

King Plan for the forest of Chaibasa North Forest Division.

PART – I

Summary of facts on which the proposals are based.

CHAPTER – I

THE TRACT DEALT WITH

Name and Situation .

- 1.1 This working Plan deals with all the RF & PF'S of Chaibasa North Forest Division . The Division is bounded on the north by the Dhalbhum Sub-Division and West Bengal, on the East Orissa State, South by the Chaibasa South, Kolhan and Porahat Forest Division and on the West by Ranchi District.
- 1.2 The Forest lie between  $85^{\circ} 30'$  and  $86^{\circ} 15'$  North Latitude and  $22^{\circ} 30'$  and  $23^{\circ} 0'$  East Longitude.
- 1.3 The following thanas of Singhbhum district lie within the area of the Chaibasa North Forest Division.
  - (i) Patamda
  - (ii) Chandil
  - (iii) Saraikella
  - (iv) Govindpur
  - (v) Kharsawan
  - (vi) Tamar and
  - (vii) Chakardharpur.
- 1.5 The tract forms a part of the Southern fringe of the Chotanagpur plateau. The northern and the southern parts of the division are mainly plain and undulating dotted with low hills. These hills contain very poor and degraded forests. The plains are almost devoid of vegetation. The northern slope of DALMA HILL range which falls within this division extends and merges with Chadri Pahar range terminating on the left bank of the river SUBARNAREKHA. The main forests of Chandil beat lie over this hill range and its slopes some of the important peaks of the division are (i) Dalma 3036' (ii) Rajjama 2224' (iii) Darkada 2439' (iv) Doddro 3009' (v) Deshwa Pahar 2766'.
- 1.6 Slopes of the hills are moderate to precipitous and have made relevance to the size of the hills and hills ranges . Most of the isolated hills are either devoid of Vegetation.
- 1.7 The configuration of the ground, coupled with intensive grazing fire and inadequate vegetative cover lead to high degree of run off which often into flood disrupting the main communication between Chaibasa and Jamshedpur. The forests as well on these accounts, are deprived of the benefit of rain water which otherwise would have increased the moisture

status and aided significantly in maintaining a much better forest crop and Luxuriant ground flora.

- 1.8. The tract is gullied particularly along the banks of the rivers and sheet erosion is common through out. The gully formation has been amply aided by the abuse of Vegetative Cover of the hills and undulating plains.

#### DRAINAGE .

- 1.9. Almost the entire tract drains into two principal rivers the Kharkhai and the Subarnarekha. Bulk of the forests of Kharsawan and Saraikella Ranges drain into Kharkhai and its tributaries whereas these of Chandil drain in the Subarnarekha. The drainage of the forests . on account of the Configuration of the tract coupled with abuse of forest crop is rather excessive, The net work of rivers, rivulets and nallas (Particularly in the hills) facilitates the draingage to the excessive degree and thus deprives the forests of the benefit of rain water even during poor rainy season.

#### RIVER SYSTEM .

- 1.10 The Principal rivers and their main tributaries are (i) Kharkai (ii) Subarnarekha (iii) Sanjai (iv) Sona.

Kharkai :- The river Kharkai is formed by the junction of two mountain streams rising in the eastern Kolhan range of hills. It forms for about 18 miles the boundary between Kolhan and Mayurbhanj. At trijunction point of Saraikella Mayurbhanj and Kolhan the river takes its name Kharkai. Kharkai forms the eastern boundary of the division till it reaches the solitary conical Mindu hill (950') where it enters Saraikella. From this point the river takes to north and north east direction till reaches Saraikella town. There after it follows a meandaking Course till it finally joins the Subarnarekha near Jamshedpur. Its important tributaries are Sanjai Longra, Sona etc. The cat ehment area of Kharkai is almost entirely deforested.

Subarnrekha :- The origin of the river Subarnrekha lies in the district of Ranchi, enters Chandil Range near village saparam and Birdih where Damara Nala meets it, and runs almost through the middle of the range and immmediatly after admitting Kharkai in its course liaves the division boundary and finally doins in the see independently near Balasore after passing through. Dhalbhum Forest Division and Orissa, Its important

tributary is Kharkhari which runs from west to east through Chandil Range before joining the river Subarnrekha.

Sanjai :- The river Sanjai rises in the forest clad hills of Porahat, North West of Sonua and receives

Bamni a perennial feeder. It finally drains in the Kharkai within the division near Ujjainpur about 5

Miles South of Gamaharia Station on the south Eastern Railways.

