

CHAPTER – I THE TRACT DEALT WITH

NAME AND SITAUTION

This working plan covers the forests of Chatra North division in the district of Chatra. Formerly they formed part of old Chatra Forest Division. In 1962 the old Chatra division was sub-divided into two divisions, namely Chatra North Division and Chatra South Division. In addition to the protected forests, this plan also embraces the ex-reserve forests of Ramgarh Estate.

The forests lie between 24°-10' N and 24°-32N' latitude and 84°-27' to 85°-7'E longitudes. All these forests fall within the jurisdiction of Hunterganj, Pratappur and Chatra (Part) police stations.

The main forests form more or less large compact blocks, although there are numerous enclaves of civil villages.

CONFIGURATION OF THE GROUND

The tract forms parts of a chain of high land, high cultivated plateau and sometimes a range of hills. It is the eastern extremity of the Vindhyan hill range. From the above description one should not infer that the area contains any extensive range of high hills or it is situated entirely on elevated plateau but both the features are represented.

Part of Hunterganj and Pratappur are on plain and undulating ground with elevation of 800 to 1300 fee (243.8m to 396.2m). A considerable area gives almost a mountainous look though the hills are not of any considerable height.

The important hills are Rajgurua 1481ft. (451.3m), Jhumbra 1503ft. (458.11m), Garhwa 1450ft. (441.94m), Chandla 1384ft. (421.80m), Hemra Pahar 1487ft. (453.81m).

Kalhua hill (1575ft.) is very striking when seen from the north as it over hangs abruptly the low Lilajan valley.

RIVER SYSTEM

The principal drainage is towards west and north of the division. This division has the following 3 well known rivers of the state viz (1) Lilajan (2) amanat and (3) Morhar besides the above, a number of rivers and streamlets drain the forests.

Lilajan : The river originates from a pond in broken country near Simaria and flows through a deep and rocky channel until it reaches, the neighborhood of villages Jori. These the hills begin to recede and the stream flows sluggishly over a wide sand bed. Six miles (10 km) south of Gaya it unites with the river Mohane to form Phalgu. (Extract from the Gazetter of Hazaribagh).

Amanat : The river starts its journey form the southern most part of the division and drains into Palamau district. Several nalas of Kunda range feed this rivers.

Morhar : This river takes its rise from Pratappur range. This is one of the large tributaries of the river Punpun.

GEOLOGY ROCK AND SOIL

The following description, furnished by the Deputy Director, Geological Survey of India of reproduced from the previous plan:-

“Chatra North” is largely covered by two groups of rocks i.e. (1) The Archeans and (2) The Gondwanas.

The Archaeans

The Archeans comprises of two rock groups (a) Metamorphic rock associated with extrusive lava and basic igneous rocks and (b) Granites.

“In the northern portion of the division, there is a belt of mica-schist with quartz schists and horn blende schists permeated by numerous granite intrusions, leading sometimes to the formation of composite gneisses. These schists include quartzites, crystalline lime stones with wollastonite, chondrodite and tourmaline, banded garnetiferous and horn blende granulitic rocks with epidote and allanite, serpentine, epidiorites and altered beds of basic ash. The horn blende schists, epidiorites and granulites probably represent lava flows, intrusive sheets or even localitic intrusions. Metamorphosed and partly metamorphosed basic igneous rocks like dolerites and metadolerites respectively are also of frequent occurrence. Garnets are common in all the rocks types of the area. The trend of foliation of the schists is parallel to strike of the rocks. Bands of siliceous fault-breccia are recorded in places.

“Intrusive granite in most cases, has been rendered gneissose (including the so called “dome-gneiss”) or schistose. It varies from biotite-granite to hornblende granite and is to coarse grained, coarse prophyritic types are also found.

“The dome-gneiss” is a gneissose biotite-alkali granite or granulitic, and gives rise to dome shaped hummocks due to spheroidal weathering. The rock is some times prophyritic. It consists of quartz and microcline with smaller quantities of oligo-classess biotitic hornblende and accessory sphene, apatite and zircon. The prevailing colour is that of feldspar-pink to purple. The dome gneiss occurs as large tentacular bosses or in thin sheets as intrusive into the schists.

