9. Secretary, RD Dept. :	Member
10. Secretary, PR Dept. :	Member
11. Secretary, SC & ST Dept. :	Member
12. Two non-official experts to be nominated by Govt. :	Member
13. Special Secretary, F& E Deptt. :	Member
14. Chairpersons of two JFMC selected by PCCF :	Member
15. CCF (Affn and SF), Office of PCCF, Orissa :	Member-Secretary

vii. The non-official members of the State Level Steering Committee will have tenure of three years.

viii. The Committee shall meet once in a year to review the progress of Joint Forest Management in the State. They may hold extensive deliberations on specific problems faced in implementation of the programme and may

guide and direct the operation of JFM programme in the State. They may recommend amendment of JFM provisions whenever required to steer thecourse of events in a positive direction.

16. Repeal and Savings:

This supersedes Forest & Environment Department Resolution No.16700-10F(Pron)-30/93-F&E dt.3.7.1993. However, all VSSs already formed under provisions of Forest & Environment Department Resolution No.16700-10F(Pron)-29/93-F&E dt.3.7.1993 will be recognized and treated as formed under thisResolution.

O R D E R

Ordered that the Resolution be published in the Extraordinary issue of the Orissa Gazette.

By order of Governor
H.S Chahar
Principal Secretary to Government
Forest & Environment Department

ANNEXURE-A

ACCOUNTING PROCEDURE, DUTIES OF OFFICIALS AND NON-OFFICIALS

A. JFMC Account and Procedure of Accounting

i. There shall be a Development Fund in each JFMC wherein money received by the JFMC will be deposited before it is used for any purpose. On receipt of resolution of the EC for opening of a bank account, the DFO shall recommendthe same for opening savings bank account in any Nationalised Bank,Cooperative Bank, Rural Bank (recognised by RBI) or in Post Office which willbe called the "JFMC Account". This account will be operated jointly by theChairperson and the Member Secretary of the JFMC. (The JFMC shall open asavings bank account in any nationalized bank, cooperative bank, rural bank,post office proximate to the village. The account will be opened in the style of"(village name) JFMC Account". All money received by the JFMC either incash or instrument shall be deposited into the account before it is used for anypurpose. The account will be jointly operated by the Chairperson and Member Secretary.)

ii. Any withdrawal from the JFMC account can be done only after a specificresolution of the EC in this regard and after one week of such resolution. A copyof the said resolution shall be endorsed to the concerned Range Officer who maycommunicate his opinion within a week if he differs with the resolution. In sucha situation the EC will have to reconsider its proposal and accordingly take adecision.

iii. The funds deposited into the JFMC account shall be utilised towards theconservation and development of forest, development of the village or for anyother purpose ancillary to the implementation of the Micro plan.iv. In case the EC decides to spend the money from the 'JFMC Account/EDCaccount" for any other purpose it shall seek the approval of the General Body ofthe JFMC and then written permission from the DFO.

v. The PCCF/Government may issue executive instructions for operation of the JFMC account, which shall be binding on the EC. In case of detection of any financial irregularity the concerned DFO may freeze the JFMC account for a specific period and conduct necessary enquiry and may take required legal action.

vi. The Member Secretary shall be fully responsible for the submission of the Monthly account and maintenance of the Cash Book of the JFMC. The account shall be maintained in the same form as maintained by the Forest Department.

vii. A monthly work programme shall be drawn up by the Forester concerned in consultation with the EC and will be implemented with the approval of the RO subject to availability of funds for the purpose. Funds will be withdrawn accordingly from the JFMC Account.

viii. All vouchers will be passed by the EC and signed by the Member Secretary as well as the Chairperson/ Treasurer and shall be retained at the JFMC level. The Member Secretary will submit an abstract of receipt and expenditure to the concerned Range Officer by the 10th of the following month. RO will prepare a 19 consolidated abstract of receipt and expenditures of all JFMC in his range and submit a monthly report to the DFO by 15th of the same month.

ix. On receipt of the monthly Cash account of the JFMC the Range Officer will scrutinize make field verification if any and countersign the same. He will then send consolidated abstract of receipt and expenditure of all the JFMC in his Range along with his

comments on each account to the DFO concerned. In all cases 'where the Range Officer raises objection on the expenditure incurred by any JFMC he should communicate the menu of objection to the concerned EC for compliance while also informing the same to the DFO. The decision of the DFO on this issue shall be final.

x. Annual receipt and expenditure of the JFMC shall be audited by an auditor to be appointed by the Conservator of Forests. The annual statement of receipt and expenditure of the JFMC account shall be placed before the GB for its approval. The audited and approved abstract of annual receipt and expenditure shall be communicated by the EC to the concerned RO and DFO.

B. Duties of the Chairperson

i. To request the Member Secretary of the JFMC to convene meeting of EC and GB as per the provisions of the resolution and as and when necessitated.
ii. To preside over the meetings of the GB and EC.
iii. To sign the MoU on behalf of the JFMC as per provision *of Para 14 (iii).*
iv. To jointly operate with the Member Secretary the JFMC account/EDC account.
v. To countersign all vouchers of payment and expenses, muster rolls and utilization measurement books and utilization certificates along with the Member Secretary. (The Chairperson may also authorize the Treasure in do the same on his behalf.)
vi. To ensure implementation of the Micro plan, annual and monthly work plan.
vii. The conduct all other functions that may be authorized by the GB or EC.

C. Duties of the Vice Chairperson

i. To perform all functions of the Chairperson in his absence or on being instructed by the Chairperson.
ii. Any other function as authorised or instructed by the GB or the EC.

D. Duties of the Treasurer

i. To assist the Member Secretary in the maintenance of the JFMC account and submission of return thereof.
ii To countersign all vouchers, muster rolls and measurement books, if authorised by the Chairperson.
iii. The JFMC Treasurer should maintain a detailed record of the cost and benefit shared by the JFMC and FD in case of intermediate and final felling as per provisions of the micro plan. In case of the EDC, the Treasurer should maintain a detailed record of the benefits accrued to different members of the EDC through various development programmes.

E. Duties of the Conservator of Forests

i. Evaluation of the performance of the JFMC. Approval and administrative sanction of the annual work plan depending upon its financial outlay as per delegation of financial powers by Government.
ii. To appoint a registered auditor for the audit of annual accounts of the JFMC, which shall be completed by May of following financial year.
iii. To dispose of appeals against the decision of the DFO on disbanding any JFMC and order for recovery of any amount after giving both sides reasonable opportunity of being heard.

F. Duties of Divisional Forest Officer

i. To register the JFMC and assign Registration No.
ii. Monitoring and evaluation of the performance of the JFMC.

iii. Approval and administrative sanction of the annual work plan depending upon its financial outlay.
iv. To ensure opening and operation of the joint savings bank account of the JFMC account/EDC account' in Nationalized Co-operative Bank (as recognized by RBI) in a Post Office by the Chairperson and Member Secretary of the JFMC.
v. To impart training and lend assistance to the member of the JFMC for preparation and implementation of Micro plan.
vi. To coordinate with other government and other agencies for execution of the work programme adopted under the micro plan and make the financial resources available.
vii. To ensure proper participation in decision making of the JFMC/EDC by women and other weaker sections of the society and ensure proper sharing of benefits by all.
viii. To ensure harvesting and marketing of forest procedure whenever required as envisaged in the approved micro plan/ annual work plan with the participation of JFMC members.
ix. To maintain a ledger of the abstract of accounts of all the JFMC within the Division, make field enquiries if any and to submit their consolidated account report to the Conservator or Forests/Appropriate authority /Donor agency.
x. The DFO may either himself or though the ACF at any point of time hold an enquiry into the accounts or any other activities of a JFMC and take appropriate action if any misappropriation of funds or irregularity is noticed.
xi. To disband the EC and JFMC under *para 9 (i) and (ii)* or divest its powers under para 9 (iii).
xii. In special circumstances as a provisional alternative arrangement and with prior permission of the Conservator of Forests, DFO shall have the power to authorize the concerned Range officer to perform all the functions and exercise all the powers of the Member Secretary of a JFMC.

G. Duties of Assistant Conservator of Forests

i. Monitoring and evaluation of the performance of the JFMC.
ii. To guide the members of JFMC and offer required technical assistance to the JFMC member in preparation of microplan/ annual anion plan.
iii. To make site inspection and conduct field enquiry to make an assessment of forest area to be assigned to a JFMC as member of DLC.
iv. To conduct any other function as directed by the DFO for implementation of the JFM programme.

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H. Duties of Forest Range Officer

i. To guide the forester in initially organizing a meeting of the Gram Sabha for constituting the JFMC.
ii. To oversee the constitution of the Executive Committee and to act as Returning Officer during the election of elected member of the

EC.

iii. To assist and train the members of the JFMC in preparation of the micro plan and annual work plan.

iv. To assist the JFMC member in resolution of internal conflicts and in discharge of their functions.

v. The RO shall attend all the special/ emergency meeting of any JFMC and will have the freedom to attend other meetings of any EC or JFMC.

vi. To issue authenticated serial numbered and page certified account books, muster rolls and measurement books to a JFMC and to maintain an account of this.

vii. To make field inspection of works executed by JFMC and communicate his comments or opinion to the EC for rectification of any defects.

viii. On being authorized by the DFO as per para F (xii) to perform all functions of the member secretary under any JFMC under special circumstances.

ix. To take follow up action as per rules after the detection of forest offence by the JFMC and to ensure that the JFMC gets its due share after disposal of the forest produce so seized.

x. To demarcate the forest area to be assigned in favour of any JFMC.

xi. He shall submit the consolidated abstract of receipts and expenditures of all JFMCs of his range within prescribed time period.

I. Duties of FEO

i. He will be instrumental in spreading the message of JFM within the Range.

ii. He will interact with villages /PRI and collect socio-economic profile of village.

iii. He will assist the JFMC in PRA exercise and formulation of micro plan.

iv. He will assist the R.O. in monitoring and periodic evaluation of all JFM programme in the range.

J. Duties of Forester/VFW

i. He will be the ex-officio Member Secretary of the JFMC as well as that of the EC.

ii. He shall maintain the proceedings of the GB and EC meetings.

iii. He shall maintain the monthly receipt, expenditure account of the JFMC. He shall be the custodian of all books and vouchers of all JFMC under his responsibilities. He shall submit a monthly abstract of receipts and expenditure to the Range Officer by 10th of following month.

iv. He shall operate the JFMC account jointly with the Chairperson of the JFMC.

v. He shall assist the members of the JFMC in preparation and implementation of the Micro plan.

vi. He shall keep the Range Officer continuously informed about functioning of all the JFMC under his control.

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vii. Under special circumstances where the Chairperson does not convene the meeting of the GB even after receiving written request from at least one third member of the GB, the Member Secretary shall convene the GB meeting with the approval of the concerned Range Officer.

viii. To discharge all other functions of the Member Secretary as prescribed in the JFM Resolution.

ix. To take follow up action as per rules after the detection of forest offence by the JFMC and to ensure that the JFMC gets its due share after disposal of the forest produce so seized.

K. Duties of Forest Guard

i. To assist the Member Secretary to organize all meetings in the village.

ii. To assist the villagers in preparation and in the implementation of the Micro plan / annual work plan.

iii. To oversee harvesting and distribution of the forest produce among the JFMC members as per approved Micro plan.

iv. To take follow up action as per rules after the detection of forest offence by the JFMC.

v. To assist the Member Secretary in maintenance of Proceedings of all meetings of the JFMC and EC and records thereof.

vi. To keep the Member Secretary continuously informed about the day-today activities of the JFMC and the daily progress of work.

vii. To discharge any other function as insured by Range Officer or Forester.

ANNEXURE –B
Form-1
RESOLUTION

We the following villagers of _____ villages (s), hereby resolve to form a JFMC (Vana Smarakshyan Samiti (VSS)/Eco Development Committee (EDC) for the protection and management of the part/whole of _____ forest in accordance with the provisions of the Orissa Joint Forest Management Resolution, 2008. We also undertake not to contravene any provision of the Orissa Forest Act, 1972 and Forest Conservation Act, 1980 and any other Acts and Rules in force.

In case of failure to comply with any of the conditions laid down in the above said Resolution by any of the members of the JFMC, the membership of such member may be cancelled.

