

Govt. Of Jharkhand  
Dept. of Forest and Environment

**WORKING PLAN**  
**FOR**  
**PORAHAT DIVISION**  
**(2003-2004 TO 2012- 2013)**

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## **CHAPTER -I**

### **SUMMARY OF FACTS ON WHICH THE PROPOSALS ARE BASED.**

#### **DESCRIPTION OF THE TRACT DEALT WITH.**

**Name and situation:** - All these forests are in the territorial jurisdiction of porahat division. The division is bounded in the north by Ranchi district, on the east by Saraikela- Kharsawan district on the south by the Howrah — Nagpur line of the South Eastern Railway and of the west by Ranchi district and part of Orissa .The forests lie between 22 ° 20' to 22° 50' North latitudes and 85° 5' to 85° 30' East longitude. The main Porahat reserves form more or less a compact block although there are numerous enclaves of civil villages. The river Karo isolates the Girga block at the extreme west. The old demarcated Protected Forests occur in eighteen isolated blocks scattered all over the erstwhile Porahat estate. The Anandpur forests fall within the Manoharpur Thana.

Porahat Division includes the Khasmahal estate of Porahat, Vested protected forests also leased to Government formerly by the proprietor of Anandpur of estate and Protected forests of Anandpur estate constituted as such as a result of vesting under the Land reforms Act.

The division comprises 56,605.28 ha. of reserved forests (R.F.) and 9,911.63 Ha. of protected forests (P.F.). Thus the total forest area of this division is 66,516.91 ha.or 665.17 sq. Kms. of reserved and protected forests. Except for occasional occurrence of scattered villages in the periphery and more limited else where, the reserved forests form an almost continuous block with a few scattered villages and hamlets within the compact RF block consisting of Kungughutu, Bera,Girga, Birda and Songra RF block in a row.

**Configuration of the ground:** - The tract is hilly throughout. Some parts of Girga, Bera and Kundrugutu blocks are precipitous. In Anandpur range, the hills are low with gentle slopes. Songra and Birda blocks, though hilly, are not precipitous. The highest point is Pungila Buru in Kundrugutu block, which is 852 meters high. The lowest point is 229 meters. On the whole, the tract is made of a number of hills and steep valleys. Very often the hill shale's are rugged, the valleys are especially narrow. The principal drainage is towards south and south-west.

**Geology rock and soil:** - The following note received from the director General, geological survey of India, Calcutta is reproduced below.

#### **The following rock types are met with in the area.**

Recent to sub-recent	Soils Literate, Newer detente, Granites.
Pleistocene-recent	Ultra basic igneous rocks.
Late pre-Cambnian	Iron ore series with the Dalma volcanic flows.
Archaean	Older Metamorphic.

**ARCHAEOAN Blocks:** - Older metamorphic rocks include banded haematitequartzite, Jasper-haematite schists, and hornblende and mica schists, with quartz veins. The quartzites are generally pure quartz rocks frequented with a well- defined cleavage and occasionally merge into quartz- sericite-schists. The mica schists are invariably decomposed. Chlorite schists are rare. The typical hornblende-schists are relatively fine- grained and schistose.

- (i) The following succession has been made out in Iron Ore Series; Sandstone.
- (ii) A few lenticular bands of limestone.
- (iii) Shales altering to phyllites and mica-schists, tuffs and sandstones usually altered to quartzites.
- (iv) Dalma volcanic flows with phyllites, tuffs, and conglomerates.

A well-defined bed of sandstone forms the basal member of the Iron Ore series. This bed is often a conglomerate but at places the pebbles are less abundant or even entirely absent when the rock is simply sandstone. Intercalated with the shales are nnumerable impressments bands of sandstone, which form a very regular alternating series of beds. The limestone's are very impure, fine-grained and grade through calcareous shales to normal shales. In the Porahat and in one or two localized areas further south, there is a zone of chloritic and occasionally sericitic phyllites. The Dalma traps apparently occur at the top of the Iron Ore series and are represented by epidiorites, which are generally fine-grained, dark grey rocks. These epidiorites are interlaced with phyllites and metamorphosed tuffs and conglomerates.

**Late Pre- Cambrian:** - The ultra basic rocks of the area are by no means extensive in outcrop nor are they widely distributed. They are confined rather to the eastern portion of the area and generally occur as relatively small masses at widely separated points.