Veins of pegmatite are associate with granite and where these pegmatites have penetrated into mica schists, they contain at places large books of workable mica.

The pegmatites contain other interesting minerals such as apatite amazon-stone, moon stone, muscovite, lepidolite, magnetite, automolite, tourmaline (red, blue, green and black) indcolite, flurite, garnet, leucopyrite, cassiterita epidote, beryl and columbite.

THE GONDWANA SYSTEM

Sir Cyril Fox classified the lower Gondwanas as follows:-

The Gondwana rocks occur mostly in the southern part of the district contained in basin like structure and distributed in an east west belt, parallel to the general structural trend of the Archeans. There are however other basin of the Gondwana off this main line of strike (such as Giridih Chohe, and Itkhori Coal fields).

Inter bedding of coal seams with sand stone or shale is common feature. Generally sand stone is found to over lie coal with a layer of pebbles immediately above the latter while shale underlines it. The dispositions of beds is horizontal or little inclined as seen in the vicinity of faults. The Gondwana coal basin's are generally bounded by major faults.

Among the plant fossils the chief general in the lower Gondwana system are Gang-mop-teris, glossopteris and its stem vertebrarin, gondwanidium, neoggerthiopsis, euryphyllum, schizoneurs, phyllothea, buriadia ottokaria and arboria.

Besides these there occur the seed like bodies, samaroopsis and cordicarpus. In talchir stage fossils are few, the lower bed being quite unfossiliferous.

SOIL

The soil varies from deep sandy loam to shallow infertile coarse sandy murrum at many places along with occasional out crops of gravel and rocks. Extensive patches of clay occur in areas adjoining Gaya division. Erosion is common every where. It has been induced and aggravated by maltreatment of the forests, unrestricted grazing and frequent fires. The areas where the forest cover has been destroyed partly or fully are more susceptible to various forms of water erosion. The exterior faces of hills, particularly all the accessible ones, have suffered most, where the parent rocks are exposed.

Gully erosion upto 15' deep can be seen on the foot hills. Sheet erosion occurs every where being directly proportional to the damages inflicted on the forests.

CLIMATE

The area enjoys the monsoon type of climate characterized by three main seasons- an intensely hot and dry summer season from March to mid June, a warm and humid

rainy season from mid June to beginning of October and midly cold season from November to end of February. October is the link month between the rains and winter.

The heat in summer month is intensified by radiation from the rocky hill slopes that become partially bare through leaf fall. The temperature rises upto 120°F (48C). During this period a hot and desiccating westerly wind locally called “Loo” blows over the area and frequently cause Sun strokes but in the forest the nights are pleasant. From the middle of April to 2nd week of June i.e. the break of monsoon the heat is most oppressive.

The monsoon breaks during the middle of June and continues till the beginning of October. Pre-monsoon showers or thunder showers occur sometimes between mid May and mid June. Most of the rain fall is confined between June and September but there are occasional showers also at the end of December or in early January. Usually in the first week of October there are heavy showers known as the “Hathia” rain which are of vital importance to the paddy crop of this area.

The winter is generally mild. It sets in during November and continues till February. It becomes severe during the later part of December and whole of January when occasional forests occur in pockets. During February, although the nights are cold, the days are comparatively warm and pleasant.

Unfortunatley, there are no Meteorological stations inside this forests division for collection of data. The statements given below represent the data of temperature humidity and rainfall recorded at Hazaribagh observatory stations may be taken to be fairly representative of the conditions obtaining in the division.

