

PART – I
SUMMARY OF FACTS ON WHICH THE PROPOSALS ARE BASED
CHAPTER – I
THE TRACT DEALT WITH

NAME AND SITUATION

1.1.1 The forests of the Saranda Division, for the management of which this plan provides, are situated in the Saranda pir (Pargana) which embraces the South-Western extremity of the earlier Kolhan Government Estate in Singhbhum district. The tract lies between latitude $22^{\circ} - 0'$ and $22^{\circ} - 26'$ north and longitude $85^{\circ} - 26'$ and $85^{\circ} - 26'$ east. For some distance on the north of this Division run Calcutta-Nagpur South Eastern Railway line which separates it from Porahat Division, then the Koina river and forests of Kolhan Division. On the East there is common boundary line of Kolhan and Chaibasa South Forest Division. On the South the Forest tracts of erstwhile Keonjhar and Sundargarh districts of Orissa State exist and on the west again is the Sundargarh district of Orissa.

1.1.2 The Division comprises of 201710.50 acres (81664.17 hectares) of Reserved and 9855.15 acres (3989.93 hectares) of protected Forests, total approximately 847 sq.km. It is the most compact forest division in Bihar. Its exceptional compactness is broken only by three revenue villages, namely Chhotanagra, Kodalibad and Ponga. It is further intruded by Ghatkuri, Salai and Ankua Villages. Besides these, there are 10 (ten) forests villages established for supply of labour but of course, the land there of remains as reserved forests.

1.1.3 CONFIGURATION OF THE GROUND

The country of Saranda forests is also known as “The Land of Seven Hundred Hills”. An onlooker gazing from one of the several hill peaks at the panorama, will readily agree to this. The landscape presents a beautiful view of hill upon hill with thickly wooded valleys and meandering live streams.

1.1.4.1 The bulk of the division is situated between 305 metres and 610 metres elevation, but Sasangada Buru is the highest hill range. It shoots majestically to an altitude of 914 metres above M.S.L. The highest point in this hill range is 927 metres. The ridge about 24 km long is a series of charming gentle undulations which is now the seat of two massive iron ore projects, namely Kiruburu project and Meghatu Buru project. The valleys are on the whole more open than those of the neighbouring Kolhan and Porahat Division

and gradients though frequently steep, are usually more moderate than in the later division. The highest point as stated above is 927 metres on the Sasangda Buru and the lowest point is 229 metres in the Samta Valley. Jaraikela railway station, the headquarters of Sasmta range, though outside the forest limit, is the lowest point, having elevation of 206 metres only. Some of the hill peaks above 610 metres in elevation are listed below:-

Name	Elevation in Metres	Location
Sasangda Buru	926.89	Meghatu Buru Project
Budha Buru	834.54	Meeting point of A.21, 11, 12 & 20
Raigori Buru	821.43	Between G 18 & 19
Baichindigi Buru	797.05	Between A 21 & 11
Lutu Buru	787.29	Meeting point of G 5,3,4
Dlinda Buru	744.01	Between Tk. 3 & 14
Dirisum Buru	714.75	Meeting point of Kd. 1,2,3,4, & 5
Ichaguru Buru	695.85	Meeting point of TK 12, 13, & 35
Paraita Buru	678.18	Meeting point of KP 14, 17 & 22
Jamai Buru	669.95	Between TK 43 & 29
Gangai Buru	654.71	Between S 26 & 46
Chatu Buru	632.15	Meeting point of G 15, 16, 17
Bamai Buru	619.35	TK 39

1.1.5 There are two main drainage systems in this division divided by a watershed of over 610 metres which runs north from Bhangaon to Tholkabad then west to Tirilposi and finally turns south-west to Nawagaon village. The southern and smaller system includes most of Tholkabad and the southern half of Tirilposi blocks and contains the catchment area of the Rangangara, the Poramui and Nawagtaon nalas. These flow south through Bonai State and finally immerse in the Brahmini river. Ranganrga originating near Tholkabad is perennial through its course of about ten miles in this division.

