

## *Name and Situation*

This working plan deals with all the forests Giridih Forests Division including the reserved and protected forests of Khurchutta range, the ex-reserved and protected forests of Ramgarh state and the ex-Dhanwar Raj forests. It also covers the forests of the Dhanwar, Jamua and Doranda range which are under the territorial jurisdiction or the Giridih Afforestation Division. The total area of the forest covered by this working plan is 163196.94 ha.

For the erstwhile private protected forest areas of this division, a working plan was prepared by Shri B.N. Prasad for 1957-58 to 1966-67. A separate working plan by the same author was in force for the Ramgarh Ex-Reserved Forests. For the Khurchutta Reserved and Protected Forests, a Working plan prepared by Shri P. Mishra was in force. The recently taken over areas of the Parasnath hills were under private management and were not covered by any working plan. The present plan would cover all the forests of the Giridih sub-division and would be in place of the three working plans mentioned above.

These forests from the eastern and north-eastern portion of Hazaribag district and coincide with the Giridih Civil sub-division of the District. The division is bounded on the north by the Monghyr and Gaya districts, on the east by the Santhal Parganas and Dhanbad district, on the west by the Koderma Forests Division. The whole area is on the Lower Hazaribagh plateau. The forest are widely scattered in big and small blocks.

The forests lie between  $23^{\circ}45'$  to  $24^{\circ}50'$  North latitude and  $85^{\circ}37'$  to  $86^{\circ}35'$  east longitude.

**Configuration of the ground:-** The tract is the eastern extremity of Vindhyan Range. It comprised of hilly and plain areas scattered through out. Forest blocks of Gawan, Satgavan and Parasnath, look mountainous and slopes are often precipitous. In the areas of Khurchutta reserve, Bangabad Dhanwar, Doranda and Jamua. The hills are lower and generally with gentler slopes. The elevation on this flat portion ranges between 305 metres and 366 metres. It forms part of the Barakar Basin. From Koderma-Jamua road the land is seen sloping eastward, but towards North, South and West it rises slowly as though to a shallow saucer's rim. On the South-east and south, the horizon is shut in by the masses of Parasnath and buttresses of the higher plateau. Parasnath hill, the highest peak which is 1366 metres ( 4,480 Ft) and is the highest in Bihar, stands out as a great sentinal commanding a large land scape. On the northern side Tisri hill ranges interrupt the sky line, with peaks of 533 metres ( 1748 Ft.) and 604 metres ( 1807 ft.) Forests occur on all these hills their density and quality naturally varying with the ease or difficulty of access. On the undulations also field, and forest occur. The valley widening process resulting from the Barakar in the north and Jamunia in the south, have produce the sharp concave crest of the hills running roughly from west to east. The concavity of the slopes in the past is caused by humid tropical climate. After passing north of the Parasnath range, the Barakar river leaves the basin thirty two miles before its junction with the Damodar. Its basin of 2,050 square miles ( 5309.479 Sq. Km.) is comparatively level.

"Parasnath hill has a central narrow ridge. About 7 Kilometres long and three Kilometres wide with many rocky peaks, irregular in shape, but taking the general configuration of the crescent with its ends pointing the north-east and north. In these directions, the principal spurs and the greatest continuous rise occurs, to the north and west the spurs are very extensive and to the south-east there is only one spurs of importance.

**River System:-** The area is inter laced by big river, small rivulets, nalas and gullies. The main rivers are (a) Barakar ( b) Kiul ( c) Bamodar and (d) Sakri. Sakri river flows towards north west and into Gaya district. Kiual river also emorges from Tisri hill ranges flowing towards north to which other side of the hill range drains. Barakar runs eastward through the heart of the division and the Domodar simply touches the division in the South. There are many stream lets which drains into Barakar, Sakri, Kiul and Damodar.

**Geology, Rocks and Soil:-** The geological formation of the area is archean but in Damodar and Karampura valleys are found formation of Gondwana which is one of the oldest sedimentary systems. Generally igneous. Rocks are found all over the area with occasional gneisses, schists and granites. These rocks are intersected by acid pegmatice and quarter in which mica frequently occurs in large quantity. Sand-stones are found over the Gondwana formation. Recent deposits consist of gravel originally brought down by rivers.