Sona :- The river SONA rises in the Raisindri hill range passes almost through the middle of Kharsawan range and finally meets the river Sanjai near Bungi in Saraikella. Apart from these are many small & Comparatively big rivers which criss-cross the division finally draining either in the Kharkai or Subarnrekha .

- 11 All the rivers are fordable throughout the year except for few hours at a time during the rains when they rise & fall suddenly after heavy rains. The banks are generally steep and the beds are almost always strewn with boulders or consist of coarse shingle. Sand however is found in Subarnrekha and in parts of Kharkai and Sanjai. None of these rivers dries up altogether in the hot season but the flow dwindles down to a trickle. Smaller rivers however dry up shortly after the rainy season.
- 12 Water of the rivers of spring is not utilized sufficiently for irrigation purposes. There is a great scope for agricultural development by harnessing these sources. Water supply for drinking and household purposes is obtained by the villagers from the streams in the forest areas. In plain areas water supply is from wells. Water table is about 35 to 40 feet below ground level and hard rocks are generally encountered with in sinking wells which is difficult and costly.
- 13 The poorly stocked forests devoid of all protective values within the catchment along with faulty land use deprive these important rivers from being perennial in true sense. Floods immediately after heavy showers are not uncommon in the region. Often the floods overflow the banks of the rivers and cause destruction to cultivation and houses and leave behind coarse sand and pebbles all over. These rivers if made into perennial ones by treating the catchment – area, bring prosperity in the region by providing power and irrigation.

GEOLOGY ROCK AND SOIL.

- 1.14. The rocks covering the division form part of the oldest formations and are referred to as the Archaens. Very little is known regarding the order of super imposition of the Archaean rocks. The schistose and phylitic rocks covering the northernmost part of the division are the oldest and were of large pile of sediments in a geosyncline which were folded up and metamorphosed and later uplifted into large mountains. During the period the major portion of granite were intruded. Repeated periods of volcanic activity during the Archaean time give rise to numerous basic igneous rocks the most prominent of which are the Dalma lavas along the northern border of the division.
- 1.15. The evolution of the great Dalma hills rising over 3000 ft. consists mostly of lava flows. The rest of the country has rolling & topography with a number of smaller hills rising almost abruptly from plains.
- 1.16. In iron-ore series the oldest rocks in the area are the shales, phyllites and schists associated with volcanic rocks and tuffs. The main bulk of these formations constitute the iron-ore series. The iron-ore series is overlain by a great lava flow forming the Dalma and associated hills along the northern borders of the division consisting mostly of epidiorite, volcanic agglomerate and tuff.
- 1.17. Phyllites and schists of the iron-ore series are again encountered on the south of the Dalma volcanic rocks.
- 1.18. The mica schists and hornblende schists extensively developed in north east of the Dalma hills belong to the Chaibasa stage and passed westward into less metamorphosed phyllites and associated with volcanic tuff. The tuff are particularly well exposed in the Bamani Nadi section, North of Chandil. There are also prominent bands of quartzites North Chandil which give rise to steep ridges rising about 500 ft. above the surrounding country.
- 1.19. A group of chloritic, carbonaceous and ferruginous phyllites associated with tuffs constitutes the iron-ore stage. The ridges, east and west of Chandil are made up of carbonaceous phyllites grading locally into calcareous types. Ferruginous phyllites occur along the northern edge of the Dalma hills. The rocks of the iron-ore series west of Chandil near about II Chagarh are mostly phyllites and slates, associated with Volcrank tuffs.

