

PART – II
FUTURE MANAGEMENT DISCUSSED AND PRESCRIBED
CHAPTER – I

BASIS OF PROPOSALS
GENERAL OBJECTS OF MANAGEMENT

2.1.1 The General Objects of Management Are:-

- (i) To maintain, protect and improve the forest cover specifically on the high and steeper slopes to prevent soil erosion and to conserve soil moisture.
- (ii) To improve the degraded forests by suitable measures and to rehabilitate the rooted waste Sal and miscellaneous forests within the shortest possible time.
- (iii) To meet the bonafide requirements of the right holders for timber, fuel, grazing and other forest produce to the extent possible and to market the surplus for consumption by Non-right holders and also to export to other market if possible.
- (iv) To associate in increasing degree of local population with protection and scientific management of the forests and to promote a sense of community ownership.
- (v) To regulate the local water supply by conservation of the rain water.
- (vi) Consistent with the above to obtain the maximum sustained annual yield of timber, poles, firewood etc. by economic and scientific exploitation and to realize the maximum sustained annual revenue.

The above object will be achieved best by managing the majority of forests under coppice selection system on 20 years of Felling Cycle according to the need of the privilege rayats and quality of the forest to provide poles of 8" above dia and big size timber for plough and house hold materials, Regular plantation is also needed.

2.1.2 GENERAL METHOD OF TREATMENT

- (i) The forests of this Division are surrounded by a thickly populated agricultural tract. There is therefore, a strong local demand for fuel, pole

and small timber for the construction of buildings and agricultural implements. There is always a good market for the above categories of forest produce and a considerable portion of the annual yield is consumed locally. All the good forest of this division will therefore, be worked under coppice selection system. The aim is to produce a pole crop of over 8" dia. The yield from the annual coupes will meet the requirements of fuel and poles.

- (ii) The poorer forests which are close to habitation and have been maltreated in the past will be managed separately with a view to replace existing worthless crop with valuable spp. by planting and to afford adequate protection to the Sal rooted wastes after cutting back.

CONSTITUTION OF WORKING CIRCLES

2.1.3 To attain the objects of management the forests have been divided into working circles according to the composition, density, situation and silvicultural needs of the forests and local requirements.

So the under mentioned working circles have been formed:-

- (i) Coppice Selection Working Circle
- (ii) Protection Working Circle
- (iii) Rehabilitation and Soil Conservation, Working Circle
- (iv) Plantation Working Circle
- (v) Tasar Plantation Working Circle

COPPICE SELECTION WORKING CIRCLE

2.1.4 This Working Circle comprises all the forest fit for working under this system, both right free as well as right burdened which can be grouped and economically exploited to meet the demand of the right holders, Non-right holders and for export wherever possible. The total area allotted to this working circle is 74622.00 acre/ 30211.33 hectare.

PROTECTION WORKING CIRCLE

2.1.5 This working circle comprises all the forests on steeper hills slopes and unworked over area severally affected by head loaders, grazing etc. The total area allotted to this Working Circle is 10809.00 acre/4376.11/ hectare.

REHABILITATION AND SOIL CONSERVATION WORKING CIRCLE

2.1.6 This Working Circle comprises all the areas in which the crop is in need of rehabilitation. This includes areas of Sal and Miscellaneous rooted wastes. Where the forests have been mostly deteriorated by irregular cutting, grazing fire and Soil Erosion. The total area allotted to this Working Circle is 11036.00 acre / 4468.01 hectare.

PLANTATION WORKING CIRCLE

2.1.7 Plantation working circle embraces all the existing plantation (A) and area fit for plantation (B) The total area allotted to this working circle is 12732 acre/5154 hectare in (A) 12909.00 acre/ 5226.72 hectare in (B), Totalling 25641.00 acre/ 10380.97 hectare.

TASAR PLANTATION WORKING CIRCLE

2.1.8 Tasar cocoon is the main source of Tasar Silk Tasar Cultivation plays an important role in improving the socio-economic condition of tribals and others who are contained to the forest are forest areas, Tasar plantation. This plantation should be encouraged for future in those areas where rearers of Tasar are residing. The total area allotted to this working circles is 3053.00 acre/ 1236.03 hectare.

2.1.9 The following table shows the areas allotted to the different working circles and total forest areas in different ranges.

BLOCK AND COMPARTMENT

2.1.10 The forests of this division have been properly demarcated on the ground by means of cleared lines and stone pillars and have been surveyed on the village cadastral sheets on a scale 16"-1 mile.

2.1.11 The areas allotted to different working circles as also to different felling series have been shown on maps on a haphazard release of forest land and frequent encroachment the position of boundary lines and pillars on the ground does not tally with the maps in many cases. This state of affair, therefore, makes it obligatory to bring the maps and other record up to date.

2.1.12 This Working Plan has been drawn for a period of 20 (twenty) years i.e. from 1985-86 to 2005-2006. A midterm review of the results of the treatment prescribed in the plan may, however be made after 10 (ten) yrs. and necessary modifications be incorporated in the plan if so required.

TABLE
Area Statement of Forest Blocks Allotted to Different Working Circle

S. No.	Block No.	Total Area in areas	Area allotted to selection coppice W.C. in acres	Area Allotted to protection W.C. in acres	Area Allotted Reh. W.C. in acres	Area Allotted to Plantation W.C. in Acre	Area Allotted to Tasar Plantation W.C. in acre	Remarks
1	2	3	4	5	6	7	8	9
1.	29	3330	3048	-	-	282	-	-
2.	29	76	76	-	-	-	-	-
3.	30	22466	18417	191	-	2489	-	1369 ac. Salai
4.	31	1689	-	1313	229	147	-	-
5.	32	2484	-	-	1726	693	65	-
6.	33	3598	2821	-	-	777	-	-
7.	34	895	-	-	-	8	-	-
8.	35	540	36	-	-	504	-	-
9.	36	392	-	-	-	392	-	-
10.	37	16739	14548	-	-	2197	-	-
11.	39	739	739	-	-	-	-	-

12.	40	1580	-	476	-	-	-	1104 ac. Mining
13.	41	1390	-	-	399	-	-	991
14.	42	479	-	176	-	303	-	-
15.	43	534	314	-	-	220	-	-

S. No.	Block No.	Total Area in areas	Area allotted to selection coppice W.C. in acres	Area Allotted to protection W.C. in acres	Area Allotted Reh. W.C. in acres	Area Allotted to Plantation W.C. in Acre	Area Allotted to Tasar Plantation W.C. in acre	Remarks
1	2	3	4	5	6	7	8	9
16.	44	1344	-	-	1263	81	-	-
17.	45	2617	338	785	-	1491	-	-
18.	46	916	259	-	-	657	-	-
19.	47	1472	1027	-	-	445	-	-
20.	48	642	496	-	-	23	123	-
21.	49	737	-	-	607	130	-	-
22.	50	856	-	-	646	122	88	-
23.	51	915	-	-	437	478	-	-
24.	52	1821	-	-	1007	814	-	-
25.	53	5832	4615	185	-	1032	-	-
26.	54	364	343	-	-	21	-	-
27.	55	913	772	-	-	141	-	-
28.	56	29726	19511	6630	-	3460	125	-
29.	57	2105	-	979	-	788	338	-
30.	58	392	-	-	-	-	318	-
31.	59	27	27	-	-	-	-	-
32.	60	374	211	-	-	163	-	-
33.	61	56	-	-	-	56	-	-
34.	62	120	78	-	-	42	-	-
35.	63	156	96	-	-	60	-	-
36.	64	472	437	-	-	35	-	-
37.	65	517	286	-	-	231	-	-
38.	66	219	219	-	-	-	-	-
39.	67	741	608	-	-	133	-	-
40.	68	40	-	-	-	40	-	-
41.	69	113	-	-	-	113	-	-

