

## FORESTS.

### GENERAL IMPORTANCE OF FORESTS.

Geneml.-Forests predominate in the district of Palamau. Out of the total area of 4,916 sq. miles of the district 2,146 sq. miles are covered with forests which are within demarcation. The economy of the district bears a very intimate correlation with the forests. A part of the total area under forests, viz; 364 sq. miles is situated on compact blocks with sparse habitation and the remaining area, viz.,1,782 sq. miles is honey-combed with villages of appreciable population. The figures, therefore, show that major portion of the demarcated area is exposed to biotic factors and the general condition is not encouraging as will be explained in the following paragraphs. However, the percentage of the area under forests when compared to the total area of the district which works out to 43.6 per cent, clearly indicates that importance of forests in this district is paramount.

*Biotic factors-its interaction and effect.*-The area under forests, during last survey settlement when compared to that at the present (1957) shows that there has been a general decline. During the last settlement (1913-20) 3,200 sq. miles were reported to be under forests and during the period under report only 2,146 sq. miles are under demarcation. Within a period of 40 years it has, therefore, decline by 33 per cent. The main reason of this rapid rate of destruction of forests and breaking up of the land is the impact of the biotic factors. The increase in the population and the mild policy of the Government followed so far, sometimes in complete disregard of the main principles of forest conservancy, have led to the above results. Not only valuable forest growth had been removed and lands made barren, marginal lands as well, which should not be put under cultivation under the principles of best land use, have been brought under plough. These short sighted activities of the people have resulted in accelerated, soil erosion, desiccation of the area, deterioration of the quality and have ultimately reflected in lowering of water table, shortage of rainfall and wash of the fertile top layers of the soil. All these adverse factors affect the economic status of the population. The agricultural economy has lost its balance completely. The crops and their yield have been upset totally and every now and then shadow of famine conditions make their appearance here and there.

There was an erroneous impression at the time when the last gazetteer was written that due to inaccessibility and vast extension, destruction could not be brought in the forests of Palamau. This idea does no longer hold good. Except in the Government-managed forests extending over 364 sq. miles which have been worked under regular working plans, the evils of destruction have made themselves felt all over the forest-bearing tracts of the district. This, however, is always in the inverse ratio to the nearness of population. The forests of Garhwa, Nagar Untari, Bhawnathpur, Lesliganj,

Bishrampur, Hussainabad, Chhatarpur and Harihargand police-stations lying in tile north and north-east corner of the district have been reduced to thorny bushes.

## **EXISTING CATEGORIES OF GOVERNMENT FORESTS.**

The Government-owned forests in the district under the management of the Forest Department which, however, at the time of writing of this gazetteer constitutes the entire forest wealth of the district can be classified as below :-

- (i) Old Reserved Forests-243 sqr. miles.
- (ii) Old Protected Forests-40.44 sqr. miles.
- (iii) Khalaha Reserved Forests-80.12 sqr. miles.
- (iv) New Protected Forests-1783.05 sqr. miles.

(i) *Old Resertled Forests.*-The first and foremost step towards protection of forests was taken in the year 1864 when 178 sqr. miles of the forest in the Government-owned Estate were demarcated and taken over for protection and management. In 1874-75 Mr. Johnston selected 37 blocks of forests aggregating 151 sqr. miles to be gazetted as Reserve Forests. These were gazetted by a notification dated 10<sup>th</sup>, August, 1875. This year Palamau Forest Division was constituted. Subsequent notifications reserving more forests were made in the years 1877, 1879, 1881, 1885, 1920, 1923, 1924, and 1927. These reserved forests were free from all rights and encumbrances.

Subsequently certain protected forests were also constituted into reserved forests which will be described in the next paragraph. The total area of the Reserved Forests is 243 sqr. miles constituted in Latehar, Mahuadanr, Daltonganj revenue police-stations and consists of 23 blocks.

(ii) *Old Protected Forests.*-In the year 1892 Government issued a notification declaring all waste lands not used for cultivation or habitation to be Protected Forests. In the year 1894 the notification was amended to apply to forests over which the Government exercised proprietary rights. In the year 1902 the principle was modified so as to allow for the purposes of cultivation an area equal to that already held under cultivation and to make the remainder as Protected Forests The Protected Forests constituted under this principle covering 81 sqr. miles were gazetted in the year 1902. The principle, however, was defective and the boundaries of the Protected Forests were twice revised during the years 1904 and 1905. The area finally notified as Protected Forests in 1906 totalled to 71 sqr. miles. In the year 1904, however, 11 Protected Forest Blocks or parts thereof were notified as Reserved Forests. The total area of the Old Protected Forests is 40.44 sqr. miles and is situated in Daltonganj, Latehar, Bhandaria and Mahuadanr revenue police-station and consists of 20 blocks.