- 1.20. Number dykes sills of basic Igneous rocks altered into epidiorite and hornblende schists and locally into chlorite and talc-schist occur interbanded with phyllites and schists of the iron ore series in the Patkum area.
- 1.21. The gold bearing quartz veins have been worked near Loma and Ichagarh. The veins in Loma have been found to contain on the average less than 6 gms per ton. These deposits have been recently prospected by the Geological Survey of India and the results are reported to be encouraging.
- 1.22. The Sonapet valley occupying the southern corner of the division bordering Kharwahan has trace deposits of gold. Gold washing is practiced by the local inhabitants but is not perhaps economical. Mining for manganese and asbestos is developing in Dashwapahar of this area.
- 1.23. The predominant rocks in the area of Saraikella and Kharsawan Ranges are granites with numerous intrusions of dolerite, the granite is known as the "Singhbhum granite" and is of alkaline type with occasional outcrop of feldspar. Unmetamorphosed shales and phyllites are found in the northern areas. Other rocks of lesser importance and incidence are epidiorites, schists with quartz veins, sandstones and conglomerates. Ochre deposits are fairly common and are generally pure and free from siliceous and gritty matter. Minerals of economic importance found in these several places in Saraikella and Dhalbhim associated with serpentinised ultra basic igneous rocks. In Saraikella the ultrabasic rocks whose hydrothermal alteration has produced the asbestos veins, are considered as intrusions in the Singhbhum granite. The largest deposits are at Barabana & Rajnagar in Saraikella.
- 1.24. An occurrence of asbestos resulting from the alteration of the basic rocks of the Dalma Volcanic, about half a mile south of Mahulbera (  $25^{\circ} 81' N$   $86^{\circ} 19' E$  ) near Chandil and Patkum has also been reported.
- 1.25. North of the shear zone the geo-anticline of mica schists with intercalation of hornblende schists and geo-syncline of Dalmai Lavas extend for over hundred and twenty miles from Parahat in the west to Midnapore district in the east. The mica schists together with the hornblende schists and quartz & granulites form the Chaibasa stage. The schists attain their highest grade of metamorphism in Sonapet anticline, in Kharwahan which is a branch of the main geo-anticline & in Saraikella, where they have been thrust into

granetiferous gneisses, The typical mica schists contain the two micas, garnet staurolite sillimanite and tourmaline. There is also zone of kyanite quartz gneiss with in bands of phyllite mica schists in which the kyanite is segregated in places to a dense, massive kyanite rock which is used as a refractory material. The largest deposit of kyanite is in Lapsa Bruu in Kharsawan other rock types are garnetiferous sillimanite- cordierite-gneiss and feather amphibolites north of Rearda (25° 52' N : 85° 53' E ) and Ramdin (22° 53' N : 85° 38' E ) .

### SOIL

- 1.26. An extensive area presently under forest cover, particularly hills and hill slopes do not contain soil of any description. On account of severity of erosion, most of it is completely lost, exposing rocks and boulders all over. Vegetation and tree growth are sustained by soil available in pockets and crevices. Soil is often found mixed with boulders and pebbles. Strata of murrum appear at varying depth of top soil. The soil is loam, sandy loam, clayey loam and at places clay. On account of high incidence of grazing and fire the soil in the plain forests in particular, is compact having very low infiltration capability. This causes high run off leading to the formation of ravines and gullies. The fertility is very low. Nutrient contents and water holding capacity are miserably poor. In brief it may be said that the soil in the forests of Chaibasa North Forest Division is highly refractory and is inhospitable to natural tree growth.

### CLIMATE

- 1.27. The climate is monsoon type characterized by three main seasons an intensely hot and dry summer season from the middle of February to the end of May, a warm and humid rainy season from mid June to the beginning of October and a mildly cold season from November to end of January. October is the link month between the rains and winter.
- 1.28. The heat in summer months is intensified by radiation from the rocky hill slopes that become bare through leaf-fall. The maximum temperature recorded is as high as 115° F and the diurnal range of temperature is between 20° F to 40° F . Loo – the hot westerly wind causes desiccation and there are occasional cases of sun stroke in the locality. On the whole however the forest does mitigate the severity of heat and consequently it is never unhealthy in the forest area as it is out in the open country.

1.20. The main Characteristic feature of Summer is that the temperature is kept down by accasional showers of ten preceded by cyclonic wind these thunder showers often preceded by cyclonic wind. These thunder showers are particularly beneficial to Sal forests for just about this time Sal wear ripen audare helped in germination by the rain water. Without this sal seeds not able to keep their Viability for long would have perished of course in the fire-swept open Sal forests the impoverished condition of the forest floor noutralised much of the advantages of the May showers.

DATA of Av. Rainfall during the year under

Chaibasa. North Division.

(Inmilimeter).

<u>Name of Station</u>	<u>Av. Rainfall (In Milimeter)</u>
Chakaradharpur	96.18
Saraikella	124.61
Gamharia	98.00
Kharsawan	117.06
Chandil	129.83

WATER SUPPLY.