42.	70	14	-	-	-	14	-	-
43.	71	27	-	-	-	27	-	-
44.	72	39	-	-	-	39	-	-
45.	73	97	-	-	-	97	-	-
46.	74	47	-	-	-	47	-	-
47.	75	34	-	-	-	34	-	-
48.	76	10	-	-	-	10	-	-
49.	77	1079	-	-	406	423	250	-
50.	78	182	-	-	-	82	100	-
51.	79	209	-	-	209	-	-	-
52.	80	230	-	-	230	-	-	-
53.	81	23	-	-	23	-	-	-
54.	82	547	224	-	-	-	-	-
55.	83	1103	476	-	-	627	-	-
56.	84	72	72	-	-	-	-	-
57.	85	105	105	-	-	-	-	-

S. No.	Block No.	Total Area in areas	Area allotted to selection coppice W.C. in acres	Area Allotted to protection W.C. in acres	Area Allotted Reh. W.C. in acres	Area Allotted to Plantation W.C. in Acre	Area Allotted to Tasar Plantation W.C. in acre	Remarks
1	2	3	4	5	6	7	8	9
58.	86	8	-	-	-	8	-	-
59.	87	93	93	-	-	-	-	-
60.	88	10	-	-	-	10	-	-
61.	89	22	22	-	-	-	-	-
62.	90	30	-	-	-	30	-	-
63.	91	-	-	-	-	-	-	-
64.	92	27	-	-	-	27	-	-
65.	93	216	127	-	-	-	89	-
66.	94	132	128	-	-	4	-	-

No.	No.	Area in areas	allotted to selection coppice W.C. in acres	Allotted to protection W.C. in acres	Allotted Reh. W.C. in acres	Allotted to Plantation W.C. in Acre	Allotted to Tasar Plantation W.C. in acre	
1	2	3	4	5	6	7	8	9
97.	125	19	19	-	-	-	-	-
98.	126	271	271	-	-	-	-	-
99.	127	376	376	-	-	-	-	-
100.	128	43	-	-	-	43	-	-
101.	129	78	-	-	-	78	-	-
102.	130	2037	1685	-	-	312	40	-
103.	131	21	-	-	-	21	-	-
104.	132	250	-	-	-	250	-	-
105.	133	117	-	-	-	117	-	-
106.	134	284	-	-	12	-	272	-
107.	135	102	-	-	-	-	102	-
108.	136	217	-	-	154	-	-	-
109.	137	17	-	-	71	-	-	-
110.	138							-
111.	139	70	-	-	70	-	-	-
112.	140	28	-	-	28	-	-	-
113.	141	14	-	-	-	14	-	-
114.	142	12	-	-	-	12	-	-
115.	143	18	-	-	-	18	-	-
116.	144	23	-	-	-	23	-	-
117.	145	103	-	-	103	-	-	-
118.	146	17	-	-	17	-	-	-
119.	147	403	-	-	-	178	225	-
120.	148	76	-	-	76	-	-	-
121.	149	163	-	-	163	-	-	-
122.	150	15	15	-	-	-	-	-
123.	151	14	14	-	-	-	-	-

124.	152	194	-	-	194	-	-	-
125.	153	65	-	-	65	-	-	-
126.	154	33	-	-	33	-	-	-
127.	155	65	-	-	-	65	-	-
128.	156	67	-	-	-	67	-	-
129.	157	92	-	-	92	-	-	-
130.	158	22	22	-	-	-	-	-
131.	159	135	-	-	-	135	-	-
132.	160	35	-	-	-	35	-	-
133.	161	29	29	-	-	-	-	-
134.	162	93	93	-	-	-	-	-
135.	163	29	-	-	-	29	-	-
136.	164	186	-	-	158	28	-	-

S. No.	Block No.	Total Area in areas	Area allotted to selection coppice W.C. in acres	Area Allotted to protection W.C. in acres	Area Allotted Reh. W.C. in acres	Area Allotted to Plantation W.C. in Acre	Area Allotted to Tasar Plantation W.C. in acre	Remarks
1	2	3	4	5	6	7	8	9
137.	165	42	-	-	-	42	-	-
138.	166	33	-	-	-	33	-	-
139.	167	271	179	-	-	-	92	-
140.	168	552	273	-	-	279	-	-
141.	169	84	-	-	-	84	-	-
142.	170	24	-	-	24	-	-	-
143.	171	96	-	-	96	-	-	-
144.	172	29	-	-	-	29	-	-
145.	173	225	169	-	-	56	-	-
146.	174	40	21	-	-	19	-	-
147.	175	96	-	-	-	96	-	-

148.	176	456	257	-	-	199	-	-
149.	177	65	40	-	-	25	-	-
150.	178	123	123	-	-	-	-	-
151.	179	35	35	-	-	-	-	-
152.	180	259	217	-	-	42	-	-
153.	181	61	61	-	-	-	-	-
154.	182	33	33	-	-	-	-	-
155.	183	36	29	-	-	7	-	-
156.	184	76	-	-	76	-	-	-

"TABLE"

Name of the Range	Total Forest Area in acre/ hectare	Area under coppice selection W.C. in A./Hect.	Area under protection W.C. in Ac./ Hect.	Area under Rehabilitation and Soil Conservation W.C. in Ac./Hec.	Area under Plantation W.C. in Ac./Hectare		Area under Tasar Plantation W.C. in Ac./Hec.	Remarks
					A	B		
1	2	3	4	5	6	7	8	9
CHAIBASA RANGE	<u>46559.00</u> 18849.60	<u>30245.00</u> 12244.90	<u>2557.00</u> 1035.20	<u>2823.00</u> 1142.90	<u>3271.50</u> 1324.50	<u>5087.50</u> 2059.70	<u>1196.00</u> 484.20	<u>1379 Acres</u> under Salai which has not been taken into any W.C.
HATGAMHARIA RANGE	<u>42579.00</u> 17238.50	<u>21958.00</u> 8889.90	<u>6815.00</u> 2759.10	<u>6454.00</u> 2612.90	<u>3723.50</u> 1507.50	<u>2471.50</u> 1000.60	<u>1157.00</u> 468.40	-
NOAMUNDI RANGE	<u>39497.00</u> 15990.70	<u>22419.00</u> 9076.50	<u>1437.00</u> 581.80	<u>1759.00</u> 712.10	<u>5737.00</u> 2322.70	<u>5370.00</u> 2166.00	<u>700.00</u> 283.40	<u>2095.00</u> 848.18 Mines

PART – II
CHAPTER –II
COPPICE SELECTION WORKING CIRCLE OF CHAIBASA SOUTH DIVISION

General Constitution of Working Circle

2.2.1 This working circle comprises the bulk of the forests of classification A, B and part of C having crop density above 0.3. These forests have been placed under this Working Circle, In consideration of heavy demand in the thickly populated pockets, the forests which would yield small poles, fuel and brushwood as also those which contain malformed and pollarded crop have been allotted to this working circle. The general character of the vegetation allotted to this Working Circle has been described in detail in paragraph 1.2.1. to 1.2.14 of part I. The forests generally comprise Sal with varying proportion of its usual associates and occur mostly in plain, lower slopes of high hills and also in the eastern and northern aspect of high hills. The majority of the crop present consists of poles in different stages. The seedling regeneration of Sal is confined in remote valleys only. As per All India Coppice quantity table sal crop is generally of quality B except in remote valleys where it embraces quality A.

2.2.2 The extent of miscellaneous crop is also quite significant. It occurs generally on hill tops and on, Southern as well as Western aspects. The main spp. in miscellaneous forests is Kend, Piar, Aasan, Dhaura, Sidha, Doka, Karla, Galgal, Salai etc. Response of these spp. to coppicing is comparatively slow. This working circle covers an area of 74622.00 acre/ 30211.33 hectare.

2.2.3 SPECIAL OBJECTS OF MANAGEMENT

- (1).To meet the bonafide agricultural and domestic requirement of the right holders without deterioration of the forests.
- (2).To meet the supply of non-right holders and the export trade out of surplus.
- (3).To improve the stocking and quality of the forest by silvicultural treatment.
- (4).To maintain the hills slopes under adequate forest cover to prevent soil – erosion, and regulate water supply.
- (5).To organize management of the forests in such manner that local people living near them may find sufficient employment in forestry operation.