The following description by Dr. R.K. Ghose, superintending Geologist. Geological Survey of India is reproduced from the predecessor plan.

In Hazaribagh, the contrast of physiography is more stretching from Chauparan to Koderma towards Giridih rises supply from the alluvial belt to the north. The entire plateau has been carved and dissected by streams in a remarkable fashi the level of intervening ridge remaining at 1,250' southwards the deeply dissected belt of the plateau merges into the widespread stretch of bad lands carved out of the old soil by extremely active streams.

The dissected belt, with still preserved ramnants of blankets of sub-recent and recent deposits, on edges of the plateau, is the clear evidence of slow uplift, in late geological time. Such movements have been too slow and regular and caused by a gentle tilt of vast area of the continent as a whole to be destructive. In fact, the portion outside the Gangetic alluvium for all practical purposes may be located upon as a stable platform.

**Geology ( Including Economic Geology ) :-** The geological succession of rock formation is as follows :-

Recent .....	.....	..... Soil alluvium
Pleistocene .....	.....	..... Laterite and older luvium.
Lower Gondwanas, Barakers .....	.....	Dolerite, Granite gneisses, hybrid gneisses, aplites, pegmatites.

Para gneisses and schist are of several types, i.e. mic-schist and their less altered equivalents, slates and schist grading into ureiup lime-stone and hornblende schist.

The two southerly sheets 72H and 72D are composed mainly of several types of para and ortho-schist and gneisses e.g. mica-schist, phyllite and slate, hornblende schist, quartzite,, calc-gneisses, grading into dolomite, and impure lime-stone, sparses gronorite schists and granite gneisses.

The mica schists composed mainly of muscovites, biotite, quartz and felspar with subordinate magnetite, chlorite, sillimanite, staurotite and garnet.

The quartzite which due to their resistance to weathering stand out as bold ridges and bluffs have been folded with the schists and present complex and sinuous outcrops which help to decipher the structural outlines of the region as a whole. A certain amount of admixture of mica is after noted. The granularity also varies from fine to coarse. Jointing is at times well developed on account of which some of the deposits may be worked for small slabs suitable for paving and lining. Soil cover is usually thin, but can support bamboos, shrubs and grasses.

The quartzite in places appear to grade upwards into calc-schists and granite schists, quartzite and quartz-actinolite-zoisite-schists. The calc-schists representing impure lime-stone and dolomite into which they sometimes grade, contain calcite, zoisite, tremolite, scapolite, felspar, etc. Some of the bands of lime-stone have been used for lime burning.

The intrusive rock of granite family has effected considerable reconstruction in the schists both texturally and mineralogically and given rise to several hybrid types of gneisses. The granite rocks in their turn have become much contaminated by the addition of this polite suite of sediments, altered remnants of which occur as inclusions in the granite gneiss.

The granite rocks vary from fine grained aplitic to coarse porphyritic. The aplitic types of interfoliar injection into and assimilation of the schist have given rise to several types of hybrid gneisses and 'augen' gneisses. The granite rocks, especially the fine grained types may be used as road metals and blast. The thickness of soil cover is variable and generally thin, but where thick, it supports luxuriant vegetation.

The pegmatites which are of great commercial importance for their content of muscovite mica, are also the source of beryl and several radio-active and rare earth minerals. The pegmatites occurring in the roughly east west schist belt from Gaya district west across Hazaribag and Monoghyr districts into Bhagalpur district are the chief source of commercial mica and account for roughly 75 percent of the world production of muscovite mica. Perhaps one-third of the total production from Bihar is obtained from Koderma Reserved areas. Among other large producing areas mention may be made of the area north-east of the reserved forest, further east near Gawan and that north-east of Parasnath station."