NAME OF VILLAGERS **SINGATURE**

1
2
3

Form - 2
RECOMMENDATION FOR FORMATION OF
JOINT FOREST MANAGEMENT COMMITTEE

To
The Divisional Forest Officer _____ division
(Through Forest Range Officer _____ Range)

As per the provision of para 3 ii (a) of the Orissa Joint Forest Management Resolution, 2008, a meeting of the Gram Sabha of _____ village (s) was organized. The concept of Joint Forest Management including all rights, responsibility and benefits that might accrue to the JFMC members was explained in the said meeting. On being satisfied that 60% of adult members of the village are willing and interested to form a JFMC, I Shri _____ Forester of the _____ Section in pursuance to the provision of para 3 ii(d) of the said Resolution hereby recommend for the formation of the Vana Samrakshyana Samiti/Eco Development Committee (EDC) in this village(s). The details of the area are as follows:

1. Name of Committee:
2. Village:
3. Gram Pantheist:
4. C.D. Block:
5. Police Station:
6. Forest Beat:
7. Forest Section:
7. Forest Range:
8. Total Members (list of members enclosed):

i) No of S.T. member _____ iii) No of S.C. member _____
ii) No of women members _____

9. Forest areas proposed to be protected and managed _____ha.
10. Name of the Forest Block _____
11. Comp. No. _____

The Resolution of the Gram Sabha of the village of _____village(s) is attached herewith.

Signature of the Forester

OFFICE OF THE FOREST RANGE OFFICER _____ RANGE
Memo No. _____ Date _____

I forward herewith the Resolution of the villagers of _____ village along with the views of the Forester of _____ section. I recommend for formation of the JFMC in _____ village for the protection and management of _____ ha of forest area in _____ forest block.

Signature of Forest Range Officer

Form: 3
OFFICE OF THE DIVISIONAL FOREST OFFICER _____DIVISION

OFFICE ORDER NO. _____ Date _____

After due consideration of the proposal submitted vide Memo No_____ office Forest Range Officer, _____ Range, and the recommendation of the DLC, I, in exercise powers vested under 3 ii(e) of the Orissa Joint Forest Management Resolution. 2008, accord my approval for constitution of VSS/EDC and order that the _____ Vana Smarakshyana Samiti/ Eco Development Committee for the _____ villager(s) is hereby constituted for protection and management of part/whole of _____forests.

The _____ Vana Smarakshyana Samiti/ Eco Development Committee is registered in this office vide Registration No. _____

Forest Area Schedule:
Extent of Forest Area: ha
Description of Location:

DIVISIONAL FOREST OFFICER
_____ FOREST DIVISION

OFFICE OF THE DIVISIONAL FOREST OFFICER _____ DIVISION
Memo No. _____ Date _____

Copy forwarded to Forest Range Officer _____Range for information and necessary action. He is instructed to demarcate the forest area as per above schedule and depict the area in the topo sheet (1:50000 scale). A copy of the map should be available with the VSS, Member Secretary, and Beat Guard and in the Range Office. Another copy of the map should be submitted to this office for record.

Copy forward to Sarpanch, _____ Gram Pancayat for information and necessary action.

DIVISIONAL FOREST OFFICER
_____ FOREST DIVISION

Form – 4
ORISSA JOINT FOREST MANAGEMENT
RESOLUTION – 2008

- Name of the assigned Forests _____
- Description of Forest produce Quantity
- Source of Procurement of the forest produce _____
- Name of the JFMC Member _____

Date of issue: Destination:
Valid up to:
(Signature of the Authorised Member of the Executive Committee, _____ JFMC)

Signature of the Member Secretary

Form –5

MEMORANDUM OF UNDERSTANDING

1. We the members of the Executive Committee of the Vana Smarakshyana Samiti /Eco Development Committee of _____ village do hereby undertake individually and collectively to perform the duties and shoulder the responsibilities as detailed in the Orissa Joint Forest Management Resolution, 2008, for proper protection, regeneration and management of the forest areas as per the schedule given hereunder.

i. Name of the JFMC
ii. District _____
iii. Forest Division _____
iv. Forest Range:
v. Section :
vi. Beat:
vii. Police station :
viii. Village:
ix. Name of the assigned Forest Block:
x. Legal status of the Forest area:
xi. Area (Ha) of the assigned forest:
xii. Boundaries of the area:

North East
South West

1. 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 Smarakshana Samiti as per the aforesaid resolution. We undertake not to contravene any provision of any Act or Rules in force. In case of failure to comply with any provision of this Resolution by any member of the JFMC, the membership of such member may be cancelled and such member may not be allowed any usufructuary benefits from the date of termination of his/her membership.

2. A copy of the aforesaid Resolution is annexed herewith duly signed by us on every page in proof/evidence of our having read/understood the same in letter and spirit. It is hereby agreed that this MOU will come into effect from _____.

Signature of the Chairperson
_____ JFMC

Signature of R.O.
Range:
Division:

Witnesses:
1.
2.
3.

Witnesses:
1.
2.

ANNEXURE – XXIV

The Orissa Gazette

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FOREST & ENVIRONMENT DEPARTMENT
RESOLUTION
The 9th September, 2011

Sub: Joint Forest Management Resolution, 2011

1. Introduction:

Forests are one of the complex eco-systems of our planet. The role of forests in Conservation of environment and economic prosperity of mankind is well established. Economic growth and environment protection are inextricably linked. For surviving on the earth human beings will have to live in harmony with nature. The need for conservation of environment and protection of forests and wildlife has been enshrined in our Constitute on. Orissa has 61018 Sq. kms of forest area which is 39.18% of the geographical area of the State. The existing forest cover of 31.38 % of its geographical area plays a very signify cantrole in the socio-economic and cultural life of the people of the State. However, over the past few decades, the forests of Orissa are under heavy biotic pressure. The rich biodiversity of the State faces the risk of depletion. Man-animal conflict is on the rise. Hence, conservation and development of the forest eco-systems of Orissa is a priority of the State Government.

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

The State Government enacted the Orissa Village Forest Rules, 1985 which envisaged preparation of a Management Plan for every village forest and soughtco-operation of the community in protection of these forests. In 1988, the State Government passed a resolution to formally introduce a Scheme of Protection of peripheral Reserve Forest areas

with participation of the adjoining villagers by forming a Village Level Forest Protection Committee. The scope of this resolution was enlarged in1990 to include the Protected Forests. To make the forest-people interface more effective, the Government of Orissa in Forest & Environment Department issued a Resolution dated3.7.1993. This resolution dealt, in a fairly exhaustive manner, the involvement of all local communities in protection of adjoining forests, formation of Van Samrakshyana Samiti(V.S.S.), duties and responsibilities of the V.S.S. and their Executive Committees and the role of Forest Department and Gram Panchayats, preparation of Joint Forest Management plans, usufruct benefits for the V.S.S. and provisions of MoU etc. Since these Resolutionsin the past did not cover the Mangrove Wetlands and the Protected Areas (PA) of the State, i.e. National parks and Sanctuaries, and participatory modes of management are needed there too, the 2008 Resolution was issued to extend the participatory approach toall types of forests. Eco-development was adopted as a strategy in order to improve the livelihood of local people and thereby secure their support for conservation.

Participatory Forest Management in JFM mode is an evolving concept encompassing ecological socio-cultural and economic dimensions. People have played an important role in protection and regeneration of forests all over the state of Orissa. Villagers have either formed V.S.Ss as per JFM Resolution or Community Forest Management Groups outside the existing JFM framework. It is desirable that associations of people, whether formed under Government resolutions, or by peoples' own initiative, with the forest conservation as the principal and core objective, are allowed to function smoothly.

Panchayat Extension to Scheduled Area (PESA) Act, 1996, which is applicable to scheduled areas, lays down as follows: "Every Gram Sabha shall be competent to safeguard and preserve the traditions and customs of the people, their cultural identity, community resources and the customary mode of dispute resolution; Every Gram Sabhashall approve the plans, programmers' and projects for social and economic development before such plans, programmers' and projects are taken up for implementation by the Panchayat at the village level and be responsible for the identification or selection of persons as beneficiaries under the poverty alleviation and other programmes." This Actvests the ownership of Minor Forest Produce (MFP) on Gram Panchayats in Scheduled areas. The decision of Government of Orissa to do away with the monopolies in collection and trading in 69 items of MFP is in consonance with the spirit of PESA Act.

The community forest resource has been defined under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (popularly known as Forest Rights Act). As per the said Act, community forest resource means customary common forest land within the traditional and customary boundary of the village and seasonal use of the landscape in case of pastoral communities etc. The Minor forest produce has been defined under the Forest Rights Act which includes all non-timber forest produce of plant origin such as bamboo, brushwood, stumps, cane, tassar, cocoons,honey, wax, lac, tendu or kenduleaf, medicinal plants and herbs, roots, tubers and the like.It be mentioned here that in case of Kendu Leaf, the current policy of Government is to discharge certain responsibilities with a view to protecting the livelihood of forest dependent communities while providing management inputs to facilitate a scale of operation required for adequate value realization and sustainable management process.

Under the Forest Rights Act, the Gram Sabha is to initiate the process of determining the individual and community forest right. Therefore the enactment of FRA provides an opportunity not only to strengthen the existing Participatory Forest conservation and management initiatives but to promote such initiatives in the areas which are devoid of such institutional arrangements. With the changing scenario of Forest Management, increasing awareness among people and experiences gained from the past management practices; it is

now felt necessary that the resolution on Joint Forest Management, 2008 is revised.

2. Selection of Area:

(i) The forests of the State to be covered under this Resolution shall be grouped into the following two categories:

(a) Reserved Forests, Protected forests, Village forests, Revenue forests etc. not covered under Protected Areas.

(b) Protected Areas (National Park and Sanctuaries) excluding Core Areas, and Mangrove Wetlands. The Committee constituted for the first category of forests will be known as Vana Surakshya Samiti (VSS) while the Committee constituted for the second category will be known as Eco-development Committee (EDC).

(ii) While deciding the extent of area to be assigned, the Palli Sabha shall consult the Forest Range Officer concerned and take into account the area customarily being protected and used by the community, the number of adjacent villages, their claims, if any, and users' regime. In case a group of villages decide to constitute one VSS jointly, they may do so. The local Forester will provide the technical input and facilitate the process of identification of the forest area to be managed by the committee.

(iii) In case any change is required in the extent of forest area assigned to the existing VSS formed under the JFM Resolution, 2008, the same can be done in consultation with the village community and the local forest department officials not below the rank of a Forest Range Officer.

3. Constitution of VSS/EDC:

(i) Ordinarily there will be one VSS/EDC for a single village. One VSS may also cover more than one village or there may be more than one committee in a village especially large in size. Other Forest Protection groups, if any would also be covered under this Resolution.

(ii) All adults of the village will be the members of the VSS/EDC. They may pay an enrolment fee determined by the General Body (GB) of VSS/EDC.

(iii) The Palli Sabha shall send its Resolution to the Range Officer concerned regarding constitution of VSS / EDC for his record and communication to the DFO concerned for registration at the Division level.

4. Constitution of the Executive Committee (EC):

(i) The Palli Sabha shall elect the Chairperson, the Vice-Chairperson, the Secretary and the Treasurer and a minimum of other 11 (eleven) members to constitute the Executive Committee. At least 50% of the members of the EC shall be women. The number of SC & ST members in the Executive Body shall be in proportion to their membership in VSS / EDC. There should also be representation from the group of community, who do not have any livelihood support other than depending on the forests.

(ii) Either the Chairperson or Vice-Chairperson shall be a woman.

(iii) The composition of the EC shall be as follows:

1. Chairperson	1 Elected Member
2. Vice-Chairperson	1 Elected Member
3. Secretary	1 Elected Member
4. Treasurer	1 Elected Member
5. Ward Member (s)	concerned *Ex officio* Member (s)
6. Members 1	1 Elected Members
7. Local Forest Guard	1 *Ex officio* Member

(iv) The Range Officer concerned will act as the Returning Officer for conducting the election of the EC. It shall be the responsibility of the Returning Officer to ensure that the representation in the EC is in accordance with reservation specified in Para-i above.

(v) The EC will have tenure of 3 years at a time.

5. Meeting:

(i) General Body (GB)

(a) The GB meeting of the VSS / EDC shall be held at least once in every six months. It can also be called as and when required.

(b) The Secretary with the approval of the Chairperson will convene the meeting of the GB. Ordinarily a 15 days' notice would be necessary for convening themeeting. A copy of the notice will be sent to the Gram Panchayat.

(c) The Chairperson and in his absence the Vice-Chairperson shall preside over the meetings.

(d) 50% of the members of the VSS / EDC will constitute the quorum for the GB. At least one third of the members present should be women.

(e) Under special circumstances, a special meeting of the VSS/EDC can beconvened provided at least one third of the members agree to convene sucha meeting and make such a request to the Chairperson in writing. Where theChairperson does not convene the meeting, the Secretary shall convene theGB meeting with the approval of the Vice-Chairperson. In all such cases, a 3days' notice would be necessary indicating the purpose of the said meeting. The decision in such meeting shall be taken by a minimum of 2/3rd members of VSS / EDC.

(f) The Secretary shall record the proceedings and get them approved by Chairperson. A copy of the proceedings would be either pasted in a register or preserved in a guard file. A copy of the Resolution will be forwarded to the Forest Range Office and the Gram Panchayat under the signature of the Secretary.