(iii) *Khalsha Reserved Forests.*-In the year 1902 management of Protected Forests mentioned in the above paragraph was transferred to the, Deputy Commissioner as the

stringent rules under farce and difficulties in grazing caused much discontentment among the villagers. In 1920 the forests were once more transferred to the Forest Department as the denudation of the forests was causing apprehension and it was considered advisable to introduce systematic working with a view to preserve them. The Deputy Commissioner, however, once again raised objections and certain parts of these forests were transferred to him in 1923. At the time of writing of the last gazetteer out of 68 sq. miles of the Protected Forests 48 sq. miles were under the management of the Forest Department and 20 sq. miles under the Deputy Commissioner. These forests were managed by the Khas Mahal Department. In the year 1947 these forests were ultimately transferred to the Forest Department and were constituted as Reserved Forests, hence the name Khalsha Reserved Forest. The total area of the Khalsha Reserved Forests is 80.12 sq. miles situated in 128 villages in Mahuadanr Latehar, Daltonganj, Patan and Ranka police-stations.

(iv) *New Protected Forest:-*As has been stated above the major part of the area under forests in this district was owned by private individuals. Only a small fraction was Government-owned which was under a scientific management. On account of wanton destruction of forests at a very rapid rate resulting in irretrievable damage to this national property it was considered desirable to take up the management of such forests under the Government. There is a provision under section 38 of the Indian Forest Act according to which private owned forests can be reserved only with the full agreement of the owners. Efforts made in this district to induce the private owners to execute such agreements proved to be abortive except in a solitary case, viz., Deogan Estate which was reserved in the year 1924 under this section of the Indian Forest Act. With the opening of the Central Indian Coalfield Railways in 1929 (now E. Rly.) the process of forest destruction got undue impetus. The landlords who were interested in ready cash, started cutting and selling their forests at a very rapid rate. Destruction, however, was accelerated on account of a very much inflated demand during the last World War II and the damage done to such forests in meeting the unlimited requirement of the Defence Department was enormous. After independence it was realised that this national asset must be conserved and a special Act called the Bihar Private Forests Act was enacted in 1946-47, under the provision of which all the private-owned forests came under the management of Government, the ownership however remained intact. It must be stated that the State of Bihar was the pioneer in this direction inasmuch as it was the Union in which the private-owned forests were taken up for management. These Private Protected Forests vested ultimately in the State when the Land Reforms Act of 1950 was legislated, and brought into effect. As soon as the ownership vested in the State, the Bihar Private Forests Act ceased to operate and these forests were notified as Protected Forests under section 29 of the Indian Forest Act of 1927. The total area of the new Protected Forests is 1,783.05 sq. miles which have been constituted in 1,756 villages in Mahuadanr, Latehar, Balumath, Daltonganj, Patan, Chhatarpur, Hussainabad, Garhwa and Ranka police-stations.

## **ADMINISTRATION.**

Palamau Forest Division was created in the year 1875. The forest conservancy actually dates back to 1879 when 179 sq. miles of forests were reserved. The remaining forests were constituted as reserved *in* the year 1884. Before 1904 these forests formed a separate division. They were then amalgamated with the forests of Hazaribagh Division but were again made a separate charge in 1920. The staff maintained at that time consisted of a Divisional Forest Officer, a Ranger, three Deputy Rangers, three Foresters and forty-one Forest Guards. The division consisted of three Ranges only, viz., Northern, Southern and Latehar Ranges. In the year 1932 the constitution of Ranges, however, was reorganised resulting in four Ranges, viz., Kundri, Northern, Latehar and Southern Ranges with headquarters at Kundri, Betla, Latehar and Garu. The staff consisted of one Divisional Forest Officer, one Forest Ranger, three Deputy Rangers, five Foresters and thirty seven Forest Guards. The headquarters of Northern Range was shifted from Betla to Chhipadohar in the year 1934 and another Range named Lat was created in the same year. In the event of taking over of private-owned forests under Government management from the year 1946-47, 11 more Ranges were created raising the total to 16. A forest subdivision named the Garhwa Forest Subdivision was created, vide Revenue Department notification no. VIF-4-16/48-602-R., dated 19<sup>th</sup> March, 1949 consisting of seven Ranges, viz., Garhwa, Bhawanathpur, Ranka, Bhandaria, Chhaterpur, Mohammadganj and Chainpur later this subdivision was elevated to the status of an independent division known as Garhwa Forest Division with effect from 1st June, 1952 in Revenue Department notification no. C/PF-7011/52-R-231-R, dated 23<sup>rd</sup> May, 1952. As the management became more intensive the parent division was once again split with effect from 1st November, 1954 and a separate division, namely, Latehar Forest Division was created under Revenue Department notification no. C/F-10107/54-4199-R, dated the 30<sup>th</sup> September, 1954 consisting of five Ranges, viz., Latehar, Garu, Chhaterpur and Mohammadganj were transferred from Garhwa Division to the parent division still known as Palamau Forest Division bringing the total number of territorial Ranges to six, viz., Chhipadohar, Lat, Kundri, Manatu, Chhaterpur and Mohammadganj and one non territorial Range, viz., Betla Forest Guards' Training School. The present administrative set up of the three divisions (in the year 1957) is given in the following table:-

