REVISED WORKING PLAN FOR THE FOREST OF HAZARIBAGH WEST DIVISION

PART – I

SUMMARY OF FACT ON WHICH PROPOSALS ARE BASED

CHAPTER – I

THE TRACE DEALT WITH

NAME AND SITUATION

1.1.1.0 The present Working Plan covers all the forests of Hazaribagh West Division. The forests are situated in the Sadar Sub-Division of Hazaribagh District. The Division has a narrow crescent shape extending between the northern slope of Ranchi Plateau on the South and the Barakar River on the North.

1.1.1.1 The total present area of the Division according to the latest Divisional records is 169237.00 hectare (169237 sq. km.) equivalent to 653.42 sq. mile. The total geographical area of the Division is 4256.51 sq. km. thus the area covered by the forest is 39.76 percent of the total geographical area. The total forest area of the Division as per last Working Plan was 1652.18 sq. km. Thus the total forest area has shrunk by 15.36% percent over last eighteen years. This is primarily due to large scale release of so coalmining and other purposed like irrigation projects, etc. the area lies between $23^{o}25'$ to $24^{o}20'$ N latitudes, i.e. just north of the tropic of cancer and between $84^{o}55'$ to $85^{o}50'$ E longitudes.

CONFIGURATION OF GROUND

1.1.2.0 The shape of the Division is oblong crescent about 100 km. long and average 50 km. broad. The topography is extremely variable. In the south, the forests of Ramgarh Range are mostly situated on the steep northern slopes of Ranchi Plateau. In Barkagaon and Tandwa Ranges the forests occur on the southern slopes of Hazaribagh plateau and on isolated hills like Mahudi Pahar Niri & Khapia etc. The topography of Mahudi hill needs special mention. It is a high range with precipitous slopes. These slopes are devoid of any vegetation. The forests of Hazaribagh Range occur on the main Hazaribagh plateau where the topography is generally easy to undulating. The topography of National Park Range is

undulating to hilly. In Barhi Range the forests occur on the northern slopes of Hazaribagh plateau and on easier topography in the portion north of G. T. Road.

1.1.2.1 The prominent hills are the Hudu (2706'), the Ashwar Pahar (2468'), the Batekhut Pahar (2425') the Mahudi hill (2380') and the Mahabal ridge (22511) near Barkatha. The portion between the Ranchi and Hazaribagh plateau in the upper basin of the Damodar forms a through like structure which consists of the dead level agricultural lands round about Barkagaon and Tandwa surrounded by high hills on all sides.

1.1.2.2 The table land near Hazaribagh town forms the origin of several important rivers. The Bokaro and the Konar originate near village Sultana on the Hazaribagh - Chatra Road. The Barakar originates near Ichak. The Mohane also originates near village Bendi and forms the western boundary between Hazaribagh West and Chatra South Division.

1.1.2.3 Bulk of the area of the this Division fells in the catchment of the Damodar. Only a small portion forming the western and south-western portion of Hazaribagh Range lies outside the Damodar catchment.

GEOLOGY, ROCK & SOIL

1.1.3.0 The geology of the area lying within this Division consists of two systems : (i) The Archeans & (ii) The Gondwanaas. The general formation is Archeans hut in the valleys of the Damodar and its tributaries extensive areas of Gondwana formation, which is one of the oldest of the sedimentary rocks are found.

THE ARCHEANS

1.1.3.1 These consist of the metamorphic and igneous rocks like schist, gneisses and granites. These rocks are intersected by acid pegmatite veins. The metamorphic rocks consists of several types of schist like para & ortho-schist, mica-schist, phyllite and slate-hornblende schist, calc-schist and rocks of the granite family have undergone considerable reconstruction in the schist both texturally and minerologically and have given rise to several types of gneisses. In most cases the intrusive granite have been rendered gneisses

(including the so called dome-gneiss) or schistose. It varies from biotite granite coarse porphyritic types are also found.