Within the area, the more important granitic masses are those of the Singhbhum granite, the Chakradharpur granite-gneiss and the Chhota Nagpur granite-gneiss. Other important masses are the Arkassani belt of outcrops, whilst there are numerous granite and pegmatite veins throughout the area. Throughout Singhbhum granite are-a there is a considerable variation in the texture of the rock from an extremely fine-grained to a rather coarse grained and somewhat porphyritic rock. The Chakradharpur granite-gneiss stretches from Chakradharpur eastward. The Chhota Nagpur granite-gneiss rock is rather finegrained towards its border than well within the mass. The Arkasani granite gneiss rock occurs as a series of intrusions extending from east of Kharsawan to Duarpuram where it apparently merges into the Chakradharpur mass. The outcrops of granitic rocks around Tebo and Kaudeon are apparently western extension of this belt. Granite veins occur in many places throughout the Iron Ore Series but more particularly in the vicinity of the main granites masses.

The intrusion of the granites into the older rocks was followed by a series of basic igneous intrusive rocks, which have been termed the newer dolerites. Dykes of these dolerites are well developed in the Singhbhum granite and in parts of the Arkasani granitic rock, but curiously

enough these are almost absent in the charadharpur granitic mass. They are only sparsely distributed in the shales. These rocks exhibit considerable variation in texture, from almost aphanitic to coarse doleritic.

**PLEISTOCENE To RECENT ROCKS:** - Laterite is often found on the tops of the highest hills, particularly in the epidiorite area. Usually or haematite, . Sometime it is slightly siliceous. Many of the thin bands of laterite, which are found occasionally in mica schist country, may represent altered epidiorite dykes or sills as they are sometimes seen to be on the same line of strike as unaltered epidiorites. Associated with these laterites along the boundary of the epidiorite there is often peculiar clay varying in colour from pure white to buff. Within the shale area the tops of the some of the hills are lateritic.

**RECENT ROCKS:** - Owing to the diversity of rock types the soils are naturally rather variable throughout the area. The granites produce a sandy soil, and this is noticeable wherever there are few or no dolerite dykes, or in the case of the Chakardharpur mass, where there is no inclusions. The surface close to the dolerite dykes in the singhbhum granite is covered by an excellent loamy soil derived from the two rocks. The epidiorite gives rise to a dense clay soil, which is not very suitable for the ordinary cultivation, except where it contains considerable amounts of organic matter. The shales form a somewhat light clayey soil which is considered quite good for cultivation. The quartz-felsparmica-schists form a fairly sandy soil but it is not under intensive cultivation as it readily gives rise to “badlands” owing to its susceptibility to of erosion.”

**CLIMATE-** The climate is characterized by three main seasons viz, the summer, the rainy and the winter. The summer season which lasts from mid- February to end of May, is intensely hot in April and may. The rains last from June to September and the period- October to mid-February constitutes the cold weather.

The maximum temperature recorded in the summer months is as high as **430** C and the diurnal range of temperature is 10°C to 15°C. The heat during the day becomes very intense particularly in the open areas and there are occasional cases of sunstroke. Inside the forests, however, conditions are not so severe. Nights are generally quite pleasant, with thundershowers generally in the late afternoon. These are of great significance as they synchronies with the seed fall of Sal. It is this synchronization or its absence on which depends the nature of germination of Sal. In the years with scanty pre-monsoon showers, Sal regeneration is poor.

The monsoon generally breaks in the second week of June. The average annual rainfall is about 1400 mm. The rainfall is mosly confined to the months of June to September. Late rains, which are often heavy, fall in the month of October. There are, at times, a few winter showers.

Winter is generally mild, the average maximum and minimum temperature being 25 0 C and 10 0 C respectively. In some pockets, the cold is intense,such as at Kamrora, Gudri, Jarakel. There is heavy ddwfall and occasional mists. Forest, which was of rare occurrence so far, has of late been experienced more frequently. The years 1962 and 1963 saw extensive forest damage by frost in Songra, Kundrugutu and Bera blocks in which Sal crops in the sapling stage were badly

damaged. These have been more pronounced in the valleys in which natural or artificial regeneration had been attempted.