(g) The Executive Committee shall be elected by GB at least one month before expiry of its tenure.

(ii) Executive Committee (EC)

(a) EC would meet as often as possible and necessary, but not less than once in two months.

(b) The meeting will be presided over by the Chairperson and in his absence by the Vice-Chairperson.

(b) The quorum for any meeting of the EC shall be 50% of its membership, out of which at least one-third shall be women.

6. Duties and responsibilities of VSS / EDC:

(i) The members of the VSS / EDC shall individually and collectively protect the forest, wildlife and biodiversity.

(ii) The VSS / EDC shall put in necessary efforts so that adjoining catchments area, water resources and other ecologically sensitive areas are protected.

(iii) The VSS/ EDC shall place adequate emphasis on plantation of indigenous medicinal and NTFP species in the forests as well as outside the forest area adjoining the village

(iv) The VSS / EDC shall ensure that the decisions taken in the Palli Sabha to regulate access to community forest resources and stop any activity which adversely affects the wildlife, forests and the biodiversity, are complied with.

(v) The General Body of the VSS /EDC shall have the powers to remove and/or substitute any elected member of the EC by a two third majority of the members if the concerned member does not discharge his/her duties satisfactorily.

7. **Duties and responsibilities of the Executive Committee (EC):**

(i) The EC shall carry out the day-to-day business of the VSS / EDC as per provisions of the Resolution. The EC shall prepare the Micro Plan and Annual Work Plan for the assigned forest area and integrate other developmental activities outside the forest area associated with the forest based livelihood system and get it approved by the VSS / EDC after technical scrutiny by the Forest Range Officer concerned. The EC shall be responsible for managing and implementing the Micro Plan and Annual Plan and other decisions of the General Body of VSS / EDC.

(ii) The EC shall be responsible for protection of the forests assigned to the VSS / EDC and extend their assistance to the Forest Department for apprehending the offenders who commit

forest offences. If the members of the VSS / EDC play a significant role in detection of forest offence and seizure of the forest produce within their village limits, they will be entitled for a fixed percentage of the value of the forest produce (except in case of WL Trophies) so seized as per procedure laid down in Para. - 11(iii).

(iii) The EC in consultation with the GB shall evolve methodology on all issues relating to membership, conflict resolution, prevention of encroachment, exercise of customary rights and use of the permissible forest resources such as NTFP including Bamboo.

(iv) The EC shall be responsible to account for and manage the funds and other resources received from the Government, other agencies and funds internally generated, if any. For this purpose a joint account called VSS account/EDC account shall be opened in any commercial, rural or Co-operative Bank recognised by the RBI or in any post office, which shall be operated, jointly by the Secretary and the Treasurer of the VSS / EDC. Utilization Certificate relating to the expenditure incurred shall be jointly signed by the Chairperson and the Secretary and submitted to the authorities concerned.

(v) The EC shall be responsible for managing funds received by VSS / EDC by maintaining and operating VSS / EDC account as per the procedure detailed in Annexure A.

(vi) The EC shall try to establish marketing linkage for various NTFP items and other micro-enterprise products for securing better returns for the members. The Forest Department will provide necessary support in this regard.

(vii) Annual account of VSS / EDC shall be placed before the GB for its approval.

8. Role of Palli Sabha:

As per the 73rd Amendment of the Constitution, certain powers and responsibilities have been vested on the PRIs. Therefore it is necessary to define the relationship between village level institution like VSS / EDC and the PRI and establish a linkage with the Palli Sabha.

(i) Regarding protection and conservation of forest, wildlife and environment, the EC shall work as a Sub-Committee of Palli Sabha.

(ii) If the work of the EC of any VSS / EDC is found to be detrimental to forest conservation and against the larger and long term interests of the people, the VSS / EDC may recommend for dissolving and reconstituting the EC. The Palli Sabha, on receipt of such recommendation may enquire into the matter and forward its findings to the Divisional Forest Officer for necessary action. The Divisional Forest Officer, after examining the merit will dissolve the EC and advise the GB of VSS / EDC for its reconstitution. Such dissolution will be formally placed by the DFO before the District Level Steering Committee in its next meeting for information.

9. Role of the Forest Department:

(i) To register the VSS / EDCs and maintain close liaison with them.

(ii) To support the VSS / EDCs in identifying and apprehending the forest offender(s).

(iii) To take action as per law in cases where VSS / EDC members have handed over the offender(s) and forest produce involved in the offence.

(iv) To assist in capacity building of VSS / EDC members on different aspects of forest management, planning, silviculture, nursery technology, forest laws, accounting, book keeping, micro-enterprise development, value addition and processing of NTFPs etc.

(v) To provide technical help to the VSS / EDCs in preparation and implementation of the Micro plan/ annual work programme.

(vi) To invite suggestion from the VSS / EDCs while preparing the Working Plan / Management Plan of the concerned Forest Area / Protected Area.

(vii) To sign Memorandum of Understanding with the VSS / EDCs and ensure sharing of benefit as per norms in vogue.

(viii) To establish co-ordination with other departments/agencies for successful implementation of the micro plans and related area development programmes.

(ix) To facilitate the process of discharging the duties and resolving the conflicts by the ECs.

10. Micro Plan:

(i) After constitution of the EC, as soon as possible, a Micro Plan shall be prepared by the

members of the Committee through a participatory process involving VSS Members and with the technical input provided by the field officers of the Forest Department.

(ii) The Micro Plan shall be prepared for conservation and sustainable management of the assigned forests while integrating other developmental activities outside the forest area associated with the forest based livelihood system, with participation and involvement of line departments, wherever necessary.

(ii The Micro Plan will primarily prescribe afforestation with priority for plantation of indigenous medicinal and NTFP species, soil and moisture conservation measures and activities to be undertaken for livelihood support of the forest dependent communities. It may also incorporate formation of SHGs and micro-enterprises that could be undertaken based on locally available resources and may include activities such as:– eco-tourism, farm forestry, Agro forestry, Silvi-pasture development, promotion of fuel-efficient devices, animal husbandry, pisciculture, bee keeping, mushroom cultivation, tassar/lac cultivation etc.

*(iv)*The Micro Plan shall indicate the choice of species in different plantation schemes and models. It shall contain a detailed silvicultural operations plan, which shall be consistent with the prescriptions of the overall working plan covering the area or the Wildlife Management Plan of the Protected Area.

(v) The Micro Plan so prepared shall be in consonance with the existing laws of the land.

(vi) The Micro Plan shall also detail out the various NTFP items that can be collected. This shall be done with due regard to the carrying capacity, productivity and biodiversity of the local eco-system.

(vii) The draft Micro Plan prepared by the EC, will be scrutinized by the Forest Range Officer from the technical, financial and legal point of view. After that the same shall be placed before the GB for deliberation and approval.

11. Usufruct sharing:

(i) The VSS / EDC shall be entitled to the usufructuary benefits from the assigned forests as under:—

(a) Usufructs like fallen leaves, fodder grasses, thatch grass, broom grass, fencing materials, brushwood, fallen lops, tops and twigs to be used as fuel shall be available to the members free of cost.

(b) All intermediate yields in the shape of small wood, poles, firewood etc as may be obtained as a result of silvicultural operations and bamboo harvested in VSS / EDC assigned area shall be made available to the VSS / EDC members in a manner as may be decided by EC. If sold at a price, the funds so obtained shall be deposited in the VSS / EDC account.

(c) In case of Kendu leaves and specified forest produce other than bamboo, if any, the VSS will have the right to collect the same from the assigned forest but these items will be disposed of as per the prevailing provisions of Government and practices.

(d) While maintaining the forest cover in perpetuity, if any major harvest or final felling occurs in the assigned forest, the same shall be taken up by the forest department as per the prescription of the working plan/ duly approved micro plan. In case of natural calamities, harvesting of wind-fallen trees shall be treated as final harvest. Priority will be given to the members of the VSS /EDC for salvaging and harvesting work. Valuation of the produce so obtained shall be done and information shared with the VSS /EDC and the produce will besold / disposed of by the forest department or by agents of the forest department. The VSS / EDC will receive 50% share of the sale price after deduction of proportionate harvesting cost and this will be deposited in the "VSS account". The VSS may also opt for 50% of the forest produce so.

Harvested if it is for their *bonafide* domestic use and they agree to pay the proportionate cost of harvesting.

(e) In case of village woodlots created and maintained by the VSS / EDC on non forest land, all usufructs including interim and rotational harvests shall go to the VSS / EDC.

(f) In the event of a natural calamity occurring in the village there may be a demand for house building materials and other forest produce from the assigned forest. In such cases, the VSS / EDC may go for harvesting the required quantity of timber or other forest produce as a deviation to the Micro Plan, with due approval of the Divisional Forest Officer concerned.

(ii) The EC shall be responsible for the distribution of the usufructuary benefits equitably among the members of the VSS. Need of the group or community, who do not have any livelihood support other than depending on the forests, should be specially considered

(iii) In cases where member/ a group of members of the VSS /EDC play a major role in the collection of intelligence, detection and seizure of illegal forest produce in transit the concerned VSS/EDC shall be entitled to the prescribed percentage of the sale price of the forest produce as per Rule 4 (3) of the Orissa Rewards for Detection of Forest Offences Rules, 2004. Such amount shall be deposited by the DFO in the "VSS account/EDC account" after disposal of the seized produce following due procedure of law.

12. Transit of harvested forest product:

All forest produce requiring permits for transit as per provisions of Orissa Timber and Other Produce Transit Rules, 1980 shall be removed from the assigned forest area in accordance with a permit to be issued jointly by the President and the Secretary in the prescribed format (Form-4). The permit shall be valid only within the limits of the area to which the VSS members belong. A record will be maintained to this effect by the VSS / EDC and the Secretary will keep the local Forest Range Officer informed of the same on a quarterly asis. In case of transportation outside the above limit, the permit will be issued by the competent forest officer on receipt of application from VSS / EDC.

13. Conflict Resolution:

(i) In case of intra village conflict in matters of implementation of Joint Forest Management, the Executive Committee of the VSS/ EDC shall endeavor to amicably resolve the conflict. If it fails to resolve the conflict, it shall bring the same to the notice of the Palli Sabha and try to sort out the issue. If the conflict still remains, the same would be

Referred to the Sub Divisional Level Steering Committee formed in the line of the SDLC under FRA, 2006 and their decisions would be final.

(ii) In case of inter village conflict; the same would be referred to the Sub Divisional Level Steering Committee and their decisions would be final.

14. Memorandum of Understanding (MoU):

(i) To ensure smooth working relationship between the Forest Department and the VSS /EDC and also to bring in a sense of ownership, empowerment and accountability a MoU shall be signed between the FD and VSS / EDC delineating the duties and responsibilities of the parties concerned.

(ii) The Chairperson of the VSS will sign the MoU on behalf of the VSS while the Range Officer concerned will sign the same on behalf of Forest Department. Other members at the EC will also be signatory to the MoU as witness while the concerned local forest officials such as:— the Forester and Forest Guard will sign the MoU as witness.

(iii) The MoU shall be in the prescribed form (Form-5)

15. Steering Committee:

(i) There shall be Steering Committees at the Sub Division Level, District Level and at the State Level.*(ii)* Sub Division Level Steering Committee (SDLC): This committee shall comprise of the following members:—

(a) Sub Collector : Chairperson

(b) Assistant Conservator of Forests: Member Convener

(c) An Officer of the Tribal Welfare Department: Member
in-charge of the Sub-Division
(d) Sub Divisional Police Officer (SDPO): Member
(e) Forest Ranger concerned: Member
(f) Tahashildar concerned: Member
(g) Chairperson of the Panchayat Samiti concerned Member.
(h) Zilla Parishad member: Member
(i) Two Chairpersons/Vice-Chairpersons of: Member

VSS/EDC (to be nominated by the DFO)

(iii) The SDLC will be responsible to resolve all cases of intra village and inter village conflicts as referred to them in regards to smooth functioning of VSS / EDC.12
(iv) The SDLC will meet at least once in every quarter and shall facilitate functioning of the VSS / EDC and provide necessary support and guidance to them.
(v) The SDLC will facilitate the VSS / EDC for protection and sustainable management of forests, forest based livelihood and holistic development of the villages.
(vi) The SDLC may invite the representatives of the committees concerned and other such peoples' representatives, reputed persons / organizations working in the field of forest management to their meetings as per requirement.
(vii) District Level Steering Committee (DLSC): This committee shall comprise of the following members:—
(a) District Collector : Chairperson
(b) Divisional Forest Officers : Member
(Territorial and Wildlife)
(c) ADM dealing with land matters : Member
(d) Deputy Director (Agriculture) : Member
(e) Chief District Veterinary Officer : Member
(f) PD, DRDA : Member
(g) PA, ITDA : Member
(h) District Welfare Officer : Member
(i) Deputy Director Horticulture : Member
(j) Soil Conservation Officer : Member
(k) 5 VSS (Chairperson/ Vice-Chairperson : Member
(at least 2 women) (to be nominated by the DFO)
(viii) The DFO concerned having the jurisdiction over the district headquarters will be the Member Convener of the meetings of DLSC.
(ix) The tenure of the non-official members will be three years.
(x) The DLSC may co-opt NGOs or other experts as members with credibility and experience of working on forest related issues.
(xi) The DLSC will meet at least once in six months and shall facilitate functioning of the VSS / EDC and provide necessary support and guidance to them.
(xii) The DLSC will oversee protection and sustainable management of forests, forest based livelihood and holistic development of the villages.
(viii) The DFO concerned having the jurisdiction over the district headquarters will be the Member Convener of the meetings of DLSC.
(ix) The tenure of the non-official members will be three years.
(x) The DLSC may co-opt NGOs or other experts as members with credibility and experience of working on forest related issues.
(xi) The DLSC will meet at least once in six months and shall facilitate functioning of the VSS / EDC and provide necessary support and guidance to them.