**Soil:** - The type of soil is the resultant of the above rock formation. The soil is very variable. It varies from deep sandy loam to shallow infertile coarse sand (in river beds) with occasional outcrop of rock. At places it is clayey loam to loamy. Infertility in the soil is generally proportional to the slope. On steep slopes bare rocks are present.

**Climate:-** The forests enjoy typical monsoon climate with three marked seasons, namely, the rainy and the cold. The humidity is very high during the rains and very low during the hot weather.

The hot season starts from the end of February and ends in the middle of June and continues until the end of September. Showers, good for paddy called 'Health' locally occur in October. The average rainfall is about 50."

The winter starts from the beginning of November and ends by February, during which period the days are warm. The nights are cool and often cold with heavy falls of dews. Fogs are not so common, except in the deep valleys. Fog is common in the heart of the forests. They generally occur during the month of December and January but remain only for an hour so after sunrise. Fog is rare.

The following are the tables for Mean daily maximum temperature, Mean daily minimum temperature, the mean monthly rainfall, mean relative humidity and Mean number of rainy days

**Water Supply:-** The entire tract is drained into three different directions north-west, north and east by four different perennial or semi-perennial rivers. The river Damodar runs in the southern and eastern portion of the division with its tributary the river Barakar. The Damodar and Barakar rivers are not perennial owing to the construction of dams by the Damodar Valley Corporation.. The northern and western portion of the area forms the catchment of Sakri and Kiul river which finally flow into Gaya district. In the summer they are dry and show rocks or sand. During rains, due to heavy intensity and discharge of surface water, Water Rivers, rivulets and the stream on the plateau get flooded and carry heavy loads of silt.

A network of meandering nala feeds the rivers. Among the perennial ones may be mentioned Sita nala in Parasnath hills which finally merges into the river Barakar and Pathro Jharna in Gawan which flows into the river Sakri. Bareto Irga nala and river Usri which remain dry during the summer is feeder of river Barakar and take charge of the surplus surface water of Palaungia, Dhanwar, Jamua and Kharagdiha regions. Chalki of which Barki nala is a tributary, Suknar and Kunda nala take charge of the surplus rain water of Balborn and Doranda Blocks. Chilka nala receives surface water of northern portion of Deori region which finally opens into the Arnar River in Monghyr. Jamunia, another seasonal river, accounts for the overflow of Dumri block and Parasnath hills. All the streams in hilly tracts of Gawan, Satgawan and Parasnath may not be flowing full all the year round but are at times wet. And in places as if resting in rough and tortuous journey, the nalas form themselves into quiet pools of water. In summer they serve as water holes for the wild animals. The forest workers and dwellers of forest overpowered by thirst in summer sun, bless the pools and as camping sites for labour they are much sought after. On the whole the nalas in plain and hilly tracts are dried up during the summer.

When rain actually falls, the nalas rush forward only to subside into inactivity on its lee side. The heavy cattle population graze both the plain hilly portion of the tract making the soil compact and devoid of vegetation and thereby rob the surface soil of its capacity to hold up and significant proportion of the rain water. The hill slopes are getting eroded by the down rush of water. The rain fall can do little good until means to each up and detain the water is found or by covering the soil surface by vegetation. The annual fires immediately preceding the rains burn away the humus which would otherwise act as sponge. Keeping the condition unaltered more

rain fall will only cause more soil erosion and greater destruction. Rigid fire protection and covering the soil surface by vegetation are few ameliorating measures. Another will be contour trenching, check dams and gully plugging. It is the soil and moisture that are vital elements to forests. Down in the valley where the soil is deep and moisture plentiful, the crop is denser and coppice crop of sal is vigorous. On the slopes and plains the crop is stunted and open. Obviously there are the two factors mainly responsible. Contour trenching, check dams and gully plugging had been constructed to a great extent in the afforestation areas which appear to be indicative of improvement in depredation.

Water supply for drinking and house hold purpose is obtained by the villagers largely from the streams in Gawan Satgawan tracts, but in the plain areas major portion of the population use drinking water from wells. wells have been constructed or are being constructed gradually in many villages. Since, however, water level is about 12 to 15 metres ( 35-45 ft. ) below ground level and hard rocks are commonly encountered the sinking wells is difficult and costly. Probably due to hard bed rock, bring is also difficult.