- 1.30.1 .The Position of water supply is not satis-factory in the division particularly if quality is considered. As stated earlier most of the rivers dry up shortly after the rainy season. In the larger ones water flow gets very much restricted. In the year of prolonged summer – even major rivers dry up creating small pools in their beds. In fact cultivation is done now in the bed of Kharkai during summer months. Water does become plentiful during rainy season but it is always muddy not suited for drinking. The practice of having tanks and quite often big tanks definitely mitigated the scarcity of drinking water for human beings and cattle but water in the tank is invariably unhyqoinic for cattle too bath and drink in these tanks. In fact few factories in the region are being run from tanks inter . wells for drinking water are not found every where though efforts to have wells in every village are being made at Gove initiative.
- 1.31. In the forest tract however, the situation is entirely different. Even the meager facilities of tanks and wells are not there. One depends entirely, particularly during summer, on the

pools of muddy water and trickles form springs (Raisindri) This position of water supply in the forested tract makes living difficult even for resourceful human beings and whatever wild life exists in the division survives under real suffering.

DISTRIBUTION AND AREA.

- 1.32. Total forest area of 254.530 Sq. miles of the division forms 21.50 of the total land area within the territorial jurisdiction of the division. The forest blocks are confined to the northern part of the division and the southern, eastern and part of western parts have only dotted hills and small hill ranges which have forests in denuded condition. There are mundari Khutkatti tenure holding villages as well, Thus the forests of Chaibasa North Division consists of both RF, PF's & P.P.F's.

R F	<u>15,547.32 Ac</u>
P F 's	<u>1,29,974.20 Ac.</u>
P. P. F's	<u>17,378.16 Ac.</u>

- 1.33. The division is further subdivided into four ranges for administrative purposes. The Range wise distribution of forests are as follows:-

	<u>R F</u>	<u>P F 's</u>	<u>P. P. F's</u>
(1) Saraikella Range	--	37,542.95	----
(2) Kharsawan	246.30	26,759.77	17378.16
(3) Chandil	5,101.58	51,316.87	-----
(4) Kera Range	10,199.44	14,354.61	-----

STATE OF BOUNDARY.

- 1.34.1. The boundary of the forest is shown by pillars except in places where river forms the boundary. The forest of each village has independent even when the forests one many village form one compact blocks. The boundary pillars are of stone or earth. At places attempt has been made to plant AGAVE near the boundary pillars in the direction of the boundary lines.
- 1.35. The state of boundary is rather unsatisfactory mainly on two counts. Firstly, the boundary pillars to not exist at all the points where they were originally placed and secondly, the position of boundary pillar has been violently vitiated in many cases due to encroachment. Even in the villages where reconsolidation of boundary pillars either do not exist or have been removed from their original position. This situation has arisen

mostly in Chandil Tange. In face on account of irregular position of the boundary was carried out in the past it was decided during the currency of the preparation of this working plan to verify and reconsolidate the boundary of the forests of the effected areas.

#### MAPS.

- 1.34.2. No other maps except the demarcated maps on 16" = 1 mile scale are available. Even this map in the form Master copy was not available for all the forests.

#### RECORDS.

- 1.37. The register known as Demarcated register in which the name of the forest, its area plot wise notification number etc, are recorded was not up to date. It was difficult to ascertain the exact extent of forests within the territorial Jurisdiction of this Division. During the course of the preparation of the working plan attempt was made to prepare an up to date demarcation register after measuring the area of the forests plot wise. The measurement has been done on the Master copy. Since the accuracy of the master copy is itself in doubt as it is not up-to-date, the area so obtained may not be all correct. However recently assessed area has been not be all correct. However recently assessed area has been taken into consideration while preparing this working plan.

#### SURVEY.

- 1.38. The forests falling within the jurisdiction of this Division were surveyed and demarcated as and when they came under the management of Forest Department. Prior to taking over the forests for management by the Forest Department, only the forests of Saraikella and Kharsawan were demarcated when the notification 4/S 38 of the I. F. Act. Was published in 1945. After the merger of Saraikella and Kharsawan States to Bihar and taking over the forests of Chandil and Saraikella for management under the B.P. Act every bit of the forests worth management was surveyed and demarcated. This has often caused two demarcation lines in the same forest.
- 1.39. With the revenue survey having been recently completed all the forests under the management of Forest Department stand surveyed. The demarcation line of the forests of the entire division has been shown on the printed 16"=1 mile, maps. These printed maps however, lack accuracy in many cases in as much as some raiyati land have been included within forest boundary and in some cases the forests has been shown outside the forest boundary. Entries in the KHATIAI too in many cases are incorrect as many plots

having no forest and not under the management of Forest Department have been shown as forest and vice versa.