**TABLE I.**

Name of Division	Area in sqr. Miles.				No. of Range.	No. of Beats.	No. Of Sub-beats.
	Old R.F.	Old P.F.	K. R. F.	New P.F.			
1	2	3	4	5	6	7	8
Palamau	134	25	20	556	7	17	104
Garhwa	.....	9.44	2.12	745.02	5	12	106
Latehar	109	6	58	482.03	5	15	91

TABLE II.

Number of-

Name of Division	D. F. O.	Rangers.	Deputy Rangers.	Foresters.	Forest Guards	Temporary staff	Office establishment
1	2	3	4	5	6	7	8
Palamau	1	6	1	23	124	C. M. S. D. M.S. N. G. 14. L. C. 12. C. G. 12.	Asst. 12. I.Amin 1. Amin 3.
Latehar	1	4	...	17	91	C. M. 13 C. G. 19.	Asst. 8. Amin 2.
Garhwa	1	3	...	16	106	C. M. 5 D. M. 4. N. G. 3. C. F. 5.	Asst. 10. Amin 1. I. Amin 1.

### TOPOGRAPHY-FOREST CROP AND ITS DISTRIBUTION.

The elevations on which these forests lie vary from 700' to 3,819' (the highest peak of the Sarwat hills), a height second only to that of Parasnath hills in Bihar. The general topography of the terrain is very hilly on the south, hilly on the north with interceptions of level and undulating stretches. In the south of the district specially in the Old Reserved Forests *sal* (*Shorea-robusta*) forms the main crop along with its other associates in major part of the area. *Sal* sometimes constitutes 50 per cent of the crop. It grows Very well on the fringes of the *nalas* and lower slopes of the hills. It also occurs in fair abundance in the Old Protected Forests with similar growth wherever the destruction by men has not been conspicuous. In the Khalsa Reserved Forests it does not appear in remote patches but the size and the proportion is low. The New Private Forests which have been taken over for management (after they had been badly backed by the people specially during the War and the transitional period) contain *sal* only in very remote areas where it forms merely a sprinkle. The sizes also are low, the stems are defective and usually they are small saplings sprouting over old high stumps. The usual associates of *sal* are as follows:-

*Asan* (*Terminalia tomentosa*), *Karam* (*Adina cordifolia*), *Kend* (*Diospyros tomentosa*), *Guri* (*Mitragyna parvifolia*), *Kusum* (*Scheleichera trijuga*), *Galgal* (*Cochlospetmum gosaypium*), *Keonjhi* (*Sterculia Villosa*), *Ginjan* (*Odina wodier*), *Piar* (*Buchanania Latifolia*), *Siris* (*Boswellia serrata*) and etc.

The fact that the area could grow good *sal* is exhibited by the few remnants which have put very high growths here and there. In the Barasand Block *sals* of 7' and 8' girth are still not uncommon.

The major part of the area in the district, however, is covered with miscellaneous crop with sprinkle of *sal*. They are found distributed almost all over the area and have acquired some economic importance since the introduction of intensive method of forest exploitation. The mixed miscellaneous forests consist of the following species:-