TABULAR STATEMENT OF MONTHLY OF RAINY DAYS (in mm)

(Average Monthly Rainy-Days of Last 5 years)

	CHATRA	SIMARIA	TANDWA	HUNTERGUNJ	ITKHORI	PRATAPPUR
1	2	3	4	5	6	7
1. January	0.8	N. A.	N. A.	0.8	0.6	0.6
2. February	0.6	0.4	0.4	0.8	0.4	0.4
3. March	0.4	0.6	0.6	0.4	1.6	0.4
4. April	0.4	0.8	0.2	0.4	1.4	0.2

5. May	1.8	1.4	N. A.	1.0	3.0	0.4
6. June	8.6	7.8	5.2	4.6	9.4	2.6
7. July	14.0	14.2	4.8	11.2	12.8	5.4
8. August	11.4	10.4	3.6	2.4	6.2	3.0
9. September	10.2	8.8	3.4	2.2	6.8	2.6
10. October	3.6	2.4	2.0	0.4	4.4	0.6
11. November	0.2	N. A.	N. A.	N. A.	0.2.	N. A.
12. December	N. A.					

TABULAR STATEMENT OF MONTHLY NORMALS OF RAINFALL

(Average Monthly Rainy-Days of Last 5 years)

	CHATRA	SIMARIA	TANDWA	HUNTERGUNJ	ITKHORI	PRATAPPUR
1	2	3	4	5	6	7
1. January	10.80	N.A.	9.32	10.12	7.40	N.A.
2. February	11.6	N.A.	13.40	8.92	1.60	N.A.
3. March	6.68	N.A.	19.08	8.20	1.82	N.A.
4. April	4.96	N.A.	3.64	1.48	2.58	N.A.
5. May	20.72	4.40	15.40	8.16	28.98	N.A.
6. June	155.56	82.84	128.16	92.44	197.16	N.A.
7. July	261.36	158.62	224.00	270.46	246.18	N.A.
8. August	211.16	121.22	130.96	72.14	142.16	N.A.
9. September	208.56	128.16	143.80	44.02	94.62	N.A.
10. October	41.04	13.32	54.60	11.12	30.82	N.A.
11. November	4.56	N.A.	2.28	2.30	0.76	N.A.
12. December	0.72	N.A.	0.86	0.46	0.56	N.A.

WATER SUPPLY

The main sources of water supply are rain water, tanks, ponds, wells and seasonal nalas. The forests have a number of rivulets and nalas, but almost all are seasonal and not a single drop of water is present in them during summer. An exception is the Amjhar Nala which is perennial. But the same nalas become torrents during monsoon. The hilly nature of the terrain helps in accelerating the run off. These streamlets serve as quick drainage for the rain water and ultimately feed the rivers of the plains. The said conditions hardly leave any scope for the absorption of rain water. More over adequate forest cover is also wanting which could help proper absorption. The water table is generally quite low and this is one of the evil

effects of the fully seepage conditions. In some parts hardship is caused during summer when wells dry up.

TEMPERATURE & HUMIDITY

Months	Rainfall (mm)	Minimum Temp. (C)	Maximum Temp. (C)	Solar Radiation (Hr.)	Max. Humidity (%)	Mean Humidity (%)
January	26.8	8.6	21.6	7.4	89.2	49.4
February	40.4	10.0	25.5	9.3	85.8	37.3
March	6.3	15.7	31.4	9.5	71.0	36.6
April	3.1	19.1	35.5	8.9	59.5	24.5
May	11.1	23.5	38.9	10.1	57.9	18.5
June	253.8	23.2	32.3	7.0	85.6	56.2
July	132.8	23.4	30.7	5.0	90.3	68.0
August	355.8	22.9	28.8	3.0	93.4	78.1
September	183.9	22.3	29.7	6.0	93.4	66.5
October	36.5	16.7	28.4	8.6	87.3	50.3
November	0.0	10.4	26.3	10.0	83.2	37.5
December	0.0	5.6	22.2	9.5	79.9	32.0