#### LEGAL POSITION.

- 1.40 forest of Chaibasa North Forest Division fall under three legal classification –RF, P.F.s and P.P.F’s. The Reserved forests and Protected forests were constituted under the provisions of the I.F. Act where as the Private Protected forests were done so under the B.P.F Act.
- 1.41 All the reserved forests of the division were constituted after the provision of section 38 (Protection of forests at the request of owners) of the I.F.Act. 1927 became operative.
- 1.42. The protected forests of the division are of two categories those constituted initially as Private Protected forests under the provision of B.P.F.Act 1947 and their subsequent notification u/s 28 of I.F. Act. On vesting of Private forests to Govt. on the application of the Bihar Land Reforms Act. And those constituted outright as P.F’s under the I.F Act. The P.F’s of Saraikella and Khasawan and part of Kera Ranges fall in the second category.
- 1.43. The forests of 36villages of Tamar thana of Ranchi district transferred to Singhbhum district vide Govt. notification no. CF/1 (B) -0224/ 56-2495- rt dated 18.08.1956, 33 villages are burdened with “MUNDARI KHUTKATTI” rights and as such these could not vest in Govt. even when the Bihar land Reforms Act. 1952 became operative, These forests, however, continue to have the legal status of P.P.F’s under the Bihar Private forest Act. 1947.
- 1.44. The details of the forests along with their notification number and area are given in Appendix no.

#### RIGHTS AND CONCESSIONS.

- 1.45 Rights of tenants and thief manner of exercise in the forests of Saraikella and Kharsawan estate were entertained as such even after the merger of these states to Bihar State till the revenue survey and settlement operations were completed. During the Estate regime, there were two categories of forests in Kharsawan known as BAHAR JUNGLE and BHITAR JUNGLE. The tenants were permitted to exercise their rights form Bahar Jungle only. Even forest land of Bahar Jungle was settled with tenants. This right was

however eliminated when the Estate Vested in Bihar and the Forest Department took management of the forests.

- 1.46 In the estate of Saraikella the rights were entertained only in the forests falling in Dugnipur.
- 1.47 In Chandil range rights were entertained vide Khatian Part-II in all the forests.
- 1.48 The forests of Kera Range too were partly burdened with rights which were exercised on payment of forest cess .
- 1.49 The Mundare Khutkatti forests of Ranchi District were burdened with rights including right to break forest land.
- 1.50 Even after the survey settlement operations, the rights in the forests and the manner in which these rights are to be exercised have not been streamlined as it appears from the Khatian Part- II
- 1.51. all the forests of Saraikella have been made free from rights where as in Kera Range the exercise of rights on Payment of forest cess have been continued. Similarly all the rights including the right to breack forests land have been maintained in the Mundari Khutkatti forests. In the forests of Chandil and Kharsawan Range rights to obtaind free firewood and building materials have been entertained as elsewhere.
- 1.52. Though the rights entered in Khatian Part – II are serupul usauly entertained by the forests Department, the manner of exercise of these rights often becomes unpracticable.
- 1.53. Difficulties are felt in regulating rights in Mundari Khutkatti forests. The mundari Khutkattidars adhere to the old time method of obtaining forest produce form all over the forests and to not confine themselves for the exercise of rights to the annual coupe. This they take as in-ftingement on their rights. They also break forest land as & When they like without caring for the administration. This system of exercise of rights has already caused extensive damage to the forests and has at the same time made scientific by the state Trading wing.
- 1.54. Else where in the division annual coupes are laid out and handed over to the Panchayat for distribution of forest produce of the coupe amongst the rightholders. Surplus left if any is sold in the next year after exploitation by the state Trading wing.
- 1.55. Broadly, the fellowing rights have been entertained in Khatinan Part-II
  - (1) Right to take firewood and house building materials free for bonafide requirments.

(2) Right to graze cattle free.

(3) Right of way through the forests, over and above this , the following concessions have been allowed by the Govt. by executive orders.

(a) Right to collect edible fruits and flowers.

(b) Right to collect dry and fallen firewood by head load vide Revenue Department Govt. of Bihar letter no. C/F-50 76/54-67- RT dated the 8<sup>th</sup> May, 1954.

(3) Turis are to be given bamboo at concessional rate vide Govt. letter no 226/69-1669 dated 5/6<sup>th</sup> June' 1969.