On the whole condition of moisture conservation needs to be improved.

**Distribution of Area:-** The previous working plan, covered only 1474.07 Sq. Km. ( 569.12 miles) but now the area has increased to 1631.93 Sq. Km. ( 630.09 Sq. miles) on account of the inclusion of old and new reserve of 19 scattered blocks, ex-reserved forests of Ramgarh and the forests on Parasnath. Details of the distribution and area of the forest have been furnished in appendix. I but a summarised statement is produced below:-

**State of boundaries:-** All these scattered old and small blocks are demarcated and boundary pillars of either stone or earth and wooden posts have been constructed. Due to land hunger, these are repeated attempts at encroachments in the forests and unfortunately the forest boundaries, except in some cases, have yet to attain stability.

The condition of the boundary lines of the Khurchutta Reserved forests and Ramgarh ex-reserved forests are generally satisfactory. The boundary lines in these forests have been maintained properly. But the pillars need re-num-bearing in old reserve, since map position of some of the pillars does not tally with that on the ground. In the new reserve and protected forests the condition is not completely satisfactory. Ramgarh ex-reserved forests consist of scattered blocks which have been demarcated by means of 6 metres (20 ft.) wide cleared artificial boundary lines where natural boundary is not in existence. In Gawan, Satgawan and Parasnath inter-divisional boundary lines are not conspicuous and at certain places there is no existence of the boundary marks.

As a safeguard every of fifth pillar of concert should be put up in the Khurchutta reserve and protected forests and also in the plain forests of Jamua, Doranda and Dhanwar ranges. In previous plan period have been planted along the boundary lines of some forests Trench fancing has also been introduced. As in Ramgarh ex-reserved forests, Saranda, Porahat or Kolkhan, artificial boundary lines may be maintained by cleared line of 8. to 10, Metres ( 25 to 35 ft.) in hill tracts of Gawan, Satgawan and Parasnath where natural boundary lines are not in existence. the wooden pillars have not lived up to the expectation of providing abiding marks

like aloe plantation, masonry pillars or trench boundaries. In plains, human population is heavy and hence the uprooting of wooden boundary pillars is prevalent.

**Legal Position:** - The old reserved forests were reserved under the Bengal Government notification no. 976 dated the 20th Feb. 1893. In the notification the area was mentioned as 6625 acres but as a result of survey of 1913-1914 the area was altered to 6890 acres.

The Khas Mahal forests of the Hzaribag district were notified as protected forests by notification no. 3686 for dated the 17th July 1894 when the area was given as 14,973 acres. of these 4914.04 acres were notified as reserved forests vide notification nos. 296R to 314R, all dated 21st Jan. 1944 of the balance 7425.85 acres were demarcated as protected forests earlier and 1171.83 acres demarcated as later on. The balance area was perhaps lost to cultivated later on. The balance area was perhaps lost to cultivation.

The former Ramgarh reserved forests were reserved under section 20 of the Indian Forests Act on applications made by court of wards on behalf of the proprietor of Ramgarh Estate under section 38 of the Indian Forests Act. The agreement dated the 18th September 1941 was determined for non fulfillment of the terms by the proprietor and consequently the forests ceased to be reserved forests vide the following notifications under section 27 of the Indian Forest Act.

<b>No. 11967-VI</b>	-	<b>293/47-R..... dated the 18th Dec. 1947</b>
<b>No. 12221-VI</b>	-	<b>293/47-R..... dated the 28th Dec. 1947</b>
<b>No. 12222-VI</b>	-	<b>293/47-R..... dated the 28th Dec. 1947</b>

The Forests were simultaneously notified under section 14 of the Bihar Private Act 1946 ( Act III of 1946 ) In Government notification no. 11968-VIF-293/47-R, dated the 18th December, 1947 and no. 12223-VIF-293/47-R, dated the 28th December, 1947. The forest were provisionally declared as private protected forests under the provision to sub-section (1) of section 29 of the Bihar Private Forest Act in Government notification nos. 11969-VI- 293/47-R, dated the 18th December, 1947 and nos. 12224- VIF-293/47-R, dated the 28th December, 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 Forests Act.