STOCK MAPS

2.2.4 The forests have been stock mapped on 4"=1 mile topographical sheets. The stock maps show the distribution of Principal spp., the average size density, extent of rooted wastes, area fit for Plantation, area already planned. The details about stock are given in Appendix No. II.

SILVICULTURAL SYSTEM

2.2.5 In Order to obtain the above objects of management silvicultural system prescribed in COPPICE SELECTION SYSTEM. This will consists of removal of the exploitable trees that are silviculturally available and at the same time maintaining and improving the adequate soil cover.

SILVICULTURALLY AVAILABLE

2.2.6 The expression Silviculturally availability is defined as follows:

A green and healthy tree is Silviculturally available when it fulfills all the three following conditions.

- (1). It forms part of a Congested crop and the Principal of improvement felling warrants its removal.
- (2). Saplings of poles or established regeneration of the same or of equally valuable spp., exist to take its place.
- (3). Its removal does not create permanent gap in the upper canopy.

EXPLOITABLE – DIAMETERS

2.2.7 As per existing stock 24" girth or 8" dbh will be the exploitable girth or diameter for all spp. except Bija & Salai which will have 36" girth or 12" dbh.

FELLING CYCLE

2.2.8 The existing rotation will not be disturbed the coupe pattern will remain same as such the felling cycle will be of 30 years or 40 years as prescribed in the previous plan, reducing the area under rehabilitation and plantation working circle.

REGULATION OF YIELD

2.2.9 The yield will be regulated by area with selection fellings. In each annual, coupe the exploitable trees will be marked only, when the trees is silviculturally available.

BLOCKS AND COMPARTMENTS

2.2.10 There are 156 isolated protected forest blocks varying in size from 12 acreas to 20,000 acreas. These has not been divided into compartments. The blocks have been divided or grouped into a number of felling series. Histories will therefore, be kept by felling series and not by Compartments.

CONSTITUTION OF FELLING SERIES

2.2.11 In constituting the felling series, the points taken into consideration are:-

- (1). All forests burdened with rights have irrespective of their legal classification and situation , been grouped together.
- (2). Right burdened felling series lie within a radius of 8 km of the villages of right holders.
- (3). For the sake of continuity, the felling series of the previous plan have been kept in tact as far as possible.

CLASSIFICATION OF FELLING SERIES

2.2.12 In consideration of the measures required subsequent to the main fellings and to improve the quality and stocking of the crop, felling series have been classified into category A and B.

FELLING SERIES UNDER CATEGORY 'A'

2.2.13 This category comprises all felling series where, the soil condition are better, stocking of the crop normal, impact of grazing & Fire, human interference not too intense and where seedling regeneration may, establish. Such felling series generally lie in comparatively in localities. Which be not frequented by villagers.

FELLING SERIES UNDER CATEGORY 'B'

2.2.14 This category embraces such felling series where the crop is open, soil is either already lost or is getting lost fast and blanks have already appeared or are extending on account of grazing, fire and indiscriminate felling. Such felling series fall in thickly populated zone with heavy demand.

2.2.15 The following felling series under coppice selection system have accordingly been constituted.

T A B L E

Statement of Felling Series under coppice selection working circle

Name of Range	Sl. No.	Name of the F.S.	Total Area in Ac/hect.	Productive area in Ac./Hec.	Felling Cycle	Annual Coupe area in Ac./hec.	Whether Right burdened of free of right
1	2	3	4	5	6	7	8
CHAIBASA	1	Jojobatu	<u>1953.00</u> 768.90	<u>1360.00</u> 535.43	20	<u>68.00</u> 26.77	
	2	Telaisud	<u>1821.00</u> 716.92	<u>1529.00</u> 601.96	20	<u>76.00</u> 29.92	
	3	Anjitbera	<u>3141.00</u> 1236.61	<u>2512.00</u> 990.15	20	<u>125.60</u> 49.44	
	4	Dausukuwa	<u>2707.00</u>	<u>1701.00</u>	20	<u>85.05</u>	

			1065.74	680.04		34.02	
	5	Mailoi	<u>2681.00</u> 1072.40	<u>2513.00</u> 1005.22	20	<u>125.65</u> 50.26	
	6	Jagada	<u>3020.00</u> 1188.98	<u>2876.00</u> 1132.28	20	<u>143.80</u> 56.61	
	7	Tinsura	<u>1126.00</u> 443.30	<u>970.00</u> 381.89	20	<u>48.30</u> 19.00	

Name of Range	Sl. No.	Name of the F.S.	Total Area in Ac/hect.	Productive area in Ac./Hec.	Felling Cycle	Annual Coupe area in Ac./hec.	Whether Right burdened of free of right
	9	Kenjara	<u>3300.00</u> 1320.00	<u>3074.00</u> 1229.60	20	<u>153.70</u> 61.48	
HATGAMHARIA	1	Dhobadhobin	<u>1957.00</u> 770.47	<u>1595.00</u> 627.95	20	<u>79.74</u> 31.39	
	2	Deodhar	<u>2140.00</u> 842.51	<u>1782.00</u> 701.57	20	<u>89.00</u> 35.00	
	3	Unduda	<u>2078.00</u> 818.11	<u>1596.00</u> 628.34	20	<u>79.80</u> 31.41	
	4	Haldipokhar	<u>3266.00</u> 1285.82	<u>2964.00</u> 1166.92	20	<u>148.20</u> 58.34	
	5	Ratnasai	<u>4014.00</u> 1580.31	<u>3739.00</u> 1472.00	20	<u>186.94</u> 73.60	
	6	Deojhar	<u>2722.00</u> 1071.65	<u>2537.00</u> 998.81	20	<u>126.85</u> 49.94	
	7	Kudahatu	<u>2103.00</u> 827.95	<u>2064.00</u> 812.60	20	<u>103.20</u> 40.62	
	8		<u>2888.00</u>	<u>2653.00</u>	20	<u>132.64</u>	

		Kharbandh	1137.00	1044.48		52.22	
NEOMUNDI	1	Raika	<u>6078.00</u> 2392.71	<u>5895.00</u> 2320.86	20	<u>294.74</u> 116.00	
	2	Thakura	<u>4732.00</u> 1862.99	<u>3740.00</u> 1472.44	20	<u>187.00</u> 73.62	
	3	Jamda	<u>2592.00</u> 1020.47	<u>2100.00</u> 826.77	20	<u>105.00</u> 41.33	
	4	Kantoria	<u>2079.00</u> 818.50	<u>2016.00</u> 793.70	20	<u>100.80</u> 39.68	
	5	Dudbilad	<u>1659.00</u> 653.14	<u>1084.00</u> 426.77	20	<u>54.20</u> 21.33	

TABULAR STATEMENT OF RIGHT HOLDING VILLAGES ALONG WITH AREA OF THE
ANNUAL COUPE

Name of the Range	Sl. No.	Name of the F.S.	Area of the annual coupe in Ac./Hect.	Name of village (s)	Remarks
1	2	3	4	5	6
CHAIBASA	1	Jojobatu	68.00/26.77	Chingijori Jojobatu Anjitbera Mesaband	
	2	Tilaisud	76.00/29.92	Jogidaru Tilaisud Roro	
	3	Anjitbera	125.60/49.44	Anjitbera Chingijori Kecha Baipai	
	4	Dausukuwa	85.05/34.02	Bonai Sonapurnapani Kumbakuti Bandijori	
	5	Mailpi	125.65/50.26	Mailpi Suimba Brutan Kecha Baipal	
	6	Jagada	143.80/56.61	Jagada Bandijori Kenjara Barnar	
	7	Tinsura	48.50/19	Tinsura Bandabera Topa bera	

8	Kudahansda	48.30/19	Lisimitti Kudahansda Kamarai
9	Kenjara	153.70/61.48	Uchalli Bamhatu Kenjara Jagada Salakutti

TABULAR STATEMENT OF RIGHT HOLDING VILLAGES ALONG WITH AREA OF THE
ANNUAL COUPE

Name of the Range	Sl. No.	Name of the F.S.	Area of the annual coupe in Ac./Hect.	Name of village (s)	Remarks
1	2	3	4	5	6
HATGAMHARIA	1	Dhobadhobin	79.74/31.39	Chhotalunti Majhagaon Baharia Sonaposi Betajori Tartaria Barkela Dhobadhobin Kokrkatta	
	2	Deodhar	89.35	Kudahatu Kukusud Muduam Deodhar	
	3	Unduda	79.80/31.41	Unduda Pramhansda Baida Kulawa	
	4	Haldipokhar	148.20/58.34	Patalhatu Haldipokhar Usumbir Khandori	
	5	Ratnasai	186.94/73.60	Ratnasai Jojobatu	
	6	Deojhar	16.85/49.94	Tiyapusi Baida Tunga	