There are no meteorological stations inside Porahat forests. Data has been collected for chaibasa, which is about 48 K.M from these forests, and it may be taken to be representative of the locality. These are reproduced below in table

**TABLE-P**

**CHAIBASA TEMPERATURE.**

<b>S.L.No.</b>	<b>Month</b>	<b>max Temp °c</b>	<b>Min Temp °c</b>	<b>Rainfall (mm)</b>	<b>Rainy days</b>	<b>R.H (%)</b>
1	January	26.7	12.2	16.3	1	78
2	February	28.9	15	37.8	2	72
3	March	35	19.4	25.4	2	61
4	April	39.4	23.9	31.5	2	57
5	May	40	26.1	82	6	64
6	June	36.1	26.1	222.5	11	74
7	July	31.7	25	304.8	17	86
8	August	31.7	25	291.3	17	87
9	September	31.7	24.4	204.5	12	86
10	October	31.7	21.1	74.7	4	80
11	November	28.9	15.6	17.8	1	78
12	December	26.1	11.7	4.6	1	79
13	Annual	32.2	20.6	131.5	75	75

Station— Chaibasa.

Agro-climatic Zone: Porahat falls under Agro-climatic Zone-I 2: - This comprises [the Chhotanagpppur plateau of the state with hot sub-humid eco-region with red and later tic soils. Here also the climate is hot in summer and cool in winter. Annual rainfall varies from 1000 mm and mepns annual soil temperature is more than 22 degree Celsius. Length of growing

period varies from 150 to 210 days; soil is normally fine loamy to clayey, non-calcareous, slightly to moderately acidic and has relatively low cation exchange capacity.

**Water supply:** - the rivers Karo, south Koel and Sanjay affect the main drainage of the tract. The Karo which drains the north-western part merges with the south Koel near serengda. Both the south Koel and the Karo isolate the Girga block. The South Koel, draining the south-western part of the tract falls into the Sankh soon after crossing into Orissa. The sankh then is known as the Brahmani and joins the Mahanadi. - The Sanjay which drains the south-eastern part of the tract later falls into the subarnrekha. All these rivers are perennial. During the rains they appear as roaring torrents but during the hot weather they dwindle to small water courses flanked by wide sandy stretches. The riverbeds are rocky and so the rivers are not navigable except for small crossings affected in dugouts.

These rivers are fed by numerous streams, locally called caras. Some of these are perennial amongst which worth mentioning are Roro, Robgara, Marasoram, Mahadeosal. All of these drain into the Karo and the south Koel. The Roro has its catchments in the Birda blocks and the D.P.F. Blocks of Hesadih, the Robgara in north Kundrugutu block, the Marasoram in songra block and the Mahadeosal in north-east Bera block. Though there is no regular flow of water in these garas during the summer, yet they do contain water all through the year. Large number of pools appears in the beds during the hot weather when they become water holes to serve the wild life. These garas support vegetation bordering on the evergreen forests. There a number of smaller streams, known locally as lors, which flow through the hill slopes and drain into the garas. But they dry up soon after the rains.

The villagers depend for their supply of water on these streams. During the summer when they dry up, holes are dug in the riverbeds, which provide a trickling water supply. Some wells have been constructed. The villagers however use them only when they cannot get water from the streams.

**Location on National Watershed Basin/Region**. The porahat Division falls in the following National Watershed Basin

- (I) Region : 4 Koel Karo & Subarnrekha
- (ii) Basin : 4H Koel Karo & Subarnrekha
- (iii) Catchment : 4H1 Koel Karo
- (iv) A Sub Catchment 4 HIE
  - 1. River — Lower Koel from confluence with sankh upstream
  - 2. Watersheds
    - 1. 4HIE4
    - 2. 4HIES5
  - 3. Stream :— Karo
- (iv) B Subcatchment —4HIEF
  - River — Upper Koel upto its origin
  - Watershed - 4HIF5
  - 4HIF 6
  - Stream :- Karo , Jamuni

**Area and distribution.**

There have been various changes in the territorial charge of Porahat division occasionally. The area at that time was 300.3 square miles. Porahat division was created on 1 Oct 1916. Since then there have been various changes in territorial area of the division. Certain areas of Anandpur range were transferred to Kolhan division vide Government of Bihar, Revenue Department Notification No. C/F-i (A) 087/61-1893R dated 11th Sept 1961, Subsequently when the Chaibasa division was split in 1964 into Chaibasa North and South division, the Kera range was transferred from Porahat Division to the charge of Chaibasa North Division vide Revenue Department Notification No. C/F-i (A) 014/64-3757R dated 30th October 1964. As present porahat division comprises of the following forests.