Year – 1996

Year – 1997

Months	Rainfall (mm)	Minimum Temp. (C)	Maximum Temp. (C)	Solar Radiation (Hr.)	Max. Humidity (%)	Mean Humidity (%)
January	15.3	5.9	21.6	8.2	85.3	36.8
February	2.2	8.6	25.3	9.7	74.5	20.3
March	0.0	14.2	31.5	9.5	64.8	20.1
April	18.8	17.8	34.1	9.2	71.7	32.8
May	47.0	22.0	37.5	10.5	62.1	32.3
June	211.0	23.5	35.1	8.0	77.4	39.4
July	369.8	23.2	29.0	3.2	93.2	80.0
August	340.8	22.3	29.2	4.2	91.16	71.65
September	391.0	27.3	29.2	5.2	92.80	66.77
October	59.8	19.6	27.3	7.9	92.84	58.97
November	25.2	13.4	25.2	8.5	91.97	55.50
December	20.4	9.4	20.1	6.5	91.26	54.10

Year – 1998

Months	Rainfall (mm)	Minimum Temp. (C)	Maximum Temp. (C)	Solar Radiation (Hr.)	Max. Humidity (%)	Mean Humidity (%)
January	40.2	7.4	20.1	7.1	89.87	56.68
February	24.0	10.5	23.9	8.4	83.32	43.21
March	34.8	13.5	27.4	9.3	78.35	35.45
April	30.4	19.4	34.9	9.4	79.80	32.80
May	107.8	23.1	36.8	10.1	75.42	35.19
June	163.8	25.6	36.2	7.1	73.97	40.30
July	287.9	23.8	29.7	3.1	88.93	71.30
August	254.5	23.7	30.0	3.9	90.67	72.60
September	185.6	22.8	29.4	5.8	91.53	72.53
October	88.9	20.4	28.5	6.8	89.40	70.66
November	9.8	14.4	33.1	5.5	86.03	73.57
December	0.0	7.1	23.3	9.0	86.03	39.03

Year – 1999

Months	Rainfall (mm)	Minimum Temp. (C)	Maximum Temp. (C)	Solar Radiation (Hr.)	Max. Humidity (%)	Mean Humidity (%)
January	0.0	5.9	21.8	9.2	77.5	28.4

February	0.0	11.1	26.9	9.7	72.8	43.0
March	0.0	14.2	32.4	10.2	63.3	33.6
April	1.8	19.9	38.5	10.7	51.2	11.6
May	95.7	21.9	36.6	7.7	70.3	33.3
June	289.0	23.3	32.8	5.6	82.1	58.4
July	303.2	23.0	29.6	3.5	89.3	74.8
August	405.4	22.6	28.5	3.5	90.9	73.8
September	188.9	21.8	27.7	2.9	91.6	72.7
October	74.2	18.7	27.8	6.2	90.2	61.6
November	0.0	12.0	25.9	9.7	82.2	46.3
December	0.0	7.3	23.9	8.5	86.4	50.6

Year – 2000

Months	Rainfall (mm)	Minimum Temp. (C)	Maximum Temp. (C)	Solar Radiation (Hr.)	Max. Humidity (%)	Mean Humidity (%)
January	2.4	6.4	23.8	9.8	79.6	73.8
February	23.0	9.4	23.7	6.8	86.0	68.9
March	23.0	17.0	30.4	9.8	64.2	25.8
April	0.0	17.9	37.1	9.7	49.0	17.8
May	49.6	18.1	36.6	8.4	66.7	40.5
June	173.6	23.6	31.3	4.9	84.1	63.6
July	258.8	23.1	29.2	3.3	90.1	73.2
August	137.0	22.9	29.6	5.5	85.7	75.7
September	372.6	21.6	28.2	4.5	92.0	76.7
October	15.8	18.3	29.5	9.0	87.8	64.2
November	0.0	11.9	27.3	9.2	84.6	54.5
December	0.0	5.6	23.0	8.8	83.2	61.68

HISTORICAL BACKGROUND OF CHATRA NORTH DIVISION

Before 1943 Forest in Chatra North Division were looked after by Private Estate Forest Officer Chatra Division was created on 1.1.1943 for managing the forest in the District of Hazaribagh & Ranchi. Then Ranchi Division was created in 1945. Comprising all the forests in Ranchi District. Consequently, upon the enforcement of Bihar Private Forest Act, 1947 the management of all the private protected forest of Hazaribagh, Gaya & Patna District came under the control of Chatra North Division.