The 81.97 Sq. K.M. of Dhanwar Raj forests were notified under section 38 of the Indian Forests Act in Revenue Department's notification no. 377-VIF-15/ R dated the 8th September, 1994.

The control of the erst while Private forests was taken over under the Bihar Private Forest Act. 1947 After the land reforms act came into operations. these forests we also notified as protected forests under sections 29 (3) of the Indian Forest Act, 1927.

A list of the notifications under the various sections of the Indian Forest Act, 1927 which cover all the forests of the Giridih Civil sub-division is given below:-

**Forest Settlement:-** In the previous plan period concerted efforts were made to complete the forest settlement operation for the forests of this division. Fair progress has been made in this

direction. Forests settlement proceedings have been finalised in respect of majority of the villagers and the remaining cases are also expected to be finalised shortly.

**Rights and concessions:** - The old and new Khurchutta Reserved Forests and the Ramgarh Ex-reserved forest are free from all rights.

In other P.Fs. rights are being allowed as per entries in Khatain Part II or Forests Settlement order. The people are generally allowed to take firewood and timber for agricultural implements and house building and for their domestic use free. They are also allowed free grassing.

The rights in the protected forests were defined in notification no. 4936-R, dated the 20th August, 1917. Persons who were bonafide residents on Government lands ( Prior to the enactment of the land reforms act of 1950) may cut in the forest blocks in the vicinity of their respective villages, all green trees of the unreserved species and trees of the reserved species over 30" in girth except Mahua, Arjun, Khair, Harra, Simul and Paisar ( Pija) below 4' in girth.

- (i) Pasture any plough bullocks, belonging to them.
- (ii) Pasture buffaloes, bullocks and cows, belonging to them.
- (iii) Pasture buffaloes, bullocks and cows, belonging to them upto a maximum of ten in all.
- (iv) Pasture cattle not being their own property or any bullocks, cows, buffaloes, sheep or goats, in excess of the above maximum payment of the following charges.

For bullocks and cows, six annas per head, buffaloes twelve annas per head, for sheep or goats such fee not exceeding eight annas per head, as may be laid down by the Deputy Commissioner provided as follows:-

- (a) Calves under one year old and lambs and kids under six months shall be admitted free of charges.
- (b) Sheep or goats may be pastured only within such areas as may be allowed by Deputy Commissioner.

It is course understood that the rights are to be exercised within the frame work of any regulation or regulations that may be issued by the Divisional Forests Officer, in the large interest of the forest preservation.

Among the protected forests Dhanwar is the only Range where some forests are free of rights. 63 Villages in the range have rights out of 364 villages, which contain forests. The protected forests in other ranges are heavily right burdened. The rights are generally confined to the villagers of the village in which the forests fall. In a few villages, however, there are non-resident right holder also who are locally known as Pahi Raiyats. Some villages have customary rights also under which the people are entitled to take their requirements after payment of a nominal annual fee. The right holder are not permitted to sell or barter any forest produce by the prohibition is very difficult to enforce.

Forests produce are supplied to the right holders through the Panchayats from annual coupes. Surplus, if any, is auctioned in the succeeding year. The annual coupe, in right burden forests, is made over to the Gram Panchayat who supervise the distribution of forests produce amongst the right holders themselves. The local forests staff supervise the laying out of the coupe. This system has not worked well and in most cases both the demarcation of the coupe and the marking of standard have not been upto the mark. Panchayats some time misuse their power. Government in Revenue Departments letter no. C/F-2105/54-508 F.R., dated the 26th Nov. '54 addressed to Chief Conservator of Forests, Bihar have ordered, "those Panchayats who misuse the trust reposed in them should be deprived of the powers given to them and the forest in question taken over under the direct control of Government."

In this working plan, the number of right holding houses in every village has been ascertained and the area the coupe sufficient for their requirement indicated.