			Deojhar Kadalbera Gibasai
7	Kudahatu	103.20/40.60	Baihatu Kudahatu Sarbangia
8	Kharbandh	132.64/52.22	Kharbandh Kall Dikar baliband Dudhpani

TABULAR STATEMENT OF RIGHT HOLDING VILLAGES ALONG WITH AREA OF THE
ANNUAL COUPE

Name of the Range	Sl. No.	Name of the F.S.	Area of the annual coupe in Ac./Hect.	Name of village (s)	Remarks
1	2	3	4	5	6
NOAMUNDI	1	Raika	294.74/116	Lupunga Betarkea Kulasai Sukripura Taruia	
	2	Thakura	187/73.62	Kantoria Thakura Diriburu Silpungi	
	3	Jamda	105/41.33	Bakuria Thakura	
	4	Kantoria	100.80/39.68	Jamda Barajamda Param balijori Kantoria Silpungi	
	5	Dudbila	54.40/21.33	Dudbila Kumirta Kudapi Bera Baljori Kudahansda	

APPENDIX – I gives the details of forests which constituted the different felling series.

DIVISION INTO COUPES

2.2.16 Net area of each felling series has been arrived after deducting the unproductive areas which include blanks, plantations and rooted wastes. The unproductive areas has been shown both on Stock maps & Management Maps. Wherever the size of the unproductive area is either small or linear in character, the net area of felling series has been divided into coupes to ensure the availability of forest produce through but the period of rotation.

DEMARCATION OF COUPES

2.2.17 Coupes should be demarcated on the ground strictly in the same sequence as shown on the Management maps.

2.2.18 Coupes will be demarcated on the ground by cutting clear line 5' wide all round. Trees along the coupe lines or immediately on the side of the coupe shall be double ringed with coaltar at Breast Height.

2.2.19 Each coupes in right trees felling series shall be divided into two sections by cutting internal line to ensure efficient control over fellings.

The right burdened coupes shall invariable be divided into four sections. The internal lines need not be very wide but must be clearly distinguishable. The coupe lines must always, during the currency of the coupe, be maintained unmistakably clear and double coaltar ring must show up properly. Suitable Singhboards indicating the number of coupes, year of fellings etc. Shall be put up at coupe corners and at the crossing of important roads and foot – Paths.

PRIORITY OF ALLOTMENT OF COUPES AND REQUIREMENT OF FUNDS

2.2.20 Coupes will be laid out one year in advance of actual fellings. Immediately after demarcation of coupes, items of work required for the improvement of the future crop will be listed. This will include all or a few of measures recommended under sub-head. SUBSIDIARY OPERATIONS depending on the crop. Regular estimate for the execution of such measures as

found necessary for the improvement of future crop shall be made. The preparation of estimate at this stage will enable the Divisional Forest Officer to include the funds required in his budget.

2.2.21 Priority list of the coupes needing measures, of improvement would also be prepared. In the event of the entire required funds being not available work of improvement would be done in coupes ranking high in the priority list.

2.2.22 There is some scope of adjustment too as all the coupes of felling series under category 'B' may not require all the measures to the same extent some of them in certain year may not need any.

2.2.23 Funds for measures recommended under the head SUBSIDIARY OPERATIONS may be available from one or more of the plan schemes. The Divisional Forest Officer has therefore to press for funds under one or more plan scheme.

2.2.24 In spite of all these if the requirement of funds is not available for the coupes in priority I, it is advisable to stop felling in such of the coupes as coppice regeneration is almost sure to fail and the process of creation of blanks will get accelerated. A list of such coupes may be sent to the conservator of Forest before handing over to the State Trading Division.

METHOD OF EXECUTING THE FELLINGS

MARKING RULES

2.2.25 The following marking rules are prescribed :-

- (1). All dry, dead and heavily diseased trees with begative trees with begative increment will be marked.
- (2). Among healthy green trees Sal and Miscellaneous trees that have attained exploitable diameter will be marked.
- (3). No tree will be marked where:-
 - (a) The crop density is low.
 - (b) The regeneration is absent.
 - (c) Where the slope exceeds 60 degree.

- (4). A well grown stem would be preferred to a badly grown stem even if the former is of inferior spp., and the latter of mere valuable spp.
- (5). Other spp. of the respective exploitable diameter will be marked on the principle of improvement fellings.
- (6). On the blanks or partial blanks, trees will be retained.
- (7). All climbers shall be cut at the time of marking.

EXECUTION OF FELLINGS

2.2.26 (1) In right burdened coupes, out of four sections one section of the coupe shall be opened to right holders. If the right holders remain unsatisfied the next adjoining section shall be opened for them. This is prescribed in Consideration of proper utilization of forest produce particularly by right holders.

In any right burdened coupe, rights of right holders will be taken into consideration as recorded in Khatian Part II. After feeding the rights of right holders the surplus shall be handed over to the State Trading Division.

- 2.2.27
- i) In right tree felling series the entire current coupes shall be worked by the State Trading Divisiona:
 - ii) Cutting must be done from one end and must proceed to the other end on even front.
 - iii) Fruit bearing trees such as Kend, Mahua, Piar, Mango, Kusum shall not be felled.
 - iv) Bamboo shall not be cut in the annual coupes.
 - v) The remaining trees and high stumps shall be cut down at the height not exceeding 6" from the ground level.
 - vi) Trees of Sacred groves, Sarana or JAHIRA shall not be cut.

DISPOSAL OF COUPES

2.2.28 Before 1980-81, the coupes were disposed by auction. After this period the coupes are laid out by the territorial Division, and handed over to the State Trading Division, for exploitation, extraction and sale of the forest produce.

SUB-SIDIARY SILVICULTURAL OPERATION

2.2.29 The attainment of the objective enumerated in Paragraph 6.2-1.1 in Chapter I of Part II is largely dependent on the efficient execution of the regulations which are enumerated below.

(a) REGULATION FOR FELLING SERIES UNDER CATEGORY "A"

2.2.30 In the year immediately after the main felling following operations are required:

- (i) Dressing down any stumps higher than 6" from ground level.
- (ii) Freeing shots of Sal and other valuable spp. from the over top of grass or inferior spp.
- (iii) Coppicing of broken top of other wise damaged trees meant to be felled.
- (iv) Cutting away all climbers.

(b) REGULATION FOR FELLING SERIES UNDER CATEGORY "B"

2.2.31 All the operation enumerated under item (i) to (iv) in above paragraph will be carried out in the coupes of felling series under category "B" in the year immediately after the main felling. Over and above these, the Special items of work considered highly important for attaining the objective are:-

1. Provision of effective fencing for 3 to 5 years against grazing depending on the growth of the forest crop.
2. Planting up of blanks with suitable spp.
3. All other operations such as having in the second and third year of planting, fire protection etc. hall be carried out in accordance with the recommendation of afforestation reviewing committee and their modifications from time to time.

(c) OTHER REGULATIONS

2.2.32 (i) RIGHT : Only the resident of these village which constituted a felling series shall be entitled to exercise their rights in that particular felling series. For this the coupe will be demarcated one year in advance and will be divided into four sections.

Only one section will be opened at a time to ensure proper utilization of the forest produce. If the bonafide requirements are not satisfied with the produce of first section the second and third sections. Will be opened in turn execution of fellings and felling rules will be rigidly followed by the right holders.

2.2.33 (ii) GRAZING : Coppice coupes will remain closed to grazing for a period of three years from and including the year of felling. This restriction may be extended by the Divisional Forest Officer, in the view of the state of regeneration and its establishment.