<b>Sl. No.</b>	<b>Class and name of forest</b>	<b>Area in Hectares</b>
1.	Porahat Reserved Forests in 5 blocks	50,622
2.	Porahat D.P.F. (Demarcated Protected Forests) in 18 blocks.	7,575
3.	Anandpur Protected Forests in 18 blocks.	5,097
4	Anandpur Protected Forests from (old P.P.Fs.)	3,223
5	Land obtained under F.C.ACT.	7.65
<b>6</b>	<b>Total.</b>	<b>66,517or 665.17</b> <b>Sq.Km</b>

<b>Range wise R.F., P.F. Area Distribution</b>			
<b>RANGE</b>	<b>Reserved Forest (Ha.)</b>	<b>Protected Forest (Ha.)</b>	<b>TOTAL (Ha.)</b>
Anandpur range	5642.51	2331.14	7973.65

Bera range	16081.68	390.79	16472.47
Girga range	5131.16	1307.35	6438.51
Kundrughutu Range	13043.23	4086.19	17129.42
Songra range	16706.70	1796.16	18502.86
Grand Total	56605.28	9911.63	66516.91
<b>R.F., P.F. Area Distribution in Detail</b>			
Range	RF	PF	TOTAL
Anandpur Range	5642.51	2331.14	7973.65
AnandpurP.F.	5642.51	2331.14	7973.65
Bera Range.	16081.68	390.79	16472.47
<b>DPF—XVII toXVIII</b>	0	390.79	390.79
<b>Bera R.F.Block</b>	16081.68	0	16081.68
Girga Range.	5131.16	1307.35	6438.51
<b>DPF —Vito VIII</b>	0	1307.35	1307.35
<b>GirgaR.F.Block</b>	5131.16	0	5131.16
<b>Kundrughutu Range.</b>	13043.23	4086.19	17129.42
<b>DPF— Ito Vt, XII,XV &amp; XVI</b>	<b>0</b>	<b>4086.19</b>	<b>4086.19</b>
<b>Bera R.F.Block</b>	<b>2353.98</b>	<b>0</b>	<b>2353.98</b>
<b>Kundrughutu R.F Block</b>	10689.25	<b>0</b>	<b>10689.25</b>
<b>Songra Range. -</b>	16706.70	1796.16	18502.86
<b>DPFIXt0XIV</b>	0	1796.16	1796.16
<b>Songara R.F. Block</b>	15053.19	0	15053.19

<b>BirdaR.F.Block. —</b>	1653.51	0	1653.51
<b>Grand Total</b>	<b>56605.28</b>	<b>9911.63</b>	<b>66516.91</b>

The maintenance of the boundaries has not been satisfactory. In the Reserved forests and Porahat D.P.F. block the artificial boundary consists of cleared lines 8 meters to 11 meters wide with boundary posts, which are serially numbered. The latter are generally wooden posts inside stone Cairns.

At several places, discrepancies in the position and the numbering of the posts have been noticed. The numbering has at many places been obliterated. A scheme of periodical renovation is necessary.

**Maps and surveys.** During 1899-1903 a forest survey was carried out by the Imperial Forest Survey on a scale of 4" to one mile for the reserved forests only and maps covering 15 sheets, were published during 1901-1905. This survey apart from the usual topographical and other ground features included the disposition of all external boundaries with their boundary posts and numbers, fire lines, roads, foot-ports and Forest Department building sites marked, and which were brought up-to-date in 1930. During 1911-1913 a district survey was made by the survey of India on a scale of 2" to one mile and this included the reserved and protected forest areas in maps covering 10 sheets and these were published in 1918. This survey included the disposition of external boundaries with their boundary posts and numbers of footpaths and Forest Department building sites, apart from usual survey features. Survey of India made another district survey in 1912-13 on a scale of 1" to mile in the external boundaries of the reserved and protected forest shown with some detail of roads and footpaths in five for the division.

### **Last Survey**

The boundaries of the forests of Anandpur range have not been surveyed by the survey of India. Forests boundaries are therefore not shown on the 1" = 1 Mile topo sheets. These appear on the 16" 1 Mile cadastral maps.