1.1.6 The other drainage system comprising the bulk of the area of this division, drains northward into South Koel. The chief river from east to west are the Karo, Koina, Lailor, Tentri, Samta, Kalia and Oitidiri, Karo being the largest and perennial drains only a small area in Ghatkuri Block, as it passes through only the fringe of this division. The Koina is by far the most important river of this division. It originates in the extreme south above Bhangaon village on the border. It flows for about fifty miles through the forests of this division and falls into South Koel at Manoharpur. Approximately 1,00,000 acres (30480 hectare) of Reserved Forests lie in its catchment area. Other nalas, namely, Lailor, Tentri, Kalia and Pitidiri are monor nalas but are worth mentioning only because independently they drain from the forests to the Koel river. The Samta is also a perennial nala. The smaller

nalas specially in Ghatkuri, Ankua and Tirilposi Blocks dry up in summer, but in the rest of the area most of the fair sized nalas merrily sing their course through the hottest months. From the point of view of water supply this division has no problem.

1.1.7 Geology, rock and soil :- The following is reproduced from the Mooney's Plan "The rocks of this division are of Archean age, and are referable to the Dharwar system. They show no signs of subsequent submergence although they have been subjected to considerable tectonic movements: the direction of the thrust from the north and north-west. The Dharwars have been divided into upper and lower, corresponding with the Iron-Ore and the Older metamorphic systems. The latter do not occur in this division being exposed to further east in Chaibasa Division. They consist of highly metamorphosed rocks, chiefly quartzite's, hornblende-schists and more rarely mica-schists.

The iron-ore series, which is well represented in the Division comprises a considerable variety of petrological types, the chief of which are-

(i) Shales – These unaltered shales are found chiefly in the centre and south-east of the division in Ghatkuri, Karampada, Kodalibad and Tholkabad blocks. They occur both above and below the iron-ore beds and are much metamorphosed in the north and west of the area; but no where do they become true slates though often much silicified. They frequently contain non-continuous bands of quartzite and sandstone, the latter being often felspathic as can be seen in the west of Kodalibad. Generally speaking they dip steeply to the north-west. Their colour is usually buff or reddish purple but varies greatly. Soft white clayey shale occurs near Gua. They vary in consistency from soft powdery clay to a compact siliceous rock, and from a typical shale to a glossy phyllite. They are frequently very ferruginous due to the leaching of iron from the ore deposits, with the shales are associated inter banded outcrops of quartzite and contemporaneous basic sills and flows (Epidiorite). Very typical of the shales are the abundant quartz veins, generally forming ridges and weathering into numerous quartz fragments on the surface. The shale ridges are very infertile but are the chief sources of sabai grass.

(ii) Phyllites and Schists – Towards the north and north-west in the region of greatest organic movements, the shales pass into phyllites and schists. The phyllites are mainly chloritic or more rarely carbonaceous and the schists are chiefly biotic-chlorite schists derived from the original basic rocks. The main area of the basic phyllites and schists stretches across the north of Ankua, Samta and Tirilposi blocks extending south of Tirilposi village and curving in an area along south-west of the Division. These rocks are of special

interest since the bamboo (*Dendrocalamus strictus*) forests of Saranda are almost exclusively confined to the schists extending in places on the chloritic phyllites, especially where the later are calcareous.

(iii) Quartzites and gritstone occur as impersistent bands in the shales, notably in parts of Kodalibad block where they are felspathic, but there are extensive areas of quartzite in the south-west of the area in Tholkabad and Tirilposi blocks, chiefly at elevation above 1,400 ft. These are altered locally to sericite quartzite-schist.

(iv) The Iron-ores consist of a basal bed banded haematite quartzite (or jasper) which rests on the shales at about 1,200 feet elevation and is capped by the haematitic ore body. The chief deposits in the Division are in Ankua, Ghatkuri and Karampada blocks. Minor deposits occur near Tholkabad where they rest on quartzite-breccia conglomerate and quartzite. The iron ores are almost invariably capped by laterite derived from the weathering of the ore or ferruginous conglomerates. The iron-ores and the haematitic-quartzites, with which they are commonly associated being the hardest and most weather-resisting rocks in the area, are mainly responsible for the topography of the country and constitute the most conspicuous ridges and hill tops in the Division. In some cases as in Ankua and karampada it forms fairly extensive plateaus. These plateaus represent the level of the ancient peneplain.