1.1.3.2 The dome gneiss is gneissose biotite-alkaki granite and gives rises to dome shaped hillocks due to spheroidal weathering. The rock is some times porphyrition and consists of quartz and microcline with smaller and consists of quartz and microcline with smaller quantities of oligoclase, biotite, hornblende and accessory sphene, apatite and zircon. The quartzites due to their extreme resistance to weathering stand s bold ridges and cliffs. Veins of pegmatites are associate with granite and where they have penetrated into mica. The pegmatites consists of crya line or amorphous quartz, fes par and other interesting minerals such as apatite tourmaline, beryl garnet fluorite, casseterites epidote.

GONDWANAS

1.1.3.3 The rocks of this system are found in the southern and southern-western portion of division in Ramgarh, barkagaon and Tandwa Ranges. The whole of the basin, the low-lying areas of Barkagaon and Tandwa Ranges surrounded by hills of Archean rocks on the north and the east and narrow strip along the Damodar on its north and south bank come under the Gondwana system.

1.1.3.4 The rocks are of sedimentary origin and contain shale and sandstone and loose round boulders and pebbles embedded in clay. The lowest layer contain the coal seams. Sandstone is found to overlie the coal while the shale underlies it. The loose conglomerate is found on the top.

1.1.3.5 The Mahudi and the adjoining hills belong to the Upper Gondwana system which contain coarse sandstone mixed with breccias. The strata are generally horizontal. The outer slopes of Mahudi Hill is vertical and precipitous.

SOIL

1.1.3.6 The soil derived from the archean rocks are generally sandy loam. The general name given to it is RED SOIL. The soil is generally acidic. Available from quartzite is

poor and shallow. The soil overlying the shale of the Gondwana system tends to be clay & heavy while that overlying the sand stone is sandy loam and light.

1.1.3.7 The degree of soil erosion varies from sheet erosion to formation of deep gullies. Due to frequent fire and heavy grazing the soil floor is rendered bare of any vegetative cover or cover by dead fallen leaves. Due to this soil run off is fairly high in the first few rains of the summer monsoon.

1.1.3.8 Water level generally varies from 8 to 10 metres, Even during peak summer the water level does not recede lower than 13 metres except in some localities.

CLIMATE

1.1.4.0 The area has typical three distinct seasons, the summer, the rainy and the winter seasons of the monsoon type of climate. Being situated just beyond the tropic of cancer and away from the sea the winter is quite distinct and prominent. Due to comparatively higher altitude on the Hazaribagh, plateau the extreme of temperature during summer is ameliorated. However, places at lower altitude record quite high temperature during summer. This, sometimes adversely affects the plantations. Hot westernly wind, the 'LOO' is experience all over the tract, Deaths due to heat strokes is almost an annual feature in the low lying colliery belts.

1.1.4.1 Monsoon generally breaks by middle of June. Pre-monsoon showers during late May or early June are a common feature. The rainy season ends with the Hathia rain in early October. There is a small winter rain during January and February.

1.1.4.2 The Winder is generally pleasant at Hazaribagh except for a short span when the night temperature almost touches the freezing point. Though frost is not so common, certain low lying pockets on the plateau near depressions and along the nalas become frosty during the cold wave.

1.1.4.3 The climatological data obtained from the Director General of Observatories, Poona-5 are reproduced below:-

STATION HAZARIBAGH

Month	Mean. Maximum tem. in ^{o}C	Mean. Minimum temp. in ^{o}C	Mean relative humidity at 1830 hrs	Mean relative humidity at 1730 hrs 1st
January	22.8	9.6	63	49
February	25.1	12.0	55	40
March	30.0	16.7	37	27
April	35.8	21.4	32	22
May	38.0	24.4	43	32
June	34.6	24.7	65	59
July	29.5	23.0	86	83
August	29.2	23.0	86	85
September	29.2	22.4	83	82
October	28.5	18.7	70	69
November	25.6	12.7	57	55
December	23.1	9.4	61	52

RAIN FALL

Monthly Normal rainfall in (mm)