*Khair* (*Acacia catechu*), *Asan* (*Terminalia tomentosa*), *Karam* (*Adina cordifolia*), (*Juri* (*Mitragyna parvifolia*), *Sidha* (*Lagerstroemia parviflora*), *Karjali* (*Cleistanthus collinus*), *Kekar* (*Garuga pinnata*), *Mahua* (*Bassia latifolia*), *Paras* (*Butea frondosa*), *Gamhar* (*Gmelina arborea*), *Bia* (*Petrocarpus marsupium*), *Chilbi* (*Holoptelea intergrifolia*), *Sandhan* (*Ougfinia dalbergiades*), *Semal* (*Bombax Malabaricum*), *Medh* (*Litsaea semifera*). *Rohan* (*Soymida Febrifuga*), *Piar* (*Buchanania laUfolia*), *Bel*. (*Aeglemarmelos*), *Kedar* (*Garuga pinnata*). *Dhautha* (*Anogeilasti latifolia*), *Salai* (*Boswellia thurifera*), *Keonjhi* (*Sterculiaurens*), *Kend* (*Diospyros tomentosa*), *Bhurhul* (*Chloroxylon swietenia*), *Papar* (*Gardenia latifolia*), *Kusum* (*Schlfichera trijuga*), *Belsai* (*Limonia acidissima*), *Dhola* (*Alanguiuill lamarcki*), *Sissam* (*Dalbergia latifolia*).

Bamboos, however, form the main crop mixed with miscellaneous and also with *sal* in almost the entire forest area of his district leaving only a few exceptions. The species is *Dendrocalamus strictus*. In favourable localities it has acquired girth from 13" to 15" at the base and height 32 to 35 ft. The reproduction is satisfactory and the incidence is very heavy. Good bamboos abound in Betla, Maromar, Baresand, Adheya, Dauna, Bhumbhor, Hisra, Joon, Katra, Hosatu, Saneya, Jaubar, Latd'ag, Mundu, Rekargarh, Lawabar, Tandwli, Garhgaon and many other locations. On account of very great demand of the Paper Mills and the public for house building purposes the bamboo forests of this district have acquired enormous significance. Out of all the districts in the State this district produces the highest yield of bamboos.

*Khair* is found almost all over Palamau forests in fairly large proportions varying in sizes and density. In the populated areas they have been very badly lopped by the graziers and have failed to put on growth fit for commercial exploitation. Reckless cutting of the past specially in the forests which were not under Government control has at the present moment reduced the number of exploitable trees considerably. Tree in the lower age classes abound which when given proper protection will acquire value. The potentiality, however, of *khair* production is immense and the quality is one of the most reputed in the State and in the neighbouring areas.

Miscellaneous species which have been named above as the associates of *sal* also find market and are mostly exploited. The names of *dhautha* for axlewood, *bija* for furniture and door and window shutters and *asan* for structural purposes are worth mentioning. *Salai*

which occurs also in abundance and acquires very large sizes has recently been found of use in manufacture of packing boxes and is being exploited from such parts of the district which are situated near the rail heads.

## MANAGEMENT.

In the initial stages when the forests were taken over they were heavily *jhumed* as is recorded in the Working Plan of Mr. J. W. Nicholson (1932). In 1874-75 Mr. Johnston carried out linear valuation survey on the basis of which Dr. Schlich prescribed complete rest to enable the forests to recover from the past ill-treatment. In 1892 Mr. Dandey, the Conservator of Forests, Bengal prepared a Working Plan report and submitted some proposal as the basis of working of these forests. In 1904 Mr. Haslett, the then Divisional Forest Officer, submitted a Working Plan to the Inspector-General of Forests who, however, considered that the publication of the Working Plan was unjustifiable and only a Plan of Operation for fixed number of years was all that was necessary. Mr. Haslett's proposals consisted of (1) selection felling of *sal* over 5' in girth and *khair* over 1'8", (2) non-regulated felling of dead *sal* trees and trees of other species for which demand may be found and (3) improvement felling. In 1905 one *Khair* Felling Series of 20 years rotation in Kechki, Saidup, Ramandag and Baresand was approved by the Conservator of Forests which at his instigation was altered in 1907 in which the exploitable size was raised to 2' and the 20 existing coupes were divided into two felling series worked on ten to fifteen years rotation respectively. Mr. Draper, the then Divisional Forest Officer, drew up a revised scheme of fellings for 15 years rotation. For reasons not known the felling series to be worked out on 10 years rotation was dropped out of picture. In 1908 a separate working scheme for *Betla* and Kechki was introduced. The fellings, however, were carried regularly in Kechki Block up to 1922-23 and no fellings were undertaken in *Betla* till 1919-20. This scheme operated till the year 1924-25. In 1909 Mr. Hearl, the Conservator of Forests, Bengal, amended bamboo working scheme and in 1915 Mr. Raines raised felling cycle to six years and constituted felling series in Ramandag Block as well. In 1923 Mr. Mooney submitted revised Working Scheme of Kechki and *Betla* Blocks but it came into effect from 1924. He prescribed selection-cum-improvement fellings with felling cycle of 30 years in the plain working circle and fixed the exploitable size to 3'6" in girth. In hill working circle he prescribed Coppice with Standards on 60 years rotation and confined the standards to *khair* and *Satin* wood only. He also extended the scope of Mr. Haines' scheme for bamboos over a part of Baresand forests and prescribed altogether nine felling series to be worked on felling cycle of three years. In 1927 Mr. D. H. Khan drew up a scheme for the *Betla* Protected Forests in which he prescribed Coppice with Standard under 30 years rotation. In 1932 a comprehensive Working Plan by Mr. Nicholson was introduced for the first time which covered almost all the approachable and workable areas of the forests. Under this Plan the forests of the Division were divided into seven working circles, viz., (1) Selection, (2) Coppice, (3) Village, (4) *Teak* Plantation, (5) *Bamboo*, (6) *Kath* and (7) *Miscellaneous*. Later during the Second World War one more working circle, namely (8) *Salai* Working Circle formed for meeting the demands of packing boxes. The most important feature of this Working