2.2.34 (iii) FIRE : Efforts will be made to protect the entire working circle from FIRE. In case of inadequate fund, at least the area felled during the last six years must be protected against fire.

2.2.35 (iv) UNAUTHORISED CUTTING : People are in the habit of cutting young crop mainly for GHORAN AND FIRE WOOD. The requirement of Ghoran can be met to a great extent from the produce obtained from cleaning operations. This may be given tree to right holders if they do the cleaning under the direct supervision of at least a FORESTER.

PART – II
CHAPTER – III

PROTECTION WORKING CIRCLE

GENERAL CONSTITUTION OF WORKING CIRCLE

2.3.1 This Working Circle, comprises the area on Steeper hill slopes where is problem of Soil erosion and natural regeneration and gradually taking the shape of barren hills.

2.3.2 In Chaibasa South Forest Division these are some forests areas where crop density is good but due to repeated illicit cutting by head loaders and other agencies crop does not reach in pole and middle aged matured tree, the crop generally remains in sapling stage or in bushy stage. So such areas need proper protection against illicit felling by head loaders and other agencies.

2.3.3 After giving protection the improvement felling may be needed to improve the quality of crop. If desired improvement felling will consists of only hygienic felling such as dead dying, diseased and over matured trees. The forest produce obtained after improvement felling will be distributed among the right holders and head loaders free of cost. The gram panchayats may be involved for this work under direct supervision of foresters. Such total areas of the Division will be distributed into improvement series and area will be treated in 20 years.

2.3.4 Areas of unusual flora and portion of high quality Sal Forest can be selected and formed into PRESERVATION PLOTS & allotted to this Working circle.

2.3.5 Seed orchard or elite trees can be earmarked for seed collection. All these will be allotted to this working circle.

OBJECTS OF MANAGEMENT

- 2.3.6
- 1) To protect and preserve the forests on Steeper hill slopes.
 - 2) To improve the stocking of the forests by including natural regeneration.
 - 3) To improve the health of crop by hygienic felling.

4) To enrich the Stocking larger blanks by sowing and planting.

DISTRIBUTION OF AREA

2.3.7 The total area allotted to this working circle, is 10809.00 acre 4376.11 hectare. The area fall under this working circle, are marked on the maps. The range wise details of the areas are given in APPENDIX no. III.

SILVICULTURAL SYSTEM

2.3.8 Only improvement felling will be done which will consists of the removal of dead, dying and over matured trees and also cutting of woody climbers in 10 years cycle.

METHOD OF TREATMENT

2.3.9 1) Such areas where crop having good density but not establishing in poles stage due to repeated illicit cutting and grazing will be provided necessary preventative measures taking into consideration edaphic and biotic factors. The preventive measures will included fencing, cut back and protecting the coppice shoots for at least 3 years. At present timely forest protection is very difficult task without association of local public.

So, they must be involved in protection of forest and their right must be given to fulfill their requirements.

2) In course of silvicultural operation all dead, dying, diseased and overmatured trees will be digit marked for felling. All woody climbers shall be cut.

3) Fire protection measures will be under taken. Special attention needed in improvement of felled areas for at least 3 years.

4) Soil and moisture conservation measure will be under taken over steeper hill slopes which will constitute contour trenching, gully control etc.

5) If there is any blank, sowing and planting operation should be done.

PART – II
CHAPTER – IV

REHABILITATION AND SOIL CONSERVATION WORKING CIRCLE

GENERAL CONSTITUTION OF THE WORKING CIRCLE

2.4.1 This working circle, comprises such villages containing forests which have been maltreated in the past and have resulted as ROOTED WASTE. This circle includes the rooted wastes of Sal and other miscellaneous spp. and also includes the areas which are in need of special treatment on account of series denudation of vegetation and soil erosion etc.

2.4.2 THE OBJECTS OF MANAGEMENT

The main objects of management are:-

- i. To protect the rooted wastes of Sal and miscellaneous forest against unregulated cutting, grazing, and fire.
- ii. To Rehabilitate the rooted waste forests by showing and planting of suitable spp. in gaps and degraded lands.
- iii. To carry out anti erosion measures and improve the capacity of soil and moisture conservation in these lands.

DISTRIBUTION OF AREA

2.4.3 Two main categories of forests such as Sal and miscellaneous rooted wastes are covered under this working circles. The areas of the above description are extensive and cover many villages. This is the result of grazing, fire & indiscriminate felling in the forests close to habitation.

These area often appear along the foot hills and bank of nallas in Eastern and Northern aspects. Foot hills and valleys sustain root stocks of sal on higher slopes, in western and southern slopes miscellaneous rooted waste occurs.

2.4.4 Soil over all these types of areas is invariably infertile, severe, sheet erosion, advancing gullies and ravines are evidence everywhere. The site conditions with a few exceptions are highly unsuited to any natural tree growth and the entire area is highly impoverished.

Miscellaneous rooted wastes generally contain parasitic and thorny spp. such as Karonda, Niyotanthus etc. are also found in some of the forests of Galail and Salai are seen on higher slopes and hilltops here and there.

2.4.5 The total area allotted to this working circle is 11036.00 acre 4468.01 hectare. The details are given in Appendix No. IV.

METHOD OF TREATMENT

2.4.6 The urgent need of the areas allotted to this Working circle, is PROTECTION i.e. protection from ruthless cutting, uncontrolled grazing and fire. The treatment of the rooted wastes area of both types of forests will be same and is as under:-

- 1) Area should be fenced.
- 2) Check dams should be made, gully plugged and contour trenches dug.
- 3) After fencing, the crop should be cut back. The felled materials obtained as a result of cut back may be sold or distributed to the right holders on nominal cost.
- 4) In the following year, cleaning should be carried out and rigid fire protection has to be ensured.
- 5) After fencing and cutting back the blanks should be planted up by suitable spp. such as Mahua, Acacia, Auriculiformis, Kend, Piar, Gamhar, Jamun, Mango, Harra, Behera.
- 6) In areas effected by SOIL EROSION anti erosion measures will be taken up even in the second year.

2.4.7 These will consist of the construction of check dams where it is necessary even after the first treatment and gully plugging. The diversion channels will be provided and head of gully will be cased off. On the slopes Salai grass tuft and Vitex negunda cutting will be planted.

REHABILITATION WORKING CIRCLE

2.4.8 It is difficult to lay down an annual target of area to be tackled. The total area being 11,364 acra. If it is proposed to tackle the total area in 20 years, an area of 563.20 acre will have to be attended to annually. This will depend on funds for coming. The annual target will therefore, depend entirely on the availability of funds. As delay in tackling the area is likely to result in their deterioration so it is suggested that attempts are to be made for taking up these areas as quickly as possible.

PART – II
CHAPTER – V

PLANTATION WORKING CIRCLE

GENERAL CONSTITUTION

2.5.1 This working circle covers :- (1) All the plantations raised in the Past. (2) Areas fit for raising plantations.

SPECIAL OBJECTS OF MANAGEMENT

2.5.2 In view of constitution of the working circle, a single set of special objects of management shall not be applicable to the whole of the working circle. The objects of management are therefore set fourth separately for the planted and plantable areas.

2.5.3 (I) SPECIAL OBJECTS FOR THE MANAGEMENT OF EXISTING PLANTATIONS

- a) To improve the quality of plantations by scientific management.
- b) To improve the stocking of plantations by adopting suitable scientific measures including cultural operations.
- c) To met the over increasing demand of Raw Material for wood based Industries and others.
- d) To ensure Soil and Moisture Conservation.

2.5.4 (II) SPECIAL OBJECTS FOR THE MANAGEMENT OF PLANTABLE AREAS

- a) To bring under vegetation areas either to blank or partly stocked.
- b) To minimize loss of soil and run off.
- c) Consistent with soil & climatic condition to raise plantation of spp. which may be used as Raw Material by the wood based Industries.
- d) To increase the potential of forests produce.

- e) To provide employment to local people.
- f) To meet the increasing demand of forest produce by local people & others.
- g) To provide increased quantity of grass for fodder.