**Legal Position:** - The Porahat reserved forests in five blocks were notified as reserved forests under the Indian Forests Act by Government in Notification No. 1146—For. Dated the **22nd** February 1907. Full ownership vested in Government upon the heirless death of Kunwar Narpat Singh Deo, the late Raja of Porahat.

The Porahat Demarcated Protected Forest blocks I to XVIII were declared as Protected forests under the Indian Forests Act in Government Notification Nos. 3630-For. Dated the **22nd** December 1906; 4935-IIIF- 11 12R dated the August 1917 and 2861-IIIF-86R, dated **1gth** march, 1926.

The Anandpur D.P.F. blocks I and III to XII and XV and the forests in 13 other villages belonging to Thakur Amarendra Partap Singh Deo were notified as protected forests in Government Notification No. 1189-IIIR. Dated the **11th** February 1935.

The protected forests of Anandpur range in Manoharpur and Chakardharpur thana's belonging to Thakur Amarendra Partap Singh Deo were first notified under the Bihar Private Forests Act in 1948. Subsequently these have been vested in the Govt. under the Land Reforms Act and as a consequence these were notified as Protected Forests under Section 29 (3) of the Indian Forest Act vide notification No. C/F — 17064 /55-3729 R. dated The 3 December 1955 and notification no. C/F —17022 / 58 —810 R-T dated the **2rd** August 1958.

**Rights and Concessions as Notified State :-** owned Porahat Reserved Forest in 5 blocks:

No rights are admitted since at the time of demarcation sufficient forests were excluded for the needs of the villages affected. In Several cases, compensation was paid or the villagers were settled elsewhere in comparative conditions.

The Government of Bihar vide notification no. 8991 —R- IIIIF — 23/39 dated the 11th December, 1939 approved of the following concessions to residents of village adjoining the Reserved Forests of the province;

(1) Any bona fide recorded tenants of any land or building who reside in a village, which is actually contiguous to a reserved or protected forest may, within the limits of such forests and without payment-

(a) Collect mahua fruits and flowers and other edible flower and fruits and roots for their own domestic use but not for any kind of. transfer, whatever, whether permanent or temporary, or absolute or conditional. This privilege will be allowed subject to the control of the Forest Department and under the restriction that the undergrowth or dry leaves should not be burnt for purpose of clearing the ground to facilitate collection.

(b) Pasture and use of springs for watering his own cattle or buffaloes which are their own bona fide property and are used for their own domestic and agricultural purposes provided that they will not be entitled to this concession for any cattle exceeding four heads for every acre of land they cultivate, provided further that grazing will be permitted only in such areas as be may be set apart for the purpose from time to time by the Forest Department.

(2) If the villagers abuse, the privileges allowed to them and willfully damage, the forest, the Conservator of Forests may suspend the exercise of the privileges for such time as he thinks fit. If after repeated warning and suspensions the villagers continue to damage the forest the matter should be referred to Government for orders.

In their notification no. 1226-R. -R., dated the 14th October 1940, the Government of Bihar further clarified the position in relation to grazing under 1(a) above as "The privilege of grazing is a concession and not a right, and it must not be allowed to over-ride the primary object. of conservation and protection of forest, i. e. grazing can only be

permitted where and when it can be done without danger to the forests”:

**(II) State-owned Porahat Forest Demarcated Protected Forests in 18 blocks.**

The Porahat D.P.Forests are burdened with rights. In the last plan rights were allowed to 82 villages. A list is given in Appendix-X. A detailed statement of the rights and of the rules of working are given in Appendix- XI. In substance the rights allowed to each of the right-holders concerned whatever forest produce he needs for his own domestic or agricultural requirements, subject to regulation according to the prescription of government sanctioned working plan. Grazing for their cattle is also allowed on the same terms.

**The rest of the forest.**

These are also burdened with rights. Khatian part II contains details of the rights pertaining to each right — holding village. The right generally relates to grazing; to the taking free of charge of all forest produce required bona fide by the right- holders for own agricultural or domestic requirements. Principally the right — holders take firewood and fencing material and poles for house- building and machan. Rights extended to mahua and other edible fruits, and leaves etc. These rights are to be regulated by the prescription of working plan duly sanctioned by Government and in principle must not operate to the detriment of the object on which they bear.