The work load of the Division suddenly increased manifold from the normal work load of Division. The Division was gradually split into several smaller Divisions. Finally the Hazaribagh East Division & Hazaribagh West Division were created in March 1961. Smaller divisions were created vide various notification nos. & date as below-

- The Hazaribagh Division was created on 1.11.1943 for managing the forests in Hazaribagh & Ranchi District vide notification No. **4754-VIF-40-43R dt. 14.10.1942.**
- The Ranchi Division comprising all the forest of Ranchi District started functioning from 1.4.1946 vide notification No. **9761R/VIF-106 dt. 19.12.1945.**
- Chatra & Gaya Division were created in June 1952 vide notification No. **C/PF-7011/52-2227R dt. 23.05.1952.**
- Koderma Division was created in 1957 vide notification No. **C/F-7014/56-2248R dt. 6.10.1956.**
- Finally Hazaribagh East & West Divisions were constituted as independent Divisions during March 1961 vide notification No. **C/F-1 (A) 013/61-608R dt. 10.4.1961.**
- Major area of Hazaribagh East Division lies under Hazaribagh Revenue District while part of the area lies under Bokaro & Giridih Revenue District.
- 365.98 Sq. Kms. of Hazaribagh East Division has been transferred to newly created Bokaro Forest Division by the Govt. of Bihar No. Yojana Budget – **170/97 V.P. dt. 31.12.1977.** Which falls under present Bokaro Revenue District.

DISCRIPTION AND AREA

The Chatra North Division has a total area of 939.99 sq. km. under forests. It consists of both Ramgarh Ex-R.F. whose area is (56.82) scattered in separate blocks and P.Fs. which vested to state with enactment of the Land Reforms Act, area being 347.08 sq. miles (989.92 km). The range wise distribution of the forests is indicated below :-

Name of Division	Name of Ranges	Area of Ex. R.F. in hec.	Area of P.F.s in hec.	Total area in hec.
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Chatra North	Hunterganj	2403.48	25475.11	27878.95
Division	Rajpur	3278.06	20950.36	24228.42
	Pratappur	-	24817.05	24817.05
	Kunda	-	17074.95	17074.95
Grand Total		5681.54	88317.47	93999.01

The village wise composition of the range along with area statement is given in Appendix – I.

DEMARCATON AND BOUNDARIES

The forests consist of fairly large compact blocks as stated earlier. The Ex. R.Fs. are demarcated on the ground by means of 20 ft (6 m) wide cleared artificial boundary line where natural boundaries are not in existence. The boundary pillars of the forests as a whole are both of wood set in stones or earthen mounds placed at intervals along the lines. The old boundary pillars of the external and internal boundary lines are being replaced by concrete pillars in some of the villages where encroachments inside forests areas have taken place.

MAPS

The forest area of the division is covered by the following 1"-1 mile, survey of India topographical sheets : - 72D/7, 72D/8, 72D/11, 72D/12, 72D/14, 72D/16, 72H/13 AND 72H/4.

Topographical survey of forest area has not been carried out as yet. Forest demarcation which was commenced in 1946 was done in 16"=1 mile cadastral sheet.

Maps on 4"= 1 mile scale have been obtained from survey of India.

Beat wise statement of Chatra North Division

District	Name of Blocks	Beat	Sub-beat
1	2	3	4
Chatra	Hunterganj	Hunterganj	Ekauna Deobo
	Pratappur		Jabra

Chatra (Rajpur)		Amin
		Dumree
		Pandepura
Kunda		Karma
		Chakla
	Jore	Cornhas
		Panchmba
		Chiloi
		Chatdhari
		Sijooya
		Bacin
		Jore
	Dantar	Kadlekalal
		Kolwa
		Baniyadih
		Dantar
		Loota
	Pratappur	Pratappur
		Mohanpur
		Monya
		Sidiki
		Dundu
		Basbuta
	Jogiyara	Jogiyara
		Baml
		Gare
		Hara
		Navadih
	Hindiya	Hindiya
		Aangara
		Naranpur
		Dumarwar
		Aadoreya
		Bharhi
	Kunda	Kunda
		Manjhipara
		Pinja
		Bajrahi
		Sarjamatu
	Kutil	Kutil
		Gandra
		Pinjani
		Soharlat
		Phulwariya

Kari	Surhod Panderkola Bangwatri Sall Kari Ekauna Bacchumba Kadinagar
Kolhiya	Kotap Kanduwashor Tulbul Gariya Huwage Bindhani Kolhiya

LEGAL POSITION

The former Ramgarh reserve forest were constituted Reserve Forests under section 20 of I.F.A. on application by the Court of Wards on behalf of the proprietors of Ramgarh Estate under section 38 of the act.