(v) Basic igneous rocks in the form of epidiorite (altered dolerite and garbbero) occurs as small dykes in the east of the division. But this rock is more extensively associated with the quartzites in the south of Tholkabad and Tirilposi blocks where it forms extensive out crops and appears to be a large still or flow. During the course of its metamorphosis, this rock has become increasingly siliceous differing in this respect from the original dolerite and becoming a somewhat different type of forest. The soils derived from this rock do not usually favour a good forest; but it is of interest to record that in Porahat Division bamboos are said to be closely associated with epidiorite, in Saranda it is most exceptional to find bamboos on this rock except where it intrudes into chloritic mica-schist, in parts of Ankua block. Only one outcrop resembling the new Dolerites was found (Geological specimen No. 97) on the road just north of Nuagaon village. One occurrence of an ultrabasic rock (much serpentinised) was noticed on the divisional boundary south of Bitkilsoya (specimen no. 210).

(vi) Laterite, chiefly in the "highlevel" residual form is common on all the hill tops over 2,500 feet where iron-ore occurs. No satisfactory case of residual laterite derived

from epidiorites was seen, the weak weathering more usually to a greenish shaly consistency, though yielding a red or buff ferruginous soil. The ferruginous shales on weather also sometimes give rise to a laterite material. Secondary or detrital laterite occurs on some valleys being derived from decayed fragments of rock washed down from the higher erosion. In these cases it is often found forming a lateritic cement in recent conglomerate. Both forms of laterites are of comparatively recent origin.

(vii) Calcareous deposits do not occur, except very locally in small quantities in the form of travertine. The best example is to be seen at the foot of the water-fall in Anuka 22. Some of the phyllites and chloritic schists are distinctly calcareous. These occur chiefly in the north of Anuka in compartment 38, 39 and 48 invariably in association with bamboos (geological specimen no. 161, 162 and 164).

1.1.8.1 The soil of the Division may be roughly classified under the rocks from which they are derived.

1.1.8.2 Soft carbonaceous phyllite weathers to a powdery consistency and is the most infertile soil met with, although the shale cum quartz ridges are not much better. The shale yield a compact impermeable clay the surface of which is often covered with quartz fragments. However, some of the best forest in the Division occurs along valleys on the shales where there is a good depth of well-drained soil derived from the laterites or iron-ores above and frequently having a bed of ferruginous boulders in the sub-soil, the soil is generally a ferruginous clay or loamy clay.

1.1.9 The quartzites of Tholkabad and Tirilposi yield a light, sandy loam, which is usually well watered by small springs in the upper valleys and is generally well clothed with moderate to good quality sal.

1.1.10 The basic phyllites and schists weather readily and generally give rise to very deep fertile soils in the valleys which usually support mixed forest of a moist type with a varying proportion of sal which reaches large dimensions on these sites especially if as is usually the case, the valley is watered by a perennial stream. These soils vary from loam to clay loams.

1.1.11 the epidioritic weather to a buff or reddish stiff ferruginous clay. If the rock is much exposed, dry mixed forest is commonly met with. Where there is moderate depth of soil, sal forests unless the soil overlying it is derived from the quartzite, laterite or iron-ores.

1.1.12 As a result of a general examination of the geology and soils of the Division and of the vegetation associated with them the following general conclusions have been reached:-

- (i) Sal will grow on moist soils but prefers moderately heavy but well drained soil derived from acid rocks. Iron appears to be definitely beneficial as the purest sal crops are invariably found in association with the iron-ores or the hematite-quartzite.
- (ii) The maximum development of sal is to be looked for on such a soil overlying a well-drained sub-soil with water readily available but not so close to the surface as to cause water-logging.
- (iii) The only site which sal avoids in Saranda is epidiorite with a shallow covering especially if the aspect is southerly. Here it is replaced by mixed forest.
- (iv) Deep moist soils derived from the basic phyllites or schists will support sal of excellent quality, but the climax type of forests appear to be moist forest. This is probably a post-climax. It occurs on the biotite or chlorite schists, extending locally on to basic phyllite. They were now here found on epidiorite (as is the case in Porahat) unless this rock is closely associated with the schists. It may be that the epidiorites of Saranda is more altered and is therefore of a more acid type than the Porahat. There are also grounds for believing that the bamboos are partial to slightly calcareous soils.