Month	Hazaribagh	Hazaribagh obsy	Barhi	Ramgarh	Tandwa	Gola
January	22.6	26.2	26.2	18.8	22.1	20.1
February	30.3	35.3	33.5	35.1	33.0	36.8
March	17.7	24.9	18.5	16.3	19.8	27.9
April	13.9	15.7	13.2	15.7	8.6	17.8
May	37.3	48.5	32.5	41.4	26.9	52.1
June	170.5	194.3	183.4	197.9	153.2	222.3
July	330.9	321.8	334.5	347.2	337.1	377.9
August	333.8	349.0	365.8	334.0	332.5	343.9
September	206.5	219.7	201.2	202.2	214.6	199.6
October	75.4	79.5	80.3	75.4	63.3	100.3
November	14.9	18.0	15.0	15.7	15.2	20.1
December	4.3	5.8	4.6	6.3	4.6	6.1

RAINY DAYS

Monthly normals of rainy days

Month	Hazaribagh	Hazaribagh obsy	Barhi	Ramgarh	Tandwa	Gola
January	1.6	2.1	1.8	1.3	1.8	1.6
February	2.3	2.7	2.6	2.2	2.1	2.5
March	1.4	1.0	1.5	1.3	1.6	2.0
April	1.3	1.7	1.3	1.2	0.9	1.6
May	2.7	3.4	2.4	2.4	2.4	3.6
June	8.7	10.0	9.0	9.7	7.5	11.2
July	16.3	17.7	15.8	16.6	15.8	18.8
August	16.1	17.3	15.9	16.4	15.8	18.3
September	10.1	11.6	10.2	10.2	9.8	10.2
October	3.9	4.9	4.1	3.3	3.6	5.1
November	0.8	1.1	0.8	0.6	0.8	1.1
December	0.4	0.4	0.5	0.4	0.4	0.3

Note : The monthly average are based on records for the period 1931-60.

WATER SUPPLY AND WATER TABLE

1.1.5.0 The Barakar, the Damador, the Haharo (in Barkagaon range), the Garhi (in Tandwa Range) and the Barsoti river (in Barhi Range) are the main rivers flowing through the tract. The former two are perennial. The rivers flowing through Barkagaon & Tandwa area, though apparently dry during dry months, contain sufficient quantity of sub-sand water which is utilized for agricultural and drinking purpose on large scale in the locality. The water table in Barkagaon & Tandwa areas is fairly high. In the other areas it varies from 8 t0 10 metres deep. Generally the supply of water for drinking purpose is not a problem, but during severe drought years the areas especially in the hilly terrain face acute shortage of drinking water.

DISTRIBUTION OF THE AREA

1.1.6.0 The total area of forest is 169237 hectare (418900.77 acre), i.e. 169237 sq. km. (653.42 sq. miles). This is spread over 834 villages. The rangewise distribution of area is given below. Appendix – I gives the villagewise statement of forests :

Name of Range	Number of village	Area in hectare
Ramgarh	170	22665.43
Tandwa	97	56065.83
Barkagaon	111	41458.88
Hazaribagh	129	26053.76
National Park	70	
Barhi	257	33872.08

DEMARCATION AND STATE OF BOUNDARIES

1.1.7.0 The Ex-Reserves are demarcated by a 6 metre (20 ft) wide Clearfield artificial boundary line with cairns of stone or earthen pillars all along the line. The boundary line and the pillars do not appear to have been regularly maintained. The Ex. R.F. lines which coincide with the bamboo coupe lines are regularly out at the time of laying out of bamboo coupes. Most of the boundaries pillars exist but quite a number of them are inconspicuous.

1.1.7.1 The state of boundary line of erst-while P.P.Fs i.e., the Ex-Zamindari forests is not generally very happy. Since many of the pillars are earthen, they generally get damaged incourse of time due to rains. At vulnerable points concrete pillars have been constructed, but their number is few. All subsequent release of land from the forest demarcation have been excluded on the ground and on the map.