The agreement dated the 13th September, 1941 was determined for non-fulfillment of the terms and consequently the forests were de-notified as reserve forests under section 27 of the Indian Forest Act vide notification.

No. 11967 VIF-293/47R Dated the 18th Dec. 1947

No. 12221 VIF-293/47R Dated the 28th Dec. 1947

No. 12222 VIF-293/47R Dated the 28th Dec. 1947

The forests were simultaneously notified as private protected forests under the B.P.F. Act 1947. Consequent upon the enforcement of the land reforms Act 1950, these forests have been notified as protected forests under section 29(3) of the Indian Forest Act.

The control of the erst-while private forests was taken over under the B.P.F. Act 1947. After the land reforms act came into operation, these forests also were notified under sec. 29 (3) of the Indian Forest Act.

Appendix – III : gives the list of relevant notifications.

RIGHT AND CONCESSIONS

The former Ramgarh reserves are completely right free, as against all the other protected forests which are heavily right-burdened. The rights and concessions as recorder in Khatian Part II, are being allowed freely and very liberally. Quite often people have rights in the forests of other villages also. With the passage of years, since the time rights were allowed and admitted in Khatian Part II, the number of right-holders has multiplied on the one hand and the area and density of the forests have considerably decreased on the other. The demands of the individual right holders have also increased. The result, in the absence of proper forest settlement order, is that the forests are required to support an increasing burden of right which is affecting them vey adversely.

The existing rights generally entitle the right-holders and villages to free grazing and free timber and fire-wood. Some villages have customary rights also under which the people are entitle to take the requirements after payment of nominal annual fee. The right holders are not permitted to sell or barter any forests produce removed in the course of exercise of rights and concessions but the prohibition is very difficult to enforce.

Inspite of the best efforts of the Forest Department and very generous and liberal treatment, the right holders do not care to do proper cutting in the coupes and leave high stumps and pollards. They hardly make any efforts to protect the forest from theft or grazing or fire.

The rights of the villages for the period of the plan will be determined and settled through the JFM committee as per its resolutions.

AGRO CLIMATIC ZONE

The Chatra North Division falls in the Central and North Eastern Plateau Zone of the Jharkhand State. This zone comprises of the districts of Hazaribagh, Giridih, Santhal Parganas, Dhanbad, Bokaro and North Eastern portion of Ranchi.

This zone is characterized by humid tropical monsoon type of climate. The average annual rainfall is 1321mm. Monsoon breaks in the first week of June and continues till

the middle of October. Nearly 82.5 % percent of the total rainfall occurs during the period. Winter rains (December to February) are very helpful to rabi crops. Summer rains contribute to about 88mm.

The soil of this zone is very hard. The physiography and soils of the Chhotanagpur plateau are mainly lithologically controlled. The Chhotanagpur plateau slopes both towards north and south.

This zone has a two step landscape extending from Dumka to Ranchi in Hazaribagh after which there is a sudden rise through Chuttupalu valley extending in to the upland of Ranchi. The average elevation of these two stages is between 275-458 metre and 550-670 metres above mean sea level. These two areas are nearly level landscapes broken by valleys and hillocks or hills ranges rising out of the plains.

The soil association groups of this zone are :-

- (a) Red yellow light grey catenary soil.
- (b) Paly yellow, yello-pinkish deep catenary soils of coal belt.
- (c) Hill and fore soils of steep slope and highly dissected regions.
- (d) Soil in general is gravelly sandy loam to loam.