2.5.5 DESCRIPTION OF PLANTATION

The earliest effort to raise the plantation was made in 1957. Sal, Sissoo and other miscellaneous spp. particularly chakundi were planted on hills with shallow Soil and also in plains with moderate to deep soil.

2.5.6 These plantations were raised in patches but success was not satisfactory due to biotic factor and pressure from unruly public for grazing of cattle and fire for new blades of grasses.

2.5.7 In Chaibasa South Forest Division, total area of 3075.00 acre 1244.94 hectare., was planted till 1975 between 1975 to 1984 the plantations have been raised over an area of 6002.64 acre 2430.22 hectare.

2.5.8 The details about the above plantations are given in the exploitation scheme prepared separately covering period from 1975-76 to 1984-85 and from 1985-86 to 1994-95.

The main spp. planted are Acacia, Eucalyptus, Chakundi and some where in patches Gamhar, Karanj etc.

2.5.9 DESCRIPTION OF AREAS

Mostly blank or Semi blank areas will be taken under this working circle. The impact of biotic and edaphic factors on the forests close to habitation and big town has adversely affected the crop. Due to heavy grazing, illicit cutting and fire forests have turned into rooted waste and some where is now complete blank. Failure to regenerate forests after felling, has also converted many areas into blanks.

2.5.10 There often appear along the food of the hills and along banks of nallas. In fact many small hills are now completely blank and nothing in the name of vegetation occurs soil over all these areas is invariably poor and infertile.

Severe sheet erosion, advancing gullies and revenues are in evidence everywhere. As a whole area is highly impoverished, if efforts are and not made, there is no chance of getting back forest cover naturally. At the same time no return is forthcoming either to villagers or to the national economy from these degraded forests. There is more probability of encroachment on such land. The natural of converted blanks and encroached areas will be taken in this working circle.

2.5.11 Total area allotted to this working circle is 25641.00 acre, 10380.97 hectare distributed in all ranges. The details are given in Appendix No. V-VII (B).

2.5.11 METHOD OF TREATMENT

The areas included in this working circle are mostly blank. So by a large the treatment would aim at filling up the intermittent blanks by planting with suitable spp. depending on edepic and biotic factors of that areas. The details of the method of treatment would be the same as adopted by the Afforestation Division, which are revised from time to time by "REVIEWING COMMITTEE" and embraces all aspects of plantations.

AGENCY

2.5.13 The planting of blanks are mainly at present done by Chaibasa South Forest Division, and Singhbhum Afforestation Division is exclusively entrusted with plantations where as the territorial Division, raised plantations along with its normal work of a territorial Division. So the Singhbhum Afforestation Division, can therefore take up large areas for plantation compared to the territorial division.

2.5.14 Taking plantation areas sometimes creates misunderstanding among the field staff of both divisions operating in the same division. In order to remove this dispute a separate FIVE YEAR PLANTATION SCHEME may be prepared to allot areas for both the division by the Working Plans Officer Southern Circle, Chaibasa.

2.5.15 So both Singhbhum Afforestation Division and Chaibasa South Forest Division would raise plantation on the area allotted as per five year plantation scheme. In consideration of unforeseen factors the two Divisional Forest Officer may either change or modify the allotment of areas fit for plantation as and when felt necessary after the mutual consent for administrative and protection needs.

PART – II
CHAPTER – VI

TASAR PLANTATION WORKING CIRCLE

GENERAL CONSTITUTION

2.6.1 Tasar culture in Bihar is many century old; It forms an integral part of the life of tribal people in Chhotanagpur and Santhal Parganas. It was linked with the livelihood of the tribal people who took to Tasar culture to supplement their income from Agriculture. However in the transition period of take over of Zamindari Forests there was lot of destruction of Tasar host trees consisting mainly of Aasan and Arjun. It resulted in the tribal people taking to other occupation in eluding selling of firewood removed from the forest areas. Not it is very essential to create large scale Tasar host trees plantations specially in these areas of Chhotanagpur and Santhal paragona, So that the tribal people could assume Tasar culture in a big way for supplementing their income.

2.6.2 Prior to 1986, Tasar Plantation was used to be done by Chaibasa South Forest Division, but realizing the importance of Tasar culture separately Tasar Division with head quarter at Chaibasa was created in 1986 vide Govt., Notification No. 639 dated 08.12.1986.

OBJECTS OF MANAGEMENT

2.6.3 The main objects of management are:-

- (i) To raise large scale plantation exclusive by the host plants (Assan and Arjun) in vicinity of villages linked up with rearing of Tasar.
- (ii) To provide massive employment opportunities to Adivasies and other weaker sections of the Rural populace.
- (iii) To restore and improve significantly the tribal culture of rearing Tasar silk worms and in this way to provide a rich return, which would improve their Socio-Economic conditions.
- (iv) To boost up export of tasar silk tribal and earn valuable foreign exchange for the country.

DISTRIBUTION OF AREA

2.6.4 Since Tasar rearers are found in all Ranges of this Division, Tasar Plantation areas are distributed in all Ranges. The details area allotted to this working circle is 3053.00 acre 1236.03 hectare the details of area are given in appendix VI.

TASAR PLANTATION

2.6.5 Assan and Arjun are main species for Tasar host trees plantation. For economic plantation, their spacing are 1.2 m x 1.2 m while for Block Plantation it is at 2mx2m.

2.6.6 Economic Plantation are mostly raised in Raiyate land/Block while plantations in the forest area of the State. The blocks of Tasar host trees plantation are generally called as pilot project centre.

2.6.7 Tasar Trees generally have a long gestation period but the most redeeming feature of Tasar Plantation is the fact that the Plantations require only three years to come to full yield. From fourth year, the Plantation becomes self supporting.

PART – II
CHAPTER – VI

MISCELLANEOUS REGULATIONS

FIRE

2.7.1 Fire is one of the recognized enemy of forests. The effect of fire was felt by the foresters from the early days of forest conservation. They had always advocated against forest fire. Now forest fire is a daily occurrence and people are less conscious of its adverse effects on forest soil & growth. Large number of mines have been opened inside the forests which have brought on adverse effect on fire protection measures. The main causes of forests fire are the following:-

1. Burning of forest floor for manure by the villagers.
2. Burning for fodder and sabai grass.
3. Burning by BIRI and CIGARETS atubs.
4. Burning by graziers in course of taking fruits from trees occurring in Forests.
5. Burning for shikars by the tribal population.
6. Burning around the mahua trees for picking mahua flowers.
7. Establishment of HATS inside the forests.
8. Use of inflammable materials by the mining mazdoors.

2.7.2 The following actions are needed to check forest fire. The forests may be divided into two parts.

- A). Those lying in the interior in compact blocks with very sparse population.
- B). Those of comparatively high value lying in plains in compact blocks amidst thick population.

2.7.3 (i) For type 'A' it would be effective if the people are repeatedly requested to refrain from setting or causing fire in the forests during the fire season. Normally people inhabiting this type of forest are ignorant and are generally not hostile to administration in case, they have to set fire in the forests for picking flowers etc. They may be trained alternative way of clearing the forest floor around the mahua tree.

(ii) An influential local man or boy may be appointed as a fire watcher.

(iii) Exterior boundary lines and boundary lines embracing last five coupes which ordinarily adjoin each other and main path inside the forest should be carefully fire traced. Burning should be done twice, one in the end of February and the second in the last week of April.

2.7.4 (i) For type 'B' compact block of valuable forests say entire felling series should be made unit of protection maximum effective measures including the strength of fire watchers required to protect such selected forests should be employed. Fire watchers in adequate number may not be possible to provide in compact block of valuable forest but anyhow we may have to succeed in protecting those forests from fire. Fire watchers should be variably be local unemployed boy.

(ii) All boundary lines, roads and paths inside the forest should be carefully fire traced. Burning should be done twice, once in last week of February and the second time in the last week of April.

(iii) Printed hand bills, explaining the causes of forest fire, the damage it does, the preventive methods and law on the subject, should be widely distributed.

(iv) Suitable sign – boards should also be fixed at important points.

(v) There should be instituted a system of prices for moisture work in saving the forest from fire.