(xii) The DLSC will oversee protection and sustainable management of forests, forest based livelihood and holistic development of the villages.
(xiii) State Level Steering Committee (SLSC): The constitution of the State Level Steering Committee shall be as under:—

1. Minister (Forest) :	Chairperson
2. Chief Secretary :	Vice-Chairperson
3 . Principal Secretary, F & E Department :	Member
4. Principal CCF (O) :	Member
5. PCCF (WL) :	Member
6 . 2 D.F.Os./One RCCF from field to be :	Member
nominated by PCCF (O) on rotation basis	
7 . S ecretary, Revenue Department :	Member
8. Secretary, Rural Development Department :	Member
9 . S e cretary, Home Department :	Member
10. Secretary, PR Department :	Member
1 1 . Secretary, SC & ST Department :	Member
12. Chief Conservator of Forests (Central) :	Member
13. Director, Orissa Watershed :	Member
Development Mission	
14. Two representatives of :	Member
Civil Society Organisations / Experts	
to be nominated by F&E Department	
1 5 . Special Secretary, F& E Department :	Member
16. Chairpersons of two VSS / EDC	
t o b e nominated by the PCCF (O) :	Member
17. CCF (Plan, Programme & Afforestation),	
Office of PCCF, Orissa :	Member-Convener

(xiv) The non-official members of the State Level Steering Committee will have tenure of three years.
(xv) The Committee shall meet at least once in a year to guide the process of participatory forest management.
(xvi) Changes in the Resolution, if any shall be placed before the SLSC for approval and recommendation to Government.

16. Repeal and Savings:

This supersedes Forest & Environment Department Resolution No.17454-1FAffn. 17/2008/F&E., dated the 22nd October, 2008. However, all VSSs already formed under provisions of Forest & Environment Department Resolutions made earlier will be treated as VSS formed under this Resolution.

ORDER

Ordered that the Resolution be published in the Extraordinary issue of the *Orissa Gazette.*

By order of the Governor

AUROBINDO BEHERA
Principal Secretary to Government

ANNEXURE-A

VSS / EDC Account and Procedure of Accounting

(i) The Executive Committee (EC) of the VSS / EDC shall be responsible to account for and manage the funds and other resources received from the Government, other agencies and funds internally generated, if any. For this purpose a joint account called VSS account/EDC account shall be opened in any commercial, rural or Co-operative Bank recognised by the RBI or in any post office, which shall be operated, jointly by the Secretary and the Treasurer of the VSS / EDC. The account will be opened in the style of "(village name/any other prefix) VSS / EDC Account". All money received by the VSS / EDC either in cash or instrument shall be deposited into the account before it is used for any purpose.

(ii) Any withdrawal from the VSS / EDC account can be done only after a specific resolution of the EC in this regard.

(iii) The funds deposited into the VSS / EDC account shall be utilised towards the conservation, development and management of forest, development of the village or for any other purpose ancillary to the implementation of the Micro Plan.

(iv) In case the EC decides to spend the money from the "VSS Account/EDC account" for any other purpose it shall seek the approval of the General Body of the VSS / EDC.

(v) In case of detection of any financial irregularity the General Body may pass a resolution and freeze the VSS / EDC account for a specific period and refer the matter to the Palli Sabha. The Palli Sabha may conduct necessary enquiry and may take required action.

(vi) The Secretary shall be fully responsible for up keeping the Monthly account and maintenance of the Cash Book of the VSS / EDC. The local Forest Officials will provide guidance to the EC, whenever necessary to maintain the account in proper form.

(vii) A quarterly work programme may be drawn up by the EC and implemented subject to availability of funds for the purpose. Funds will be withdrawn accordingly from the VSS / EDC Account.

*(viii)*All vouchers will be passed by the EC and jointly signed by the Secretary and the Treasurer and shall be retained at the VSS / EDC level. The Secretary will prepare the monthly cash account along with an abstract of receipt and expenditure by the 10th of the following month to be approved by the EC.

(ix) Annual receipt and expenditure of the VSS / EDC shall be audited by an auditor to be appointed by the General Body of the VSS / EDC. The annual statement of receipt and expenditure of the VSS / EDC account shall be placed before the GB for its approval. Whenever funds provided by Govt. are utilized, the audited and approved abstract of annual receipt and expenditure shall be communicated by the EC to the concerned RO and DFO or record.

(x) Utilisation Certificate relating to the expenditure incurred out of funds received from Government or any other external agency shall be prepared by the Treasurer and jointly signed by the Chairperson and the Secretary and submitted to the authorities concerned

ANNEXURE -B

Form –1

RESOLUTION

We the following villagers of _____ villages (s), hereby resolve to have formed / reconstituted a Vana Surakshya Samiti (VSS) / Eco Development Committee (EDC) for the protection and management of the part/whole of _____ forest in accordance with the provisions of Para 3 i of the Orissa Joint Forest Management Resolution, 2011. The details of the area are as follows:—

1. Name of Committee:
2. Village:
3. Gram Panchayat:
4. C.D. Block:
5. Police Station:
6. Forest Beat:
7. Forest Section:
8. Forest Range:
9. Total Members (list of members enclosed):

(i) No. of S.T. member _____

(ii) No. of S.C. member _____

(iii) No. of Women members _____

10. Forest areas protected and managed _____ha.
11. Name of the Forest Block _____
12. Comp. No. _____

NAME OF VILLAGERS **SINGATURE**

1.
2.
3.

Form – 2

OFFICE OF THE FOREST RANGE OFFICER _____ RANGE

Memo No. _____ Date _____

FORMATION OF VSS / EDC

The villagers of _____ village (s) have formed / reconstituted the Vana Surakshya Samiti / Eco Development Committee (EDC) as per the provision of Para 3 i of the Orissa Joint Forest Management Resolution, 2011 for the protection and management of the part/whole of _____ forest. The details of the area are as follows:—

1. Name of Committee:
2. Village:
3. Gram Panchayat:
4. C.D. Block:
5. Police Station:
6. Forest Beat:

7. Forest Section:
8. Forest Range:
9. Total Members (list of members enclosed):
(i) No. of S.T. member _____
(ii) No. of S.C. member _____
(iii) No. of Women members _____
10. Forest areas proposed to be protected and managed _____ha.
11. Name of the Forest Block _____
12. Comp. No. _____

The Resolution of the Palli Sabha of the village of _____village(s) is Forwarded herewith for registration of the VSS / EDC in accordance with the provision of Para 9 i of the Orissa Joint Forest Management Resolution, 2011.Signature of Forest Range Officer

Signature of Forest Range Officer

Form – 3

OFFICE OF THE DIVISIONAL FOREST OFFICER _____DIVISION

OFFICE ORDER NO. _____ Date _____

In accordance with the provision of Para 9 i of the Orissa Joint Forest Management Resolution, 2011, the _____ Vana Surakshya Samiti / Eco Development Committee is here by registered in this office vide Registration No. _____

Forest Area Schedule:

Extent of Forest Area: ha

Description of Location:

DIVISIONAL FOREST OFFICER _____
FOREST DIVISION

OFFICE OF THE DIVISIONAL FOREST OFFICER _____ DIVISION

Memo No. _____ Date _____

Copy forwarded to Forest Range Officer _____Range for information and necessary action. He is instructed to demarcate the forest area as per above schedule anddepict the area in the topo sheet (1:50000 scale). A copy of the map should be available with the VSS / EDC, and in the Range Office. Another copy of the map should be submitted to this office for record.

Copy forward to Sarpanch, _____ Gram Panchayat for information and necessary action.

DIVISIONAL FOREST OFFICER _____
FOREST DIVISIO

Form – 4

PERMIT UNDER THE ORISSA JOINT FOREST MANAGEMENT RESOLUTION – 2011

- Name of the assigned Forests _____
- Description of Forest produce Quantity
- Source of Procurement of the forest produce _____
- Name of the VSS / EDC Member _____

Date of issue: Destination:

Valid up to:

Signature of the President Signature of the Secretary

_____ VSS / EDC _____ VSS / EDC

Form –5

MEMORANDUM OF UNDERSTANDING

1. We the members of the Executive Committee of the Vana Surakshya Samiti /Eco Development Committee of _____ village and the Officials of _____ Forest Range under _____ Forest Division have come together to collaborate and perform the duties and shoulder the responsibilities as detailed in the Orissa Joint Forest Management Resolution, 2011, for protection, and sustainable management of the forest areas as per the schedule given hereunder.

i. Name of the VSS / EDC
ii. Registration N.
iii. District _____
iv. Forest Division _____
v. Forest Range:
vi. Section :
vii. Beat:
viii. Police Station :
ix. Village:
x. Name of the assigned Forest Block:
xi. Legal status of the Forest area:
xii. Area (Ha) of the assigned forest:
xiii. Boundaries of the area:

North East
South Wes

2. It is hereby agreed by and between us to abide by the provisions of JFM Resolution, 2011.
3. We undertake to function in consonance with the existing laws of the land.
4. A copy of the aforesaid Resolution is annexed herewith duly signed by us on every page in proof/evidence of our having read/understood the same in letter and spirit. It is hereby agreed that this MoU will come into effect from _____.

Signature of the Chairperson
_____ VSS / EDC

Witnesses:
1.
2.
3.

Signature of R.O.

Range:
Division:
Witnesses:

1.
2.
3.

ANNEXURE-XXV

Plantation Survey Report						
Range:- Dhenkanal Range						
Year	Scheme/ Funding Agency	location (RF/DPF/Khesra Forest/Revenue Land)	Area (In Hectare)	Species Planted	Planting Agency	Survival precentage
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2004-05	C A	Kankadaha R.F	15 Ha	Mixd Plantation	D.F.O	60%
2004-05	C A	Godabolua R.F	15 Ha	Mixd Plantation	D.F.O	54%
2006-07	B- Eco. Plant	Tamada R.F	25	Mixd Plantation	D.F.O	67%
2006-07	CA	Megha R.F	35 Ha	Mixd Plantation	D.F.O	60%
2007-08	CA	Jaripal R.F	30 Ha	Mixd Plantation	D.F.O	72%
2007-08	CA	Ghanbaja R.F	15 Ha	Mixd Plantation	D.F.O	61%
2007-08	12 th F.C plant	Charkhola R.F	15 Ha	Mixd Plantation	D.F.O	74%
2007-08	CA	Godabolua R.F	30 Ha	Mixd Plantation	D.F.O	54%
2007-08	12 th F.C plant	patapuri R.F	35 Ha	Mixd Plantation	D.F.O	64%
2008-09	B- Eco.Plant	Godabolua R.F	40 Ha	Mixd Plantation	D.F.O	53%
2008-09	CA	Sptasajya R.F	30 Ha	Mixd Plantation	D.F.O	65%
2008-09	CA	Nimidha R.F	30 Ha	Mixd Plantation	D.F.O	72%
2008-09	CA	Megha R.f	15 Ha	Mixd Plantation	D.F.O	66%
2008-09	CA	Kankadaha R.F	35 Ha	Mixd Plantation	D.F.O	68%
2009-10	CA	jaripal R.F	30 Ha	Mixd Plantation	D.F.O	72%
2009-10	CA	Matiamundia R.f	25	Mixd Plantation	D.F.O	71%
2009-10	B- Eco. Plant	Godabolua R.F	25 Ha	Mixd Plantation	D.F.O	74%
2009-10	CA	Megha R.f	25 Ha	Mixd Plantation	D.F.O	72%
2010-11	CAMPA	Sptasajya R.F	60 Ha	Mixd Plantation	D.F.O	75%
2010-11	CA	Matiamundia R.F	40 Ha	Mixd Plantation	D.F.O	72%
2010-11	CA	Kotaberena R.F	40 Ha	Mixd Plantation	D.F.O	75%
2010-11	CA	Mayuri R.F	40 Ha	Mixd Plantation	D.F.O	74%
2010-11	CAMPA	Kotaberena R.F	120 Ha	Mixd Plantation	D.F.O	76%
2011-12	B- Eco. Plant	Charkhola R.F	60 Ha	Mixd Plantation	D.F.O	74%
2011-12	CA	Tamanda R.F	100 Ha	Mixd Plantation	D.F.O	77%