1.1.13 A note on the latest geological formation of the area obtained from the Director, Geological Survey of India, Bihar, (East) circle, is reproduced below. The survey was conducted around Gua-ghhotanagra and Kumdih but the report also pertains to the adjoining areas under the same co-ordinates. "An area of about 280 sq. km. was geologically mapped on aerial photos (Scale 1:31,000 approx) around Gua-Chhotanagra-Kumdih of Singhbhum district, Bihar during the F.S. 1973-74. The area falls in topo sheet Nos. 73F/7 & 8 and lies between latitude 22° 10' & 22° 19' and longitude 85° 15' and 85° 28'.

The rocks of the area constitute phyllite shale, banded haematite carper/banded haematite quartzite, chert quartzite and basic volcanic of the iron ore group overlain by a sequence of sandstone, conglomerate, phyllite/shale of the younger Kolhan Group. The present mapping has indicated the presence of long and continuous horizon of

Kolhan sandstone/conglomerate towards NW of Gua and also of Kolhan shale/phyllite in the central part of the area.

The general trend of both the groups is almost similar striking NE-SW to EN-WS with low to moderately steep dip towards EW.

The area has undergone two phases of deformation of which the earlier phase is more intense. This has resulted in the development of folds on S1 which are similar, open to tightly appressed isoclinal with vertical to steep north-westerly dipping axial planes and subhorizontal to shallow NW-SW plunging axes. Axial plan foliation (S2) developed pervasively in the phyllite during the earlier phase (B1) also trend NE-SW to WNE-WSW with moderate to steep north Westerly dip. During the second phase of deformation (B2) S2 was folded. This fold is not ubiquitous as the earlier folds. Coaxial refolding of around NE-SW axis with sub-horizontal to low NW to SE dipping axial planes is marked by development a few mesoscopic folds in the phyllite of the south-eastern part of the area. Structural analysis of the area on both mesoscopic and macroscopic scales shows that both the group of rocks have almost same structural history and B1 folding. Iron ore group of rocks started before the deposition of the Kolhan rocks.

The economics of the area is based on the occurrence of Iron and manganese which has been mined in the past and also being worked at present by different private parties. Iron ore-haematite occurs at number of places in the banded haematite Jasper/banded haematite quartzite ridges between south of Gangda in the north and south west of Dazaiburu in the south.

Manganese occurs in the shale/phyllite or laterite capping over it. The most conspicuous horizon trends NE-SW towards west of Baraiburu extending about 5 kms which is marked by number of quarries either abandoned or in progress. Minor occurrences of dolomite were noticed in the phyllite just. East of Hakahata and about 0.5 km west of Ghatkuri.

1.1.14 There are usual three seasons-the hot, rainy and cold. The hot weather is noticeably mitigated the hilly and frost clad nature of the country. The days may well become hot enough but as soon as the sun sets, it suddenly starts cooling. The summer nights at Tholkabad (548.64 metres altitude) for example these are much cooler than the places of similar elevation outside the forests, the chief reason being that the thickly forested land cannot absorb much heat of the sun and so consequently it has little to radiate after sun-set.

Sasangda plateau, though with less forest cover now after the establishment of Kiruburu and Meghatu Buru Iron Ore Projects still presents delightful climate during summer.

1.1.15 The rainy season starts by the middle of June and continues towards middle of September, but pre-monsoon thunder showers usually occur from about the middle of April. These pre-monsoon showers are a boon to the sal forest because sal fruits ripen during this period and viability of the seed being very short, it gets sufficient moist soil to germinate itself. In the month of October also for a week or ten days there is a short period of rainfall known as "Hathia" rains. This is of vital importance to rice crop. There is also, in most years, a short spell of winter rains about December-January.