GRAZING

2.7.5 At present there is no restriction on grazing except for the newly coppiced areas, but it is seen that even the newly coppice areas are freely grazed. There is no scheme for rotational grazing. The following measures should be taken against grazing:-

a) All cut back areas and plantation should be close grazing till they are established.

- b) It is suggested that Divisional Forest Officer should prepare a scheme for rotational grazing on two years cycle for each, felling series. Each felling series should be divided into two parts and the cattle should be restricted other part of the forest. Grazing by goat and sheep should be restricted as far as possible.

WILD LIFE

2.7.6 Wild life such as Elephant, Bears wild boares Hogdeer etc. are not in abundance. Leopards are also seen in forest of Noamundi Range.

FOREST ROADS

2.7.7 For proper development of forests, both Silviculturally and economically, it is necessary to have a not work of roads. Good roads render effective control over the working of staff and silvicultural operations effectively. The extraction of forest produce as well as supervision. The details about the roads in Chaibasa South Forest Division are given in Appendix No. XII.

The Maintenance of roads are not satisfactory. It does not need emphasis that road once constructed must be maintained thoroughly. All culverts and cause ways required annual repairs.

“MAINTENANCE OF BOUNDARIES”

2.7.8 In Chaibasa South Forest Division the condition of boundaries as in bad state. Boundary pillars are often displaced, dismantled and even missing. No attempt has been made to plant ALOES etc. The present bad condition of boundary line can only by improved by executing a scheme, together with rigorous execution and follow up methods this can only bring the boundary pillars up to a mark. In short time it will be difficult to delineate forest from non-forest land. If attention is not paid.

It is, therefore, suggested that the maintenance of boundary pillars should be first and fore most duty of forest guard. The beat officers must invariably check the pillars twice a

year with map and the range officer check 50% and the higher officer 10%. The divisional forest officer will ensure the compliance of the above by calling a return from all the Range once in every month.

2.7.9 It is further recommended that at each boundary pillars two Morabba (Aloes) plants may be planted in such a way that one of them is strictly in line with preceding one and the other with succeeding one. Every year during the rains, aloe planting and replacement of Casualty should be done. The best time to start aloe planting is the period ROHAN when there is a pre monsoon showers.

2.7.10 It is also recommended that every forest Guard may be allotted a definite number of plants which must himself put in. The Range Officer and Beat Officer should also plant a number of Aloes themselves. This will exhibit the importance the operations deserves.

2.7.11 It should also be impressed on every forest personnel that proper boundary maintenance is the very foundation of forest management and therefore, he who does not know the boundary of this charge does not know the forests.

BUILDINGS AND WELLS

2.7.12 A list of building and wells constructed and maintained by the Forest Department, is given in Appendix No. IX, X, XI. It need be emphasizes that proper maintenance of building is necessary. Regular white wash and repair enhances the life of buildings at the same time helps to improve the sanitation.

MINOR FOREST PRODUCE

2.7.13 Minor Forest Produce plays an important role in tribal economy. M. F. P. items are important Raw Materials for, cottage, small and village industries and contribute to national economy through export and import substitution. Tribals are economically and ecologically inseparable from forests. Forests are in the first place store houses of food plants such as cereals roots, tubers, vegetables fruits and nuts. Apart from being sources of food, forests also provide the tribals with medicinal plants. The tribals obtain their numerous requirements, from the forest with the help of most simple implement and without any technological aid from

outside. M. F. P. items have a vital role and a viable potential of an economic revolution among the tribals residing in forests. A special drive is necessary for the collection, processing, preservation, storage and marketing of the M.F.P. and other derivatives. Domestic and Village industries need to be set up for the above mentioned purpose, Marketing of these items should be done systematically through a Co-operatives and state organization, eliminating thereby the middle man. Thus the suppression of exploitation of the tribals and passing of maximum benefits to them will be facilitated. Rationality in forestry operations and better utilization of forest produce are of prime necessity. Scientific and national steps are required to be taken for the tapping of the M.F.P. items.

2.7.4 To eliminate middle man and improve the economic condition of the tribals the Bihar State Forest Development Corporation Limited is at present procuring and purchasing the following items from the tribals:-

Sal Seed, Mahua Seed, Kusum Seed, Karanj Seed, Pala Seed, Amla Fruit with Seed, Harra Fruit, Bahera Fruit, Jangi Harra, Mahulan Leaf, Mahulan Chop etc.

2.7.15 Among the above mentioned items Sal acquires prime importance in earning revenue. The following tabular statements show its estimated outturn, procurement and purchase rates.

From the table II it is found that procurement of Sal Seed has gradually increased in alternate year except the year 1981-82 and 1987-88 and was procured at the rate of 40 paise per kg. in 1977-78 and now it becomes r. 1.20 per kg. ,which is highest rate of collection in the country. This division has a potential of procuring Sal Seeds along with other M.F.P.

KENDU LEAF (MINOR FOREST PRODUCE)

2.7.16 BIRI :- Common mains cigar is made out of kend leaf. It is a basic raw material for the manufacture of BIRI and is found in dry open forests and denuded areas. It grows to a large sized trees, if protected in earlier stage. Kendu leaves for the manufacture of BIRI are placed from 3' to 4' high trees which give out thin soft leaves. Kendu leaves of chaibasa south forest division are marketable every where. They fetch quite good revenue. But for the management of Kendu leaves, no expenditure is incurred.

2.7.17 No operation at present is undertaken to improve the quality of leaf. Revenue may increase to a great extent if arrangement is made by the department to coppice the kendu plants in time. In the year of coppicing yield is likely to increase by 10 to 12% with improved quality of leaf and if coppiced again, the yield may go up to 25%. The plants of Kendu should be coppiced by the middle of February. Leaf will be available after 40 to 45 days of coppicing. If it rains within the week of coppicing, improved quality of leaf is ensured and becomes available for collection earlier, where as, if it rains after the new leaves have just come out or remains cloudy for days, the quality of leaf is adversely affected by eruption of POX in BIRI trade, quality of leaf generally goes by the States, Orissa leaf is taken as quality - I and that of M.P. quality – II where as the leaf of Bihar is graded as quality - III.

2.7.18 To assess the quality of leaf, size & thickness of leaf are taken into account quality-I leaf is over 6" in size and yields 3 BIRIS and there is less wastage in the factory. Till 1986 Kendu leaves of forests and revenue land in the Chaibasa South Forest Division were sold by tender and lastly auction for one or three years. Kendu leaves were collected by contractors. In March 1987, Bihar Government Forest and Environment Department, Patna appointed Bihar State Forest Development Corporation Ltd., as Agent for Kendu leaf trade. The Government will realize the revenue directly from the corporation.

REMOVAL OF FODDER GRASS

2.7.19 Generally grass for fodder may be removed by right holders or non right holders free of charge from the forests or plantations; commercial removal of grass for trade or by any other Government department from the plantation areas may be charged as per rate fixed by the department from time to time.

Every effort should be made to get the grass removed from the plantations either free or on payment.

FRUITS AND LEAVES

2.7.20 Right holders have full liberties to collect fruits and leaves from any part of the forests for their own consumption. Leaves of KHAJUR (Phoneni xacaulis) and Mahulan Bahuhinia Vahilia).

PETTY FELLINGS

2.7.21 A few trees out side the prescribed areas may be felled by order of Divisional Forest Officer for the following purposes:-

1. For the use in departmental work.
2. For the supply of sample timbers for Research & Trade.
3. For meeting special free grants.

These trees will be recorded in Manual from No. 2 but will not count towards yield.

SAMPLE PLOTS AND PRESERVATION PLOTS

2.7.22 Sample plots that may be laid out & their surrounds, preservation plots, protected trees and field experiments will be excluded from the operation prescribed in this plan.

REMOVAL OF TANNING MATERIAL BY THE LOCAL TANNERS

2.7.23 Mochis, right holding or Non-right holding generally remove tanning materials, barks, fruits and leaves from forest. Fruit and leaves do not cause any damage to trees, but debarking of Aasan trees, cannot be allowed unchecked.

Debarking generally kills the trees and as such certain restrictions have to be imposed. Stripping of bark Aasan trees may be alone in the current coupes and in coupes of the following year if already laid out, Standards shall not be stripped. Debarking of trees in there two sets of coupes will do not harm since the trees will be cut away the same or the following year.