Range:- Hindol Range

Year	Scheme/ Funding Agency	location (RF/DPF/Khesra Forest/Revenue Land)	Area (In Hectare)	Species Planted	Planting Agency	Survival precentage
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2001-02	J.V.P Plant	Kandhra R.F	20Ha	Mixd Plantation	D.F.O	42%
2002-03	J.V.P plant	Kandhra R.F Near (Sapua Dam)	10Ha	Mixd Plantation	D.F.O	68%
2002-03	J.V.P plant	Koi R.F Near (Tantichra)	10Ha	Mixd Plantation	D.R.D.A	77%
2003-04	B- Eco Plant	Kandhra R.F (Comptt-15)	20Ha	Teak, Sissoo, Bamboo	D.F.O	85%
2004-05	C A Plant	Nandania R.F	20Ha	Teak	D.F.O	83%
2006-07	C A	Ambithi R.F	35Ha	Mixd Plantation	D.F.O	50%
2007-08	12th F.C Grant	Kandhara R.F (Comppt-8&9)	150Ha	Mixd Plantation	D.F.O	71%
2007-08	12th F.C Grant	Hitinda R.F Kandhara R.F & Near Khanda Village	65Ha	Bamboo Plantation	D.F.O	68%
2007-08	12th F.C Grant	Hitinda R.F Kandhara R.F & Near Khanda Village	135Ha	Bamboo Plantation	D.F.O	68%
2007-08	CA Plant	Kandhara R.F (Comppt-15) Near Village Gobindapur	20Ha	Mixd Plantation	D.F.O	78%
2007-08	12th F.C Grant	Kai R.F Near village (Sarasinga)	30Ha	Mixd Plantation	D.F.O	41%
2008-09	N B Mission	Kalipoi V.S.S V.F	5Ha	Bamboo Nutons	D.F.O	79%
2008-09	Eco Plant	Kandhara R.F (Comptt-10)	50Ha	Teak. Bamboo Sissoo	D.F.O	69%
2008-09	CA	Kai R.F	40Ha	Mixd Plantation	D.F.O	75%
2009-10	B- Eco Plant	Kandhara R.F (Comptt-13)	25Ha	Teak, Sissoo, Bamboo	D.F.O	78%
2009-10	CA	Kandhara R.F (Comptt-13)	25Ha	Mixd Plantation	D.F.O	71%
2009-10	N.R.E.G. S	Panchapada V.F	20Ha	Salia Bamboo	D.F.O	74%
2010-11	CA	Kai R.F Near Village Nuabaga	25Ha	Mixd Plantation	D.F.O	80%
2010-11	CAMPA Plant	Kandhara R.F Near Kanaka Rajanga	60Ha	Mixd Plantation	D.F.O	75%

2010-11	CAMPA Plant	Kandhara R.F (Comptt-1&2)	60Ha	Mixd Plantation	D.F.O	79%
2010-11	CA	Potalu R.F Near Village	35Ha	Mixd Plantation	D.F.O	77%
2010-11	CAMPA Plant	Kai R.F & V.F	70Ha	Mixd Plantation	D.F.O	73%
2010-11	N B Mission	Ambithi V.F	30Ha	Bamboo Valgoris	D.F.O	48%
2011-12	CAMPA Plant	Kandhara R.F Near Village Gobindapur	50Ha	Mixd Plantation	D.F.O	79%
2011-12	B- Eco Plant	Kandhara R.F (Comptt-12)	40Ha	Mixd Plantation	D.F.O	70%
2011-12	13th F.C Grant	Kai R.F Ostapal V.S.S	25Ha	Mixd Plantation	D.F.O	80%
2011-12	N B Mission	Ranjagda V.F	30Ha	Bamboo	D.F.O	56%
2011-12	MGNREGS	Panchapada V.F	20Ha	Bamboo	D.F.O	72%
2011-12	13th F.C Plant	South western of Village Babandha	40Ha	Mixd Plantation	D.F.O	79%
2011-12	13th F.C Plant	Hitinda R.F	40Ha	Mixd Plantation	D.F.O	83%
2011-12	13th F.C Plant	Kandhara R.F (Fasigan Village)	30Ha	Mixd Plantation	D.F.O	83%
2011-12	O.B.D.P Bambbo Plant	Balishai V.F	20Ha	Salio Bamboo	D.F.O	84%
2011-12	CA	Nandania R.F	30Ha	Mixd Plantation	D.F.O	69%
2011-12	Compenstry Afforestation	Bompo R.F	40Ha	Mixd Plantation	D.F.O	78%
2011-12	CA	Nandinia R.F	30 Ha	Teak, Phasi, Karanja, Sal, Chakhunda, Acacia, Mango, Anla	D.FO	69%
2012-13	13 th FC Plant	Kandha R.F (Near Village Gobindapur)	40Ha	Mixd Plantation	D.FO	77%
2012-13	B-Economic Plant	Kandhra R.F Comptt No-17	50Ha	Mixd Plantation	D.FO	87%
2012-13	13th F.C Plant	Potalu R.F South Westren side of village Brahmanipal	40Ha	Mixd Plantation	D.FO	84%
2012-13	T.F.C Grant	Nandania R.F	40Ha	Mixd Plantation	D.FO	73%
2012-13	N B Mission	Pada Village Forest	25Ha	Salia Bamboo	D.FO	79%

2012-13	OBDP Plant	Alusing V.F	20Ha	Salia Bamboo	D.FO	77%
2012-13	MGNREGS	Bompo R.F	10Ha	Mixd Plantation	D.FO	79%
2012-13	13 th FC Plant	Kandha R.F	20Ha	Mixd Plantation	D.FO	83%
2012-13	13 th FC Plant	In side Hitinda R.F	40Ha	Mixd Plantation	D.FO	82%

Range:- Sadangi Range						
Year	Scheme / Funding Agency	location (RF/DPF/Khesra Forest/Revenue Land)	Area (In Hectare)	Species Planted	Planting Agency	Survival precentage
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1991-92	J.R.Y Plant	Lahada B R.F	15 Ha	Teak, Mixed	D.F.O	71%
1991-92	T.R.W comm.	Raigoda R.F	125 Ha	Mixd Plantation	O.F.D.C	36%
1994-95	A- Eco Plant	Lahada B R.F	3 Ha	Teak,Sisso, Etc.	D.F.O	0.2%
2001-02	Jag.Vana Prakalpa (JVP)	Sadangi B R.F	5 Ha	Mixd Plantation	D.R.D.A	53%
2001-02	C.R.F Dro Sch	Sadangi B R.F	10 Ha	Mixd Plantation	D.F.O	65%
2002-03	JVP	Sadangi B R.F	5 Ha	Mixd Plantation	D.F.O	28%
2002-03	B- Eco Plant	Gondia R.F	20Ha	Teak,	D.F.O	35%
2003-04	SGRY(JVP)	Aswakhola R.F	10 Ha	Mixd Plantation	D.F.O	53%
2004-05	Compenstry Afforestation (CA)	Sadangi B R.F	15 Ha	Mixd Plantation	D.F.O	56%
2005-06	MFFWP Bambbo Plant	Sadangi K.f	6 Ha	Salia Bamboo	D.F.O	8%
2005-06	M.F.F. W.P Bambbo Planta	Atinda K.F	5 Ha	Salia Bamboo	D.F.O	56%
2006-07	CA	Aswakhola R.F	11 Ha	Mixd Plantation	D.F.O	73%
2006-07	R.D.F Plant	Lahada R.F Palaganda	25 Ha	Mixd Plantation	D.F.O	43%
2006-07	CA	Rupabalia R.F	24 ha	Mixd Plantation	D.F.O	65%
2007-08	12 th F.C Grant	lahada B R.F	160 Ha	Mixd Plantation	D.F.O	40%
2007-08	12 th F.C Grant	Gondia R.F	35 Ha	Mixd Plantation	D.F.O	56%
2008-09	B- Eco Planst	Bega R.F	30 Ha	Mixd Plantation	D.F.O	90%
2009-10	O.B.D.P	Rupabalia R.F	10 Ha	Mixd Plantation	D.F.O	-
2010-11	CAMPA	Aswakhola R.F	55 Ha	Mixd Plantation	D.F.O	80%
2010-11	CAMPA	Lahada B R.F	60 Ha	Mixd Planation	D.F.O	65%

2011-12	13 th F.C Grant	Lahada B R.F	40 Ha	Mixd Plantation	D.F.O	40%
2011-12	13 th F.C Grant	Aswakhola R.F	25 Ha	Mixd Plantation	D.F.O	88%
2011-12	CAMPA	Bega R.F	40 Ha	Mixd Plantation	D.F.O	85%

Range:- Mahabirod Range						
Year	Scheme/ Funding Agency	location (RF/DPF/Khesra Forest/Revenue Land)	Area (In Hectare)	Species Planted	Planting Agency	Survival precentage
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2001-02	Block Plant	Talcher Bordar R.F	15 Ha	Mixed Plant	D.F.O	39%
2004-05	CA	Dolia R.F	20 Ha	Mixed Plant	D.F.O	48%
2004-05	CA	Talcher Bordar R.F	15 Ha	Mixed Plant	D.F.O	66%
2006-07	CA	Khalpal R.F	20 Ha	Mixed Plant	D.F.O	75%
2006-07	CA	Anantapur R.F.	20 Ha	Mixed Plant	D.F.O	35%
2007-08	CA	Barabank (S) R.F	20Ha	Mixed Plant	D.F.O	47%
2007-08	12 th F.C	Anatapur R.F,	50Ha	Mixed Plant	D.F.O	59%
2007-08	12 th F.C	Talcher Bordar R.F	30Ha	Mixed Plant	D.F.O	56%
2008-09	B-Eco Plant	Anantapur R.F	50Ha	Teak, Sisso Etc,	D.F.O	18%
2009-10	CA	Barabank (N) R.F	25 Ha	Mixed Plant	D.F.O	62%
2010-11	CAMPA	Barabank (S) R.F	40 Ha	Mixed Plant	D.F.O	76%
2010-11	CAMPA	Dolia R.F	40 Ha	Mixed Plant	D.F.O	64%
2010-11	CA	Khalapal R.F	25 Ha	Mixed Plant	D.F.O	66%
2012-13	T.F.C. Grant	Dolia R.F.	30Ha	Mixed Plant	D.F.O.	72%
2012-13	MGNREGS	Kundhekhola K.F	10 ha	Mixed Plant	D.F.O	84%
2012-13	T.F.C. Grant	Anantapur R.F.	40 Ha	Mixed Plant	D.F.O.	79%

Range:- Kamakhya Nagra (W) Range						
Year	Scheme/ Funding Agency	location (RF/DPF/Khesra Forest/Revenue Land)	Area (In Hectare)	Species Planted	Planting Agency	Survival precentage
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1994-1995	J.R.Y	Jatia V.F	10Ha	Bambbo	D.F.O	38%
1999-2K	CA	Kantapal R.F	8Ha	Mixd Plantation	D.F.O	29%
2000-01	J.V.P	Sunajhari R.F	12 Ha	Mixd Plantation	DRDA	52%
2001-02	J.V.P	Siarimalia	11.75 Ha	Mixd Plantation	D.F.O	26%
2001-02	J.V.P	Anlabereni R.F	25Ha	Mixd	DRDA	60%

				Plantation		
2001-02	J.V.P	Anlabereni R.F	8Ha	Mixd Plantation	DRDA	75%
2001-02	CA	Jhanjirberena K.F	8Ha	Mixd Plantation	D.F.O	65%
2003-04	J.V.P	Anlabereni R.F	15Ha	Mixd Plantation	D.F.O	74%
2003-04	B- Eco	Kankili R.F	20Ha	Mixd Plantation	D.F.O	42%
2004-05	CA	Machia	15 Ha	Mixd Plantation	D.F.O	82%
2004-05	CA	Anatapur R.F	20Ha	Mixd Plantation	D.F.O	67%
2005-06	CA	Machia R.f	13Ha	Mixd Plantation	D.F.O	84%
2005-06	NTFWP	Anatapur R.F	15 Ha	Mixd Plantation	D.F.O	53%
2006-07	CA	Anatapur R.F	20Ha	Mixd Plantation	D.F.O	71%
2006-07	CA	Anlabereni R.F	20Ha	Mixd Plantation	D.F.O	72%
2007-08	CA	Sunajhari R.F	25Ha	Mixd Plantation	D.F.O	74%
2007-08	12th F.C	Sunajhari R.F	45 Ha	Mixd Plantation	D.F.O	67%
2007-08	12th F.C Grant	Anatapur R.F	35Ha	Mixd Plantation	D.F.O	53%
2009-10	CA	Suniamaru R.F	30Ha	Mixd Plantation	D.F.O	54%
2010-11	CA	Suniamaru R.F	30Ha	Mixd Plantation	D.F.O	89%
2010-11	CAMPA	Anlabereni R.F	50Ha	Mixd Plantation	D.F.O	81%
2010-11	CA	Anatapur R.F	20Ha	Mixd Plantation	D.F.O	91%
2010-11	B- Eco	Kankili R.F	50Ha	Mixd Plantation	D.F.O	73%
2012-13	13th F.C	Rangamatia K.F	20Ha	Mixd Plantation	D.F.O	92%