1.1.16 The cold weather extends from the beginning of November to end of February. In the thickly forested areas of the division it continues about the middle of March. Winter can be severe and is characterized by very heavy dews which are found to be dripping sometimes in the morning from the tree leaves. Vegetation in the shade remains wet nearly till midday. Fog is not common though it is seen sometimes in December-January. Frost is of very little occurrence on the Sasangda plateau but is rare elsewhere in the division.

1.1.17 The following table gives the available data regarding temperature and rainfall.

STATEMENT OF RAINFALL IN INCHES

Year	Manoharpur	Jaraikela	Tholkabad	Chiria	Gua
Average of 10 years from 1924-1953	65.17	100.30
Average from 1934 to 1940	46.60	61.40	...	71.60
1941	63.12	64.59	83.54	68.67	61.95
1942	73.44	87.28	78.61	63.04	57.39
1943	76.10	58.15	104.90	82.59	58.72
1944	57.26	62.39	78.86	68.45	54.90
1945	47.57	43.92	75.76	50.90	49.52
1946	77.32	69.62	90.62	70.53	71.50
1947	64.20	51.94	54.75	54.69	51.25
1948	70.33	53.08	78.66	51.13	56.91
1949	72.08	62.65	30.67	56.99	47.57
1950	65.66	60.35	85.51	60.79	53.51
1951	55.21	30.47	65.74	47.86	44.57
1952	64.76	44.83	77.47	65.37	...
1953	58.33	44.38	78.08	57.75	...
1954	42.21	27.60	51.35	53.27	...

THE RAINFALL FIGURE FROM THE YEAR 1955 ONWARDS IS GIVEN IN CENTIMETER

Year	Manoharpur	Jaraikela	Tholkabad	Gua
1	2	3	4	5
Average 1955 to 1961	65.90	167.07	148.43	141.65
1962	181.61	140.52	199.41	148.52
1963	93.22	182.02	249.47	219.13
1964	127.72	178.93	238.97	170.40
1965	162.75	175.61	152.87	169.82
1966	110.33	146.04	183.99	144.14
1967	119.02	95.01	135.29	210.99
1968	143.54	148.86	144.14	199.39
1989	109.43	49.21	63.53	313.44
1970	143.73	117.25	180.63	163.57
1971	138.76	150.46	221.62	201.80
1972	98.06	121.89	117.78	155.75
1973	186.08	139.21	177.62	273.86
1974	77.64	97.63	130.98	135.38
1975	127.83	120.45	166.10	206.81
1976	97.61	107.00	179.72	152.66
1977	144.09	137.34	196.27	176.97
Average 1978 to 1995	131.05	132.01	170.86	195.07
1996	137.01	128.59	178.07	201.31
1997	123.03	139.23	155.56	163.92
1998	99.83	109.30	112.34	124.56
1999	115.36	146.18	171.30	195.07
2000	134.00	175.61	222.04	201.31

TEMPERATURE TABLE

Month	Chaibasa		Jamshedpur	
	Mean daily Max. (cent.)	Mean daily Min (cent.)	Mean daily Max. (cent.)	Mean daily Min. (cent.)
January	26.5	12.0	26.7	11.8
Febraury	29.2	14.4	29.2	14.3
March	34.7	19.3	34.6	18.7
April	38.9	24.1	38.7	23.7
May	40.5	26.8	40.0	26.8
June	36.7	26.7	36.5	27.0
July	32.7	25.3	32.0	25.9
August	31.4	25.0	31.8	25.7
September	31.7	24.7	32.1	25.4
October	31.0	21.6	31.6	22.2
November	28.5	15.4	29.1	15.5
December	26.6	11.7	26.8	11.6

MEAN RELATIVE HUMIDITY

Month	Chaibasa Mean relative humidity %		Jamshedpur Mean relative humidity %	
	For 08 Hrs.	For 17.30 Hrs	For 08 Hrs.	For 17.30 Hrs.
January	73	51	75	48
Febrary	67	41	67	34
March	58	34	51	27
April	55	31	48	24
May	55	36	57	33
June	70	63	70	60
July	83	80	84	77
August	84	82	83	79
September	83	80	82	79
October	77	68	77	68
November	71	56	73	57
December	72	53	75	55

Note : The above data of temperature and humidity for Chaibasa and Jamshedpur are average based on records for the period 1975 to 1996.