If it is indispensable to take tanning bark from out side the coupes specified alone, Stripping of only matured and moribund trees may be alone, where ever commercial exploitable is possible, the Divisional Forest Officer will prepare a scheme and obtain sanction there to.

DEVIATIONS

2.7.24 Excess or deficit felling upto 10% of the prescribed yield in any one year will not constitute a deviation provided that the excess or the deficit is regularized at the end of every five years.

ESTABLISHMENT AND LABOUR

2.7.25 (A) EXECUTIVE STAFF

Executive staff deployed in this Division is adequate and existing organized beats and subbeats is quite satisfactory, except at and same places where the present staff of Singhbhum Afforestation Division is Operating. It may be requiring additional staff for sub-beats of beats for which the Divisional Forest Officer, Chaibasa South Forest Division may obtain sanction for creation of new additional sub-beats.

2.7.26 (B) GAZETTED OFFICER

In view of various miscellaneous work to be taken up in the Division during the plan period a gazette officer is necessary for assisting the Divisional Forest Officer.

2.7.27 (C) MINISTERIAL STAFF

The present strength of ministerial staff is adequate.

2.7.28 (D) RANGE OFFICERS

Posting of a forest guard for office work to each Range Officer has to do field work and office work single handled and thus, he is not able to do justice resulting in embarrassment and in evitable delay. Commonly a beat officer or a coupe oversear is entrusted with office work at the cost of field work.

2.7.29 One matriculate forest guard should be posted especially for office work if necessary even two forest guards may be posted, Posting of ministerial officers as Range Clerks is not favoured as adequate training is not available to them to attend range work.

2.7.30 It is therefore, recommended that one or two whole time matriculate forest guard may be posted to every range officer to allow the Range Officer more time for proper supervision of field work and protection of forests. The Beat Officer who is kept engaged in office will also be free to devote full time in the field.

PART – II
CHAPTER – VIII

CONTROL AND RECORDS

2.8.1 MAPS : The following maps have been prepared along with the revised working plan:

- a) Working plan map on the Scale 1"=2 miles showing details of blocks, working circle, Felling Series Roads and Buildings.
- b) Stock map 4"=1 mile scale prepared in duplicate and kept in F.S. Histories. This map shows the density, age and type of forests.

MANAGEMENT MAP

- (i) Management map on 2"=1 mile scale prepared showing the various working circle of the division and kept in the each copy of the revised working plan.
- (ii) Management map on 4"=1 mile scale prepared in duplicate showing the various working circle and kept in the felling series histories. This also shows the annual coupes of the different working circle.

2.8.2 The Stock map as well as the management map should be checked at the time of laying out of the coupes and any discrepancies noticed should be recorded in specially prepared control maps. These should be checked by the Divisional Forest Officer, after which they will be incorporated in the printed counter maps at the time of the revision of the plan.

DIVISIONAL MAP

2.8.3 A complete set of map in the scale 4"=1 mile should be kept in divisional offices as master copy and maintained up to date. Indicating the following.

- (i) All boundaries and boundary pillars will be checked periodically and charges should be incorporated.

- (ii) All the Roads, Buildings, Plantations and other items of permanent nature, like newly constructed roads etc. will be entered.
- (iii) The Range and Divisional Working sets of maps will be periodically brought up to date from the Divisional Master Copy set. Range Office must be warned against misuse of maps.

FELLING SERIES HISTORIES

2.8.4 The Forests of this division have been divided into number of felling series. The management unit is the felling series an essential record for each independent working circle. Its maintenance in meticulous details as far as possible is most important. A complete set in duplicate has been prepared incorporating all the old notes and descriptions of the forests, one set for division and other for range office. A brief note will also be recorded in form "F" of the felling series Histories. A fire map showing the area burnt will be maintained in each felling series Histories. The old fire maps should be preserved to study the vulnerable spots and records of fire should be maintained according to the standard instructions in the forest Manual.

CONTROL FORMS

2.8.5 In accordance with the standard form laid down in Chapter VI of the code of working plan procedure. Three complete sets of control forms have been prepared with the plan. The D.F.O., shall according to the standard instructions as given in the control form, regularly do all the entries for the timely submissions to the working plans officer for checking. The period from 1st of October to 30th of September will be reckoned as the control year.

FOREST JOURNAL

2.8.6 This will be maintained according to the standing order of the Principal Chief Conservator of Forests, Bihar.

PLANTATION JOURNAL

2.8.7 A plantation journal for each plantation series shall be maintained according to standing instruction Important observations will be recorded in the Plantation Journal, Remarks,

Suggestions and instructions of inspecting officers with regard to plantation shall be invariably recorded.

NURSURY JOURNAL

2.8.8 A nursery journal for each nursery shall also be maintained or the lines of plantation journal.

RAIN FALL RECORDS

2.8.9 At present no rain gauge is maintained in this Division. It is necessary to install rain gauge at the following places.

- | | |
|-------------|----------------|
| 1) Noamundi | 2) Hatgamharia |
| 3) Kharband | 4) Chaibasa |
| 5) Roro | |

Record of rainfall should be checked and kept up to date by the Divisional Office.

FIRE RECORDS AND MAPS

2.8.10 A fire map of the Division on 1"-1 mile scale maintained according to the standard order of the conservator of Forests, Area burnt will be indicated by the standard symbols as prescribed in the code of working plan procedure (Appendix – II-V). The fire map will be maintained for 5 years, after that a fresh set of map would be prepared.

PART – II
CHAPTER – IX

FINANCIAL FORE CAST AND COST OF THE PLAN

The past revenue and expenditure of this division from the year 1972-73 to 1988-89 are given below:-

Year	Revenue in Rupees	Expenditure in Rupees	Surplus (+) or Deficit (-) in Rupees	Remarks
1972-73	12,41,407.00	6,63,983.00	(+) 6,77,424.00	
1973-74	14,49,329.00	6,57,324.00	(+) 7,92,005.00	
1974-75	5,87,900.00	10,26,902.00	(-) 4,19,002.00	
1975-76	6,45,409.00	10,09,403.00	(-) 1,63,994.00	
1976-77	7,21,524.00	10,06,816.00	(-) 2,85,290.00	
1977-78	27,18,391.00	10,48,286.00	(+) 16,70,105.00	
1978-79	31,85,826.00	11,11,326.00	(+) 20,73,500.00	
1979-80	33,87,377.00	14,25,571.00	(-) 8,70,855.00	
1980-81	12,83,401.00	15,54,256.00	(+) 2,58,740.00	
1981-82	20,44,205.00	17,85,465.00	(-) 4,84,395.00	
1982-83	9,13,461.00	13,97,856.00	(-) 11,83,700.00	
1983-84	7,37,983.00	19,21,685.00	(-) 9,34,458.00	
1984-85	11,20,847.00	20,55,305.00	(+) 71,342.00	
1985-86	22,95,436.00	22,24,094.00	(-) 33,91,556.00	
1986-87	11,10,400.00	45,01,956.00	(-) 18,55,272.00	
1987-88	5,48,233.00	24,03,505.00	(-) 18,55,272.00	
1988-89	38,07,614.00	30,96,425.00	(+) 7,11,189.00	

The expenditure is inclusive of plan expenditure. Above table shows that there is a fluctuation between revenue and expenditure due to following reasons:-

- (i) Abolition of old contract system due to creation of state trading wing in the department.
- (ii) Transfer of collection and sale of minor forest produce like Kendu leaves, Sal seeds etc. to the Bihar State Forest Development Corporation.
- (iii) Working of timber coupes and sale of timbers by the state trading wing from 1981-82.
- (iv) Loss of forest wealth due to excessive illicit felling and human pressure in day to day work on the forest.
- (v) Excess expenditure on patrolling under protection of forest due to Jharkhand agitation, illicit felling and encroachment.

The total area of the Chaibasa South Forest Division is 1,27,729.00 acre 5,109.60 hectare. The cost of the plan works out to Rs. 2.30 per acre/ Rs. 5.50 per hectare.