Range:- Kamakhya Nagra (E) Range

Year	Scheme/ Funding Agency	location (RF/DPF/Khesra Forest/Revenue Land)	Area (In Hectare)	Species Planted	Planting Agency	Survival precent age
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1993-94	A Eco	Rangamatia K.F	20Ha	Mixd Plant	D.F.O	50%
1994-95	M.F.P	Jiridamali R.F	12 Ha	Mixd Plant	D.F.O	15%
1994-95	M.F.P	Jiridamali R.F	28 Ha	Mixd Plant	DRDA	5%
1995-94	A Eco	Ranjagada R.F	25Ha	Mixd Plant	D.F.O	71%
1996-97	S.P Bambbo	Ranjagada RF	10 ha	Bambbo	D.F.O	28%
1996-97	A Eco	Ranjagada RF	12 Ha	Teak	D.F.O	80%
1997-98	A Eco	Ranjagada RF	2 Ha	Teak/Siso	D.F.O	68%
1997-98	A Eco	Ranjagada RF	12 Ha	Teak	D.F.O	72%
1998-99	A Eco	Ranjagada RF	18 Ha	Mixd Plant	D.F.O	62%
1998-99	CA	Patabeda	4 Ha	Mixd Plant	D.F.O	51%

2002-03	B- Eco	Ranjagada RF	10 ha	Teak Plant	D.F.O	58%
2002-03	J V.P	Dhalpasi	15 Ha	Mixd Plant	D.F.O	52%
2003-04	J V.P	Ranjagada RF	10 ha	Mixd Plant	D.F.O	65%
2003-04	J V.P	Raibola R.F	15 Ha	Mixd Plant	D.F.O	67%
2004-05	CA	Ranjagada RF	15 Ha	Mixd Plant	D.F.O	68%
2004-05	CA	Rupabda R.F	4 Ha	Mixd Plant	D.F.O	35%
2004-05	CA	Jiridamali R.F	25Ha	Mixd Plant	D.F.O	67%
2005-06	N.F.F.W	Haridapada	15 Ha	Mixd Plant	D.F.O	64%
2005-06	CA	Rangagada R.F	12Ha	Mixd Plant	D.F.O	73%
2007-08	CA	Maulabhanga R.F	13 Ha	Mixd Plant	D.F.O	71%
2006-07	CA	Maulabhanga R.F	25Ha	Mixd Plant	D.F.O	60%
2006-07	CA	Jiridamali R.F	15 Ha	Mixd Plant	D.F.O	59%
2007-08	CA	Makuakateni	20Ha	Mixd Plant	D.F.O	60%
2007-08	TFC	Maulabhanga B R.F	30 Ha	Mixd Plant	D.F.O	76%
2007-08	TFC	Maulabhanga R.F	20Ha	Mixd Plant	D.F.O	69%
2008-09	CA	Jiridamali R.F	30 Ha	Mixd Plant	D.F.O	74%
2009-10	CA	Maulabhanga R.F	25Ha	Mixd Plant	D.F.O	59%
2010-11	CAMPA	Maulabhanga R.F	35 Ha	Mixd Plant	D.F.O	57%
2010-11	CAMPA	Maulabhanga R.F	35 Ha	Mixd Plant	D.F.O	57%
2010-11	CAMPA	Maulabhanga R.F	45 Ha	Mixd Plant	D.F.O	60%
2010-11	CA	Maulabhanga R.F	15 Ha	Mixd Plant	D.F.O	74%
2011-12	CAMPA	Jiridamali R.F	20Ha	Mixd Plant	D.F.O	81%
2012-13	13 th F.C.	Halandirundi R.F.	20Ha	Mixd Plant	D.F.O	86%

Range:- Bhuban Range						
Year	Scheme/ Funding Agency	location (RF/DPF/Khesra Forest/Revenue Land)	Area (In Hectare)	Species Planted	Planting Agency	Survival precent age
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2003-04	A Eco	Balibo R.F.	15 Ha	Mixd Plant	D.F.O	73%
2003-04	B- Eco	Dholapada R.F.	5 Ha	Mixd Plant	D.F.O	62%
2004-05	CA	Sunajahari R.F.	20Ha	Mixd Plant	D.F.O	48%
2004-05	CA	Bhuban R.F	20Ha	Mixd Plant	D.F.O	59%
2006-07	CA	Pedipathara	35 Ha	Mixd Plant	D.F.O	70%
2007-08	12 th F.C	Kumurusingha	15 Ha	Mixd Plant	D.F.O	66%
2007-08	CA	Bhairpur R.F	20Ha	Mixd Plant	D.F.O	64%
2007-08	12 th F.C	Bhuban R.F	35 Ha	Mixd Plant	D.F.O	50%
2008-09	CA	Tipiloe R.F	30 Ha	Mixd Plant	D.F.O	66%
2009-10	CA	Tipiloe R.F	30 Ha	Mixd Plant	D.F.O	76%
2010-11	CA	Tipiloe R.F	30 Ha	Mixd Plant	D.F.O	79%
2010-11	CAMPA	Balibo R.F.	85ha	Mixd Plant	D.F.O	82%
2010-11	CAMPA	Bhairpur R.F	65 Ha	Mixd Plant	D.F.O	89%
2011-12	CA	Balibo R.F.	27 Ha	Mixd Plant	D.F.O	87%
2011-12	CA	Tipiloe R.F	30 Ha	Mixd Plant	D.F.O	87%
2011-12	13 th F.C.	Balibo R.F.	20Ha	Mixd Plant	D.F.O	88%
2012-13	B- Eco	Tipiloei R.F	20 Ha	Mixd Plant	D.F.O	86%
2012-13	B- Eco	Dholapada R.F.	10 Ha	Mixd Plant	D.F.O	85%

2012-13	B- Eco	Dholapada R.F.	30 Ha	Mixd Plant	D.F.O	89%

ANNEXURE- XXVI

. COMPARTMENT WISE MAP (TOPO) REFERENCES OF ALL FOREST BLOCKS			
Dhenkanal Range	**Comptt.No.**	**Management 1:25000**	**Working Plan 1:50000**
Charkhola RF	1	73 H/10 NW	73 H/10
	2	73 H/10 NW,73 H/10 SW, 73 H/10 SE	73 H/10
Ghantabaja RF	1	73 H/10 SW ,73 H/6 NE, 73 H/6 SE	73 H/6
	2	73 H/6 NE , 73 H/6 SE	73 H/6
	3	73 H/6 NE , 73 H/6 SE	73 H/6
	4	73 H/10 SW, 73 H/6 NE, 73 H/6 SE	73 H/10 , 73 H/6
Saptasajya	1	73 H/10 SW	73 H/10
	2	73 H/10 SW	73 H/10
	3	73 H/10 SW	73 H/10
Mayuri	1	73 H/10 NW , 73 H/10 SW	73 H/10
	2	73 H/10 SW	73 H/10
Nimidha	1	73 H/5 SW	73 H/10
Godabalua	1	73 H/10 SE	73 H/10
Patapuri	1	73 H/10 SE , 73 H/10 NE	73 H/10
Megha	1	73 H/10 NE, 73 H/10 NW	73 H/10
Korian	1	73 H/10 NW	73 H/10
Kankadahada	1	73 H/10 SW	73 H/10
Tamanda	1	73 H/6 NE,73 H/10 NW	73 H/10,73 H/6
Jaripal	1	73 H/6 SE	73 H/6
Belabania	1	73 H/6 SE	73 H/6
Sulia	1	73 H/6 SE	73 H/6
Matiamundia	1	73 H/7 NE, 73 H/6 NE, 73 H/6 SE	73 H/6,73 H/7
Kotaberena	1	73 H/6 NE,73 H/6 SE	73 H/6
Matharagadi	1	73 H/6 NE, 73 H/10 NW	73 H/6
Kapilas	1	73 H/10 SE	73 H/10
	2	73 H/10 SE,73 H/10 NE	73 H/10
	3	73 H/10 NE	73 H/10
	4	73 H/10 NE	73 H/10
Kapilas Range			
Kapilas	5	73 H/10 NE	73 H/10
	6	73 H/10 NE	73 H/10
	7	73 H/10 NE, 73 H/14 NW	73 H/10,73 H/14
	8	73 H/10 NE,H/14 NW	73 H/10, 73 H/14
	9	73 H/10 NE,73 H/14 NW	73 H/10, 73 H/14
	10	73 H/14 NW	73 H/14
	11	73 H/14 NW	73 H/14
	12	73 H/14 NW	73 H/14
	13	73 H/14 NW	73 H/14
	14	73 H/14 NW	73 H/14
	15	73 H/14 NW	73 H/14
	16	73 H/14 NW	73 H/14
	17	73 H/14 NW	73 H/14

	18	73 H/14 NW	73 H/14
	19	73 H/14 NW,73 H/14 NE	73 H/14
	20	73 H/14 NW,73 H/14 NE	73 H/14
	21	73 H/14 NW,73 H/14 NE	73 H/14
	22	73 H/14 NW,73 H/14 NE	73 H/14
	23	73 H/14 NW,73 H/14 NE	73 H/14
	27	73 H/14 NE,73 H/13 SE	73 H/14,73 H/13
Ramei	1	73 H/14 NW	73 H/14
	2	73 H/14 NW	73 H/14
	3	73 H/14 NW	73 H/14
	4	73 H/14 NW	73 H/14
Sarangi Range			
Kapilas	24	73 H/14 NE	73 H/14
	25	73 H/14 NE	73 H/14
	26	73 H/14 NE	73 H/14
	28	73 H/13 SE,73 H/14 NE	73 H/14,73 H/13
Sadangi 'A'	1	73 H/13 SW	73 H/13
Sadangi 'B'	1	73 H/13 SW	73 H/13
Lahada 'A'	1	73 H/13 SE,73 H/14 NE, 73 H/13 SW	73 H/13,73 H/14
Lahada 'B'	1	73 H/13 SE, 73 H/13 SW	73 H/13
Aswakhola	1	73 H/13 SW	73 H/13
	2	73 H/13 SW	73 H/13
	3	73 H/13 SW	73 H/13
	4	73 H/13 SW	73 H/13
	5	73 H/13 SW	73 H/13
	6	73 H/13 SW	73 H/13
Raigoda	1	73 H/13 SW,73 H/13 SE	73 H/13
Gondia	1	73 H/13 SW,73 H/14 NW, 73 H/14 NE	73 H/13,73 H/14
Baliposi	1	73 H/13 SE	73 H/13
Nischinta	1	73 L/1 SW,73 L/13 SE, 73 H/13 SE	73 L/1,73 L/13
Raitola	1	73 H/9 SE,73 H/13 SW	73 H/9, 73 H/13
Bega	1	73 H/13 SE	73 H/13
Rupabalia	1	73 H/10 NE,73 H/9 SE	73 H/10, 73 H/9
Khankira	1	73 H/13 SE,73 H/14 NE	73 H/13, 73 H/14
K.Nagar (East) Range			
Birasal	1	73 H/9 NE	73 H/9
Jiridamali	1	73 H/9 NW, 73 H/9 NE	73 H/9
Maulabhanja	1	73 H/9 NE	73 H/9
Ranjagarh	1	73 G/12 NW,73 G/12 SW	73 G/12
	2	73 G/12 NW,73 G/12 SW	73 G/12
	3	73 G/12 SW	73 G/12
	4	73 G/12 SW,73 G/12 SE	73 G/12
	5	73 G/12 SE	73 G/12
	6	73 G/12 SE	73 G/12
	7	73 G/12 SE,73 G/12 SW	73 G/12
	8	73 G/12 SW	73 G/12
	9	73 G/12 SW	73 G/12
	10	73 G/12 SW	73 G/12
	11	73 G/12 SW, 73 G/12 SE	73 G/12
	12	73 G/12 SE	73 G/12