1.1.18 WATER SUPPLY

Water supply on the whole is adequate in Saranda division. In addition to the perennial rivers namely, the Karo, the Koina and the Samta there are many perennial stream, particularly in Karampada, Tholkabad and Samta blocks. Near Kuni, Poradih nala has been dammed up and irrigation channel has been formed therefore to the Kumdih forest village. Similarly the Champe-Sukuagara in Tholkabad and Hendediri nala near Chhotanagra maintain their continuous flow throughout the year. On the precipitous Sasangda slopes several perennial nalas for example Maruligara, Chard nala, Poradih nala suddenly and dramatically gush forth in volume approximately at 610 metres contour. Comparatively smaller streams like Ratoatgara near Tholkabad, Oraiburu nala by Babudera, Ankua nala near Ankua, Saroka nala near Chhotanagra and Hamsada nala by the Chiria iron-ore mines are perennial. There is some belief in the minds of the people associated with this forest for long that there has been gradual drying up of many streams during the past seventy years. This belief cannot yet be fully proved but straight disapproval is also very difficult. Of late large scale devastation of the forests in Karampada and old Sasangda blocks due to the iron-ore projects mentioned earlier has definitely affected the water table as it appears from the slow and discontinuous flow of some of the perennial streams in the

summer. The reddish colour water of Koina caused by the washing of the iron-ore has done great damage to this forest along with its flora and fauna.

1.1.19 The water level in wells goes down considerably in summer and the lowest is reached in May. In that month the water level ranges between 9 and 15 metres.

1.1.20 Natural calamities : - This division has never experienced any serious type of calamity like famines and flood. The banks of the Karo and Koina do sometimes overflow at periods of heavy rain but rarely cause any appreciable damage. In 1927 there was only one case of flood damage in which the light railway bridge at Duia and a portion of the road from Salai to Roam had been damaged. Storms occur but are not severe. Only in 1905-1906 a hurricane is said to have destroyed a number of dwellings. In May 1852 a storm of less severity swept through the forests uprooting many trees. In May 1974 again a hurricane swept through the forests of this division causing uprooting of several hundred trees. The half portion of the roof of Tholkabad forests Rest house was blown off. Famine does not visit these forests. The local people grow some crop which is not sufficient for the whole year. They supplement their food supply with fruits and edible roots which are in abundance in the forest. These also provide insurance against famine and starvation. They also earn their livelihood from harvesting and silvicultural works done in the forests.

1.1.21 Health : The climate of the Saranda Division was once notorious but has improved during the last few years. Malaria being the commonest scourge has been brought down considerably by the aid of malaria eradication programme of the Government, but in the last few years it has again started raising its head and cases of malaria fever increased much. A few cases of leprosy among the local people have also been noticed.

1.1.22 The health of the staff improved a great deal through construction of more quarters, rest houses and wells. In several localities ticks are found and they cause some trouble to the staff, but it has nothing to do with their health.

1.1.23 DISTRIBUTION AND AREA

RESERVE FOREST

Block	No. of comptt.	Area of block by adding up areas of all the compartments		Area of block as in register of reserved forest		Remarks
		3	4	5	6	
1	2	3	4	5	6	7
Ankua	54	40091	16231.174	40091	16231.174	
Ghatkuri	32	30793	12466.801	30793	12466.801	(a)
Karampada	36	28888	11695.546	30119	12193.927	
Kodalibad	18	11738	4752.226	11868	4804.858	(b)
Tholkabad	48	26326	10658.299	26225	10617.408	
Tirilposi	52	31210	12635.627	30724	12438.866	
Samta	49	32664.50	13224.493	32856	13302.024	(c)
Total	289	201710.50	81664.17	202676	82055.06	

(a) (i) An area of 35 acres (14.14 hect.) in Ghatkuri 23 compartment was denotified vide notification no. 98-R dated 9.1.1964.