1.1.7.2 The following table gives the total length of boundary line and total number of boundary pillars range-wise.

Name of Range	Total length of boundary line	Total no. of boundary pillars	Av. Length of boundary line per sq. km. of forests	Av. no. of boundary pillars per sq. km. of forests
1	2	3	4	5
Ramgarh	126222	27897	533	117.90
Tandwa	54505	8123	248	36.95
Barkagaon	89877	15654	190	33.23
Hazaribagh	79042	9078	247	28.45
National Park	30583	10015	164	53.76
Barhi	86699	29054	235	78.70

MAP

1.1.8.0 The basic record showing the demarcation of forests is on the gadastral maps on 16”=1 mile scale. The mater copy of the maps for each village showing upto date corrected boundary line is kept in this Divisional Office.

1.1.8.1 The map for field work is on 6”=1 mile topographical maps prepared by Damodar Valley Corporation for their catchment area. For such of the areas for which 6’=1 mile topographical maps are not available enlargements on 4”=1 mile from 1”=1 mile

topographical cal maps have been prepared. The forest areas of the Division are covered by the following 1"=1 mile toposheets.

LEGAL POSITION

1.1.9.0 Ex-Ramgarh Reserves – The former Ramgarh reserves were notified as Reserved Forests under section 20 of Indian Forest Act on application by the Court of Wards on behalf of the proprietor of Ramgarh Estate under section 38 of the Act.

1.1.9.1 The agreement dated the 18th September, 1941 was determined for non-fulfilment of the terms by the proprietor. Subsequently forest were denotified as reserved forests under section 27 of the Act vide notification no. 1167-VIF-293/47-R, dated the 18th December, 1947, no. 12221-VIF-193/47-R,dated 28th December, 1947 and no. 12222-VIF-193/47-R, dated the 28th December, 1947.The forests were simultaneously notified Act 1946 and were provisionally declared as Private Protected Forests under section 29 (1) of the B.P.F. Act in Government Notification no. 11969-VIF-293/47-R, dated the 18th December, 1947 and no. 12224-VIF-293/47-R, dated the 28th December 1947.

1.1.9.2 Consequent upon the enforcement of Land Reforms Act, 1950 all the Zamindari Forests vested with the State. These were, then notified as Protected forests under section 20 (3) of the Indian Forest Act, Appendix-III gives the list of relevant notifications.

FOREST SETTLEMENT

1.1.10.0 Forest settlement proceedings have been completed in respect of all the notified P.F.s as required under section 29(iii) of the I.F. Act and all records relating to these proceedings along with a copy of the demarcation map showing the exact extent of forests have been deposited in the record room of the collectorate. List and extent of rights admitted over a particular forest is, however, not available in the Divisional Office. This is an important record which has to be consulted very often when a dispute arises. It is advisable to obtain copy of the forest settlement order in respect of each forest and maintain the same as a permanent record in the Divisional Office.

RIGHTS & CONCESSION

1.1.11.0 The former Ramgarh reserves are completely free of any right. Other forests are all heavily burdened with right. The rights generally consist of free supply of timber and firewood for bonafide domestic consumption and right to graze cattle in the forest. The rights also entitle people to collect flowers, fruits and roots for their own consumption.

1.1.11.1 To meet the requirement of timber and firewood special provisions have been made to supply these items from annual coupes. Depending upon the number of house hold in a particular village, the area of rightholders' coupe has been determined for each right burdened felling series of coppice working circle. The rightholders coupes are laid out annually and handed over to the local Panchayat for distribution of produce among the rightholders.

1.1.11.2 Due to excessive deterioration of the forest, many of the rightholders coupes do not contain any thing except only rooted stock of sal. The result is that the rightholders do not work the coupe. Due to this attitude of the villagers many of the righholders coupes are not being laid out. The villagers, therefore, depend entirely upon the neighbouring forests for their requirement of timber and firewood and they try to obtain the same from wherever it is available. This results in large scale irregular fellings all over the forests. So far grazing of cattle is concerned the whole forest including even the freshly coppiced coupes is grazed and there is hardly and distinction between rightholders a non-rightholders.