	13	73 G/12 SE	73 G/12
	14	73 G/12 SE	73 G/12
	15	73 G/12 SE	73 G/12
	16	73 G/12 SE	73 G/12
	17	73 G/12 SE	73 G/12
	18	73 G/12 SE	73 G/12
	19	73 G/12 SE	73 G/12
	20	73 G/12 SE	73 G/12
	21	73 G/12 SE	73 G/12
	22	73 G/12 SE	73 G/12
	23	73 G/12 SE,73 G/12 NE	73 G/12
	24	73 G/12 SE,73 G/12 NE	73 G/12
	25	73 G/12 SE,73 G/12 NE	73 G/12
	26	73 G/12 NE	73 G/12
	27	73 G/12 NE	73 G/12
	28	73 G/12 NE	73 G/12
	29	73 G/12 NE	73 G/12
	30	73 G/12 NE	73 G/12
	31	73 G/12 NE	73 G/12
	32	73 G/12 NE	73 G/12
	33	73 G/12 NE,73 G/12 NW, 73 G/12 SW	73 G/12
Bhuban Range			
Bhairpur	1	73 H/9 SW,73 H/9 SE	73 H/9
Tipiloi	1	73 H/9 NE	73 H/9
Dhalapada	1	73 H/13 NW	73 H/13
Balibo	1	73 H/13 NE	73 H/13
Bhuban	1	73 H/13 NW	73 H/13
Sunajhari (part)	4	73 H/9 SW,73 H/9 NW	73 H/9
	5	73 H/9 SW	73 H/9
	6	73 H/9 SW,73 H/9 NW, 73 H/9 SE	73 H/9
K.Nagar(West) Range			
Sunajhari (part)	1	73 H/9 SW,73 H/9 NW	73 H/9
	2	73 H/9 SW	73 H/9
	3	73 H/9 SW	73 H/9
Anlabereni	1	73 H/9 SW	73 H/9
Machhia	1	73 H/9 SW	73 H/9
Suniamaru	1	73 H/9 SW,73 H/9 NW	73 H/9
Kankili	1	73 H/5 NE,73 H/5 SE	73 H/5
Siarimalia	1	73 H/5 NE	73 H/5
Kadalipal	1	73 H/5 SE	73 H/5
Madhi	1	73 H/9 NW	73 H/9
Nandabir	1	73 H/5 NE	73 H/5
Sundarakhol	1	73 H/5 NE,73 H/5 SE	73 H/5
	2	73 H/5 NE	73 H/5
	3	73 H/5 NE,73 H/5 SE	73 H/5
	4	73 H/5 NE,73 H/5 SE	73 H/5
	5	73 H/9 SW,73 H/5 SE	73 H/9,73 H/5
	6	73 H/9 SW,73 H/5 SE	73 H/9,73 H/5
Anantapur (part)	1	73 H/9 NW	73 H/9
	2	73 H/9 NW	73 H/9

	3	73 H/9 NW	73 H/9
	4	73 H/9 NW	73 H/9
	5	73 H/9 NW	73 H/9
	6	73 H/9 NW,73 G/12 SW	73 H/9, 73 G/12
	7	73 H/9 NW,73 G/12 SW	73 H/9, 73 G/12
	8	73 H/9 NW,73 G/12 SW	73 H/9, 73 G/12
	9	73 H/9 NW,73 G/12 SW, 73 G/8SE, 73 H/5 NE	73 H/9 ,73 G/12 , 73 G/8, 73 H/5
	10	73 H/9 NW,73 H/5 NE	73 H/9, 73 H/5
	11	73 H/9 NW,73 H/5 NE	73 H/9, 73 H/5
	12	73 G/8 SE, 73 H/5 NE	73 G/8, 73 H/5
	13	73 G/12 SW	73 G/12
	14	73 G/12 SW,73 G/8 SE	73 G/12,73 G/8
	15	73 G/12 SW,73 G/8 SE	73 G/12,73 G/8
	16	73 G/8 SE	73 G/8
	17	73 G/8 SE	73 G/8
	18	73 G/12 SW,73 G/8 SE	73 G/8, 73G/12
	19	73 G/12 SW,73 G/8 SE	73 G/8, 73G/12
	20	73 G/12 SW,73 G/8 SE	73 G/8, 73G/12
	25	73 G/8 SE	73 G/8
	26	73 G/8 SE, 73 H/5 NE	73 G/8,73 H/5
	27	73 G/8 SE, 73 H/5 NE	73 G/8,73 H/5
	28	73 G/8 SE, 73 H/5 NE	73 G/8,73 H/5
	32 (P)	73 G/8 SE,73 H/5 NE	73 G/8,73 H/5
Mahabirod Range			
Anantapur (part)	21	73 G/8 SE	73 G/8
	22	73 G/8 SE	73 G/8
	23	73 G/8 SE	73 G/8
	24	73 G/8 SE	73 G/8
	29	73 G/8 SE, 73 H/5 NE	73 G/8,73 H/5
	30	73 G/8 SE, 73 H/5 NE	73 G/8,73 H/5
	31	73 G/8 SE,73 G/8 SW, 73 H/5 NE	73 G/8, 73 H/5
	32 (P)	73 G/8 SE,73 H/5 NE	73 G/8,73 H/5
	33	73 G/8 SE,73 G/8 SW,73 H/5 NW, 73 H/5 NE	73 G/8, 73 H/5
	34	73 G/8 SE,73 G/8 SW	73 G/8
	35	73 G/8 SW	73 G/8
	36	73 G/8 SW	73 G/8
	37	73 G/8 SW,73 G/4 SE	73 G/8,73 G/4
	38	73 G/8 SW,73 G/4 SE	73 G/8,73 G/4
	39	73 G/4 SE, 73 G/8 SW	73 G/4
	40	73 G/4 SE	73 G/4
Talcher Border	1	73 G/4 SE	73 G/4
Dolia	1	73 G/8 SE	73 G/8
Khalpal	1	73 H/5 NW	73 H/5
Barbank North	1	73 H/5 NE,73 H/5 NW	73 H/5
Barbank South	1	73 H/5 NE,73 H/5 NW	73 H/5
Hindol Range			
Kandhara	1	73 H/2 SE	73 H/2
	2	73 H/2 SE	73 H/2
	3	73 H/2 SE	73 H/2

	4	73 H/2 SE	73 H/2
	5	73 H/2 SE,73 H/6 SW	73 H/2,73 H/6
	6	73 H/2 SE,73 H/6 SW	73 H/2,73 H/6
	7	73 H/2 SE,73 H/6 SW	73 H/2,73 H/6
	8	73 H/6 SW	73 H/6
	9	73 H/6 SW	73 H/6
	10	73 H/6 SW	73 H/6
	11	73 H/6 SW	73 H/6
	12	73 H/6 SW	73 H/6
	13	73 H/6 SW	73 H/6
	14	73 H/6 SW	73 H/6
	15	73 H/6 SW	73 H/6
	16	73 H/6 SW	73 H/6
	17	73 H/6 SW	73 H/6
	18	73 H/6 SW	73 H/6
	19	73 H/6 SW	73 H/6
	20	73 H/6 SW	73 H/6
	21	73 H/6 SW	73 H/6
	22	73 H/7 NW,73 H/6 SW	73 H/7 ,73 H/6
	23	73 H/7 NW,73 H/6 SW	73 H/7 ,73 H/6
	24	73 H/6 SE	73 H/6
	25	73 H/7 NE, 73 H/6 NE, 73 H/6 SE	73 H/7 ,73 H/6
Potalo	1	73 H/6 NE	73 H/6
	2	73 H/6 NE	73 H/6
Bompa	1	73 H/6 NE,73 H/6 NW	73 H/6
	2	73 H/6 NE,73 H/6 NW	73 H/6
	3	73 H/6 NE,73 H/6 NW	73 H/6
	4	73 H/6 NE,73 H/6 NW	73 H/6
	5	73 H/6 NE,73 H/6 NW	73 H/6
Nandania	1	73 H/2 NE,73 H/2 SE	73 H/2
Hitinda	1	73 H/6 NE,73 H/6 SW, 73 H/7 NE, 73 H/7 NW, 73 H/6 SE	73 H/6,73 H/7
	2	73 H/7 NE, 73 H/6 SW, 73 H/10 NW, 73 H/6 SE	73 H/6,73 H/7,73 H/10
Kai	1	73 H/2 NE,73 H/6 NW	73 H/2 ,73 H/6
Kansara	1	73 H/2 NE	73 H/2
Ambithi	1	73 H/2 NE	73 H/2

N.B. Old &New Topo sheet references of Scale 1:50,000 **:-** 73 H/2 - F 45 T 2, 73 H/5 - F 45 T 5, 73 H/6 - F 45 T 6, 73 H/7- F 45 T 7, 73 H/9 - F 45 T 9, 73 H/10 - F 45 T 10, 73 H/13 - F 45 T 13, 73 H/14 - F 45 T 14, 73 G/4 - F 45 N 4, 73 G/8 - F 45 N 8, 73 G/12 - F 45 T 12 , 73 L/1 - F 45 U 1 & 73 L/13 - F U13.

ANNEXURE – XXVII

NUMBER OF TRESS(SWC) IN DHENKANAL DIVISION							
Estimeted Area-15271.29 Ha.			Total No of Forest Block-3		Total No of Compartment-36		
Strip Area-764 Ha.			Strip Intensity-5%				
No of of Trees by Girth class wise and Species wise							
Species	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179323**	**180 to above**	**Total**
ASAN	85452	38226	21558	9775	4559	2812	160948
AMLA	5055	1637	361	186	22	22	7194
BELA	16826	7930	2226	402	58	0	26686
BANDHAN	4583	2136	753	296	4118	107	11971
BAHADA	9361	5560	3156	1799	451	772	21788
CHARA	107310	31935	6208	821	25	111	7421715
DHAURA	77420	45783	36453	17781	10071	6848	192153
GAMBHARI	2982	1497	786	323	399	22	6166
HARIDA	7988	4393	3350	1057	567	125	17518
JAMUN	24354	16536	10320	4337	2354	1381	57776
KASI	9324	5962	1889	648	218	184	18185
KURUM	21253	10182	5835	4092	2298	2271	41621
KENDU	68472	36461	29392	12070	7796	6122	160355
KANGADA	129645	53218	30104	12573	7076	4444	232479
KARADA	59148	16395	2754	252	284	184	79497
MAHULA	44446	35320	34484	19848	10395	13137	157612
MUNDI	2597	1438	648	241	431	502	5845
MAI	22894	15307	9250	4818	3286	1002	56997
MISC	458250	200202	111659	61074	37852	38436	896048
PIASAL	6612	4586	2127	618	769	1037	15832
SAL	400169	218879	174635	104767	63294	88023	1049767
SISOO	6793	2839	983	218	100	221	10979
SIDHA	24830	10748	6156	2792	819	246	45574
SIMILI	3524	3254	3270	2320	794	132	13765.00
TEAK	21091	5184	174	64	0	0	26514
TOTAL	1620379	775608	498531	263172	158036	168141	3483867

Total volumel in Dhenkanal Division							
Sal	400169	218879	174635	104767	63294	88023	1049767
Others	1220210	556729	323896	158405	94742	80118	2434100
Percentage of volume species							
Sal	24.7	28.2	35.0	39.8	40.1	52.4	30.1
Others	75.3	71.8	65.0	60.2	59.9	47.6	69.9