(ii) An area of 200.00 acres (80.8 hect) in Karampada 34 compartment was denotified vide notification no. C/F 18(3) – 36/37-2031 dated 17.7.76.

(b) Usuria P.F. (no. 17, thana no. 25, measuring 103.00 acres (41.612 hect.) constituted R.F. in notification no. 555-111F-17/40R, dated the 24th January, 1940 and added to compartment no. 3 of Kodalibad block.

(c) (i) Kundriba (Kodalibad) P.F., thana no. 23, formerly P.F. 16 with some village area measuring 2,74,475 acres (110887.9 hect.) constituted R.F. under notification stated under (b) above and formed into compartment no. 48 of Samta block.

(ii) Samta protected Forests 13, area 654.50 acres (26441.8 hect.) constituted R.F. under notification no. 5926 111F-271-R dated 24th December 1942 and formed into a new compartment no. 52 of Tirilposi block.

1.1.24 PROTECTED FORESTS

Name and No. of the Block	Area in acres	Area in Hect.	Remarks
Rabangda Sunsuna (P 1.11)	2191.80	887.36	
Sagjor (P.1.12)	400.80	162.26	
Narang Ponga (P.F. 19)	446.10	180.60	
Bahada (P.F. 19)	61.60	24.93	
Sonapi (P.F. 20)	1726.60	700.24	
Chhotanagpur (P.F. 21)	257.50	104.25	
Jojogutu (P.F. 22)	501.30	202.95	
Dhobil (P.F. 23)	756.40	306.23	
Kesea Pecha (P.F. 26)	1596.60	646.39	
Nuia (P.F. 26)	373.40	151.17	
Baraiburu (B.F. 37B)	889.40	360.08	
Gua (P.F. 38)	333.95	135.20	
Tagoedaburu (P.F. 185)	140.375	56.83	
Karujagda Buru (P.F. 186)	86.125	34.86	
Sutri Buru (P.F. 187)	56.325	22.80	
Kurkatapi (P.F. 188)	33.875	13.71	
	9855.15 Acres	3989.93 ha.	

Vide notification no. 31360IIF-87 dated the 22nd July 1937 as corrected by Revenue Department letter no. 61R-IIF-350, dated the 4th January, 1989.

1.1.25 A detailed statement showing distribution of area by ranges, blocks, Working Circles and Compartments, is given in Appendix I. the constitution by quantities and types as computed from the stock maps, prepared for the purposes of this Revised Working Plan is as follows:-

Reserved Forests	Area in acres	Remarks
Sal (Quality I & II)	8,662.00	Quality – wise Area of the P.F. is not Given since stock-mapping of the P.F. was not done with the same intensity as in the case of Reserved Forests.
Sal (Quality III)	26,557.00	
Sal (Quality IV)	1,01,622.00	
Sal (Quality V including blanks or near blanks)	35,700.50	
Mixed forest and Plantations	22,545.00	
Forest villages	6,624.00	
Total	2,01,710.50	81,664.17 hect.

1.1.26 State of Boundaries : The total length of boundaries, both internal and external in Saranda Division is as stated below:-

	Reserve Forests		Protected Forests		Total	
	Miles	Km	Miles	Km	Miles	Km
Natural Forests	69	111.02	6	9.65	75	120.67
Artificial Forests	256	411.90	87	139.98	343	551.89
G. Total	325	522.92	93	149.63	418	672.56

A 30 metres wide cleared line is maintained on the State boundary between Bihar and Orissa which coincides with the forest boundary. Half the width of this line is annually cleared by Bihar, Forest Department. As regards clearing other half of the State boundary, Orissa Forest Department is not paying attention since last many years. Along this boundary there are serially numbered manonry pillars about 30 cm square and 60 cm in height at distances of 200 to 300 metres apart and with wooden pillars in between. Confusion sometimes arises because many of the mason pillars are broken and some of them have been replaced at wrong points. The condition of boundary pillars is generally good, but its regular repair and maintenances are necessary. Elsewhere the width of boundary line varies between 9 metres and 12 metres.