	100.0	100.0	100.0	100.0	100.0	100.0	100.0

VOLUME OF GROWING STOCK (SWC) IN DHENKANAL DIVISION							
Total area of Enumuration -15271.29 Ha.					**Area Enumerated -764 Ha.**		
Volume by speies wise and Girth class wise in Cubie Meter							
Species	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
ASAN	5591.622	10743.96	13968.9	12196.1	9343.9	8278.7	60123.3
AMLA	287.6	400.8	203.5	201.8	45.1	64.8	1203.6
BELA	957.1878	1941.772	1255.1	436.1	103.3	0	4693.4
BANDHAN	290.7	582.6	457.2	321.1	7333.4	273.6	9258.6
BAHADA	725.2	1687.4	2040.0	2127.2	848.6	2046.0	9474.5
CHARA	6104.59	7819.736	3500.4	890.6	44.5	283.8	18643.6
DHAURA	4809.1	14971.5	26630.4	24224.6	22029.0	21194.4	113859.0
GAMBHARI	169.6	366.6	443.2	350.4	710.5	1984.4	4024.7
HARIDA	454.4168	1075.7	1888.9	1146.6	1009.7	319.6	5894.9
JAMUN	149.97	1336.32	3956.4	5811.5	8240.9	9792.2	29287.2
KASI	722.3	1809.4	1221.1	766.2	410.2	487.7	5416.9
KURUM	1214.6	2746.4	3484.9	4527.9	4078.5	5701.5	21753.6
KENDU	4852.319	11326.65	19298.7	14309.9	14553.3	15978.3	80319.2
KANGADA	7375.17	13031.18	16974.1	13638.3	12601.0	11363.7	74983.5
KARADA	3364.777	4014.5	1552.8	273.4	505.8	470.5	10181.8
MAHULA	2819.9	7901.1	16054.5	16727.5	13868.9	24619.8	81991.7
MUNDI	164.8	321.7	301.7	203.1	575.0	940.8	2507.1
MAI	1452.111	4174.8	5616.6	5498.0	6065.7	2631.6	25438.7
MISC	26068.7	48977.7	62958.7	66248.5	67407.3	98284.6	369945.5
PIASAL	467.1	1402.3	1443.6	786.3	1580.0	3028.0	8707.2
SAL	23631.4	59073.6	111021.8	129689.7	129499.0	259613.1	712528.6
SISOO	3522.4	3988.2	2688.9	1004.6	643.8	1932.8	13780.7
SIDHA	1412.515	2631.8	3471.0	3028.6	1458.5	629.0	12631.4
SIMILI	156.9	725.0	1821.1	2601.1	1499.5	363.4	7167.0
TEAK	1199.813	1269.4	98.1	69.4	0.0	0.0	2636.7
TOTAL	**97964.7**	**204320.0**	**302351.8**	**307078.2**	**304455.4**	**470282.3**	**1686452.4**
Total volumel in Dhenkanal Division							
Sal	23631.4	59073.6	111021.8	129689.7	129499.0	259613.1	712528.6
Others	74333.3	145246.4	191330.0	177388.6	174956.4	210669.2	973923.9
Percentage of volume species							
Sal	24.1	28.9	36.7	42.2	42.5	55.2	42.3
Others	75.9	71.1	63.3	57.8	57.5	44.8	57.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

ANNEXURE – XXVIII

ESTIMETED TOTAL NO OF TRESS ECO-RESTORATION IN DHENKANAL DIVISION							
Estimeted Area-37448.66 Ha.			**Total No of Forest Block - 59**		**Total No of Compartment - 90**		
Strip Area-374.5 Ha.			**Strip Intensity-1%**				
No of of Trees by Girth class wise and Species wise							
Species	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
ASAN	239218	88079	20832	3332	1538	1806	361020
AMLA	12112	2153	276	2456	0	0	14633
BELA	80888	24178	774	28	1197	0	104305
BANDHAN	12974	4772	628	288	218	218	18198
BAHADA	1932	304	28	28	0	0	2291
CHARA	257154	56845	2595	191	84	84	335411
DHAURA	102001	45236	15035	4177	6507	721	155902
GAMBHARI	1990	529	100	48	114	48	2537
HARIDA	12845	3665	1783	161	110	110	17947
JAMUN	77760	28658	5376	2643	1372	1488	116393
KASI	25964	9852	1604	88	20	0	37515
KURUM	46408	14778	2741	708	422	159	65357
KENDU	123707	51247	13064	5447	1501	2082	188174
KANGADA	109377	30708	5374	2741	1135	495	150253
KARADA	80316	15867	2463	169	51	115	98982
MAHULA	104975	42245	16501	5714	2820	3883	176582
MUNDI	1401	802	567	71	0	0	2821
MAI	70237	36695	17137	5739	2466	556	131933
MISC	1203693	370856	86042	27289	13861	19360	1694196
PIASAL	22998	12353	2217	347	242	0	38056
SAL	1893778	824379	160704	23087	8309	4667	2896703
SISOO	14322	4216	242	0	257	0	19121
SIDHA	84176	30753	2228	266	360	0	115324
SIMILI	8006	10232	4277	2626	549	501	26007
TEAK	93732	35272	6839	4818	1877	12205	152732
TOTAL	4681964	1744674	369427	92462	45010	48498	6922393
Total in of species in Dhenkanal Division							
Sal	1893778	824379	160704	23087	8309	4667	2896703
Others	2788186	920295	208723	69375	36701	43831	4025690
Percentage of estimate species							
Sal	40.4	47.3	43.5	25.0	18.5	9.6	41.8
Others	59.6	52.7	56.5	75.0	81.5	90.4	58.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

VOLUME OF GROWING STOCK IN DHENKANAL DIVISION							
Total area of Enumuration -37448.66 Ha.					**Area Enumerated -374.5 Ha.**		
Volume by speies wise and Girth class wise in Cubie Meter							
Species	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
ASAN	15653.4273	24755.8531	13498.5	4157.3	3152.2	5317.0	66534.3
AMLA	689.0	52.6	155.6	2664.1	0	0	3561.4
BELA	4601.51015	5920.32465	436.4	30.4	2131.6	0	13120.3
BANDHAN	822.9	1301.5	381.3	312.4	388.2	557.4	3763.8
BAHADA	149.7	92.3	18.1	33.1	0.0	0.0	293.1
CHARA	1544.72118	13919.3008	1463.2	207.2	149.6	214.8	17498.8
DHAURA	6336.0	14792.6	10983.7	5690.7	14233.2	2231.5	54267.7
GAMBHARI	113.2	129.5	56.4	52.1	203.0	4326.7	4880.9
HARIDA	730.718992	897.4	1005.3	174.6	195.9	281.3	3285.3
JAMUN	478.84	2315.93	2061.0	3541.6	4744.5	10550.2	23692.1
KASI	2011.5	2990.0	1036.8	104.1	37.6	0.0	6180.0
KURUM	2652.1	3986.0	1632.0	783.4	749.0	399.2	10201.6
KENDU	8766.58731	15919.9442	8577.8	6457.8	2802.0	5434.0	47958.1
KANGADA	6222.17604	7519.28735	3030.1	2973.2	2021.2	1265.8	23031.8
KARADA	4568.97054	3885.3	1388.8	183.3	90.8	294.1	10411.2
MAHULA	6660.2	9450.3	7682.3	4815.6	3762.4	7277.1	39647.9
MUNDI	88.9	179.4	264.0	59.8	0.0	0.0	592.1
MAI	4454.96299	10008.2	10405.6	6549.0	4552.0	1460.2	37429.9
MISC	68475.0	90809.3	48514.6	29601.1	24683.8	49505.4	311589.3
PIASAL	1624.5	3777.2	1504.7	441.5	497.2	0.0	7845.1
SAL	111834.5	222492.8	102165.4	28579.1	17000.1	13764.7	495836.6
SISOO	7426.5	5922.6	662.0	0.0	1654.7	0.0	15665.7
SIDHA	4788.556	7530.30623	1256.3	288.5	641.1	0.0	14504.7
SIMILI	356.4	2279.7	2382.0	2944.1	1036.8	1379.2	10378.2
TEAK	5332.17225	8636.8	3856.2	5226.2	3342.6	31209.4	57603.3
TOTAL	**266383.0**	**459564.4**	**224417.9**	**105870.3**	**88069.7**	**135467.9**	**1279773.1**
Total in of species in Dhenkanal Division							
Sal	111834.5	222492.8	102165.4	28579.1	17000.1	13764.7	495836.6
Others	154548.5	237071.6	122252.5	77291.2	71069.5	121703.2	783936.5
Percentage of estimate species							
Sal	42.0	48.4	45.5	27.0	19.3	10.2	38.7
Others	58.0	51.6	54.5	73.0	80.7	89.8	61.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

ANNEXURE – XXIX

ESTIMETED TOTAL NO OF TRESS PROTECTION WC IN DHENKANAL DIVISION							
Estimeted Area-27119.587 Ha.			**Total No of Forest Block -28**		**Total No of Compartment - 78**		
Strip Area- 272 Ha.			**Strip Intensity- 1%**				
No of of Trees by Girth class wise and Species wise							
Species	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
ASAN	135497	63989	18362	7823	6360	2161	22114
AMLA	4244	818	42	22	0	0	5125
BELA	18397	6599	1214	251	98	13	26725
BANDHAN	3289	946	152	33	0	0	4500
BAHADA	10843	7889	2361	1288	573	271	20206
CHARA	177704	37084	7908	872	1681	34	225241
DHAURA	84186	33614	19056	9306	5722	2604	154515
GAMBHARI	2975	1001	307	112	114	74	4533
HARIDA	7225	3272	1972	803	102	64	13461
JAMUN	27152	14026	8667	3869	1513	1270	109698
KASI	14420	6429	1889	615	337	147	22164
KURUM	16906	6009	2533	1185	853	263	26407
KENDU	71044	45363	23346	10742	5471	3109	158163
KANGADA	105646	46020	21620	10357	3840	6549	190920
KARADA	62428	17136	2128	346	468	985	81317
MAHULA	54659	31691	26573	17730	8319	12384	151356
MUNDI	2813	1861	885	261	263	45	5526
MAI	34477	18702	7951	3693	1193	397	63845
MISC	496053	190256	80614	30733	19250	19984	836947
PIASAL	16098	6442	2055	500	798	2509	26403
SAL	589560	254129	112287	50151	61309	21333	1088204
SISOO	6792	2197	291	27	0	71	9331
SIDHA	24092	8152	3740	1626	600	137	61483
SIMILI	2520	2684	2117	1068	285	124	8799
TEAK	71151	2845	49	41	0	28	74185
TOTAL	2040171	809154	348119	153454	119149	74556	3391168
Total in of species in Dhenkanal Division							
Sal	589560	254129	112287	50151	61309	21333	1088204
Others	1450611	555025	235832	103303	57840	53223	2302964
Percentage of estimate species							
Sal	28.9	31.4	32.3	32.7	51.5	28.6	32.1
Others	71.1	68.6	67.7	67.3	48.5	71.4	67.9
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

VOLUME OF GROWING STOCK IN DHENKANAL DIVISION							
Total area of Enumuration -27119.587 Ha..					**Area Enumerated -272 Ha.**		
Volume by speies wise and Girth class wise in Cubie Meter							
Species	**30 to 59**	**60to 89**	**90 to 119**	**120 to 149**	**150 to 179**	**180 to above**	**Total**
ASAN	8866.4	17985.0	11898.0	9760.6	13035.2	6362.1	67907.4
AMLA	241.4	200.3	23.7	23.9	0	0	489.3
BELA	1046.6	1615.9	684.5	272.3	174.5	23.2	3816.9
BANDHAN	208.6	258.0	92.3	35.8	0.0	0	594.7
BAHADA	840.0	2394.2	1526.2	1522.9	1078.1	718.2	8079.7
CHARA	10109.1	9080.5	4458.9	945.9	2993.5	86.9	27674.9
DHAURA	5229.4	10992.1	13921.2	12678.4	12516.1	8059.3	63396.5
GAMBHARI	169.2	245.1	173.1	121.5	203.0	6669.0	7580.9
HARIDA	411.0117	801.2	1111.9	871.0	181.6	163.7	3540.4
JAMUN	167.2	1133.48	3322.7	5184.4	5296.7	9005.1	24109.6
KASI	1117.1	1951.1	1221.1	727.2	634.1	389.6	6040.2
KURUM	966.1	1680.1	1508.1	1311.2	1513.9	660.3	7639.8
KENDU	5034.585	14402.72	15328.9	12735.5	10213.1	8114.4	65829.2
KANGADA	6009.929	11268.65	21020.0	11234.5	6838.3	16746.4	73117.8
KARADA	3551.368	4196.0	2128.0	375.3	833.4	2518.7	13602.8
MAHULA	3467.9	7089.3	12371.4	14942.5	11099.1	23208.6	72178.9
MUNDI	178.5	416.3	412.0	220.0	350.9	84.3	1662.0
MAI	2186.793	5100.8	4827.8	4214.2	2202.2	1042.6	19574.4
MISC	28219.2	46586.9	45454.1	33336.9	34280.6	51101.0	238978.6
PIASAL	1137.1	1969.8	1394.7	636.2	1639.6	7326.2	14103.5
SAL	34815.7	68587.2	71384.9	62081.3	125437.7	62919.1	425225.9
SISOO	3521.9	3086.3	796.0	124.4	0.0	620.9	8149.6
SIDHA	1370.532	1996.132	2108.8	1763.8	1068.5	350.3	8658.0
SIMILI	112.2	598.0	1179.0	1197.4	538.2	341.3	3966.2
TEAK	4047.597	696.6	27.6	44.5	0.0	71.6	4887.9
TOTAL	**123025.4**	**214331.8**	**218375.0**	**176361.4**	**232128.5**	**206583.1**	**1170805.2**

Total in of species in Dhenkanal Division							
Sal	34815.7	68587.2	71384.9	62081.3	125437.7	62919.1	425225.9
Others	88209.7	145744.6	146990.1	114280.1	106690.7	143664.0	745579.3
Percentage of estimate species							
Sal	28.3	32.0	32.7	35.2	54.0	30.5	36.3
Others	71.7	68.0	67.3	64.8	46.0	69.5	63.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0