MAPS

1.1.27 The reserved and protected forests of Saranda were surveyed on scale of 4":1 mile by the Imperial Forest-survey (as the Survey of India was then designated) during the seasons 1899-1903 and the maps were published between 1901 and 1905. In 1930 second edition of the maps of reserved forests were published. Further edition of the maps has been published with roads and buildings incorporated up-to-date. In 1933-34 the protected forests were re-surveyed by Bihar and Orissa Survey and another set of map was published in 1934.

LEGAL POSITION

1.1.28 The reserved forests of Saranda were so constituted by Government notification no. 1152-FOR dated the 17th May, 1882 published in Calcutta Gazette of May 24, 1882. Subsequently in 1882 (Bengal Government Notification dated the 12th November, 1888) in 1910 (Bengal Government notification no. 1152-FOR, dated the 14th March, 1910) in 1913 (Bihar and Orissa Government order no. 419-p dated the 5th March, 1913 and Bihar and Orissa Govt. Notification no. 2493, dated the 19th March 1913), small alterations, many additions, in the originally notified area were made. Details will be found in appendix 11.

1.1.29 The protected forests of this division were constituted by the following Government Notifications:-

- (i) Government of Bengal notification no. 3375, dated the 5th September, 1897 declaring as protected forests all waste lands in Chhotanagpur not being reserved forests nor in use of cultivation or habitation. Certain species of trees were also declared reserved. This notification was superseded by notification no. 3586-FOR, dated the 17th July, 1894.
- (ii) Notification no. 403-FOR dated the 21th December 1903 subsequently revised by notification no. 1801 dated the 22th March, 1904 and further revised by notification no. 904-FOR, dated the 23rd May 1905, declaring certain demarcated forests as protected forests.
- (iii) Notification no. 3136 IIF-87-R, dated the 22nd July, 1937, declaring four more blocks as protected forests, namely, P.F. 185 to 188, vide paragraph 25 (vide Govt. notification Revenue Deptt. Letter no. 61R-IIIIF-350, dated the 4th January 1939).
- (iv) Notification no. 3629 dated 22nd December, 1906 laying down rules to regulated rights.

RIGHTS AND CONCESSIONS

1.1.30 No rights are admitted in the reserved forests. The protected forests are subject to rights which are to be regulated by the rules published in notification no. 3629, dated 22.12.1906. In recent years there has been a proposal by the Government to give the status of civil village to the forest villages, in order that tribals living in forests villages may not be treated as bondage labourers and may be given rights over land which may be unalienable and that benefits of agricultural development programmes extended to the villages may be available. The denotification proposals for forests villages have been sent to government vide Divisional Forest Officer, Saranda's letter no. 2998 dated 20th August 1975

MINING LEASES

1.1.31 There are a number of mining leases and in the last few years the number has increased unprecedentedly. The place where magnificent Sasangda plateau with towering Michelia champaca trees existed, have come up the massive Kiruburu mines of National Mineral Development Corporation. This has taken in its embrace about more than

half a dozen compartment viz. Kp 30 (part) Kp 27 (part), Kp 24 (part), Kp 31, Kp 34 and Kp 35 (part). The old leases existed in Ankua Compartment 10 and 12 and Ghatkuri 19. A new massive iron-ore project, has recently come up, namely Meghatuburu project which has also taken in its fold many compartments of Karampada block like the Kiriburu project. Two old mining complexes-one on Gua face and other on Ankua face (Chiria) belonging to Messrs Indian Iron and Steel Limited have now been over by the N.M.D.C. though leases embody safeguards against avoidable damages to the forests, the mining faces and labour colonies have been notorious as starting points for forest fires, which in recent times, unlike the past, have become an obnoxious problem in the Saranda Division. A list showing the Blocks, Compartments and areas involved in mining leases has been given in Chapter VI of part II.