Plan was the Teak Plantation Working Circle which was aimed at introducing an exotic species in the area which was of immense economic value and is very much in demand. This Working Plan was revised in the year 1950 by Mr. P. Mishra which is still in operation and covers the entire Government Reserved, Protected and former Khalsa Forests of the district of Palamau. With the introduction of intensive method of management

and exploitation this Working Plan has a larger application and covers almost the entire area of the forests. He has also endeavoured to introduce uniform system which was hitherto not applied in the sal forests of the district. Under this Plan the forests have been divided into 10 working circles, viz., (1) Sal Conversion, (2) Selection, (3) Coppice, (4) Village, (5) Khalsa, (6) Plantation, (7) Bamboo, (8) Kath, (9) Salal and (10) Miscellaneous. On taking over of Private Protected Forests which ultimately vested in the State under the L. R. Act the Working Plan of the newly acquired area has been prepared by Mr. J.N. Sinha and is in operation since the year 1954-55. Under this Plan the forests have been divided into four working circles, viz. (1) Coppice Working Circle, (2) Khair (overlapping), (3) Bomboo (overlapping) and (4) SemaJand.Salai (overlapping). Working Circles. In the new Protected Forests the forests of one village or a group of villages have been constituted as Felling. Series which is the unit of management and blocks and compartments have not been made so far. These felling series in their turn are divided into as many parts as there are number of years of rotation (40 parts of the rotation is of 40 years) and each part which is called a coupe is set apart for felling in the year when it falls due. Ultimately at the end the felling series will consist of 40 equal patches of forests in a series of age gradations, i.e., varying in age from one to 40 years.

### **AFFORESTATION AND WORKS OF IMPROVEMENT.**

Large stretches of forest lands which were once covered with fine forests have since been completely denuded of all vegetation and stand out as desolate, naked wastes on which not even grass can grow. Large parts of such wastes have been gullied and deep ravines have been formed therein. For rehabilitating such denuded lands and for arresting the accelerated pace of erosion, afforestation schemes have been taken up. Gaya Afforestation Division operates in this district with the above end in view.

Besides the above, efforts are also being made by the local Divisions to afforest small patches of lands.

Works of improvement in the shape of replacement of inferior species by species of higher value and utility like teak and semal is in progress in Palamau and Latehar Divisions. The target is to plant up 400 acres with semal and 400 acres with teak at a cost of Rs. 40,000 each in each of these two Divisions by the end of the Second Five-Year Plan.

For raising teak and semal stumps one nursery at Dorami has been established having an area of 5 acres by improving the old nursery which was very small in extent.



Two wells have also been dug up which are fitted with pumps worked by electricity. Another nursery of 4 acres for raising teak stumps at Maromar and of 2 acres at Kurumkheta for raising semal stumps has been established.

Another work of improvement which has been taken up in hand in the Second Five-Year Plan is the fencing of derelict areas. Areas having potentiality which cannot show up on account of very heavy incidence of grazing have been fenced with barbed wire to exclude all grazing and it is expected that they will improve in 5 to 10 years time.

### **ARBORICULTURE.**

The arboricultural work was mostly confined to the Netarhat Plateau. The Government have the idea of transforming this Hill Station into a beauty spot. With this end in view plantation of ornamental exotics was tried on the plateau by the department. The indigenous species namely *tun* and *gamhar* have done well. Plantation of Chir Pino (*Pinus Eacelsa*), Eucalyptus Citrodora, Silveroak (*Grievellia, Robusta*), Cypress and the Thuja have met with success.

### **MINOR FOREST PRODUOE.**

There are several minor forest produce which are exploited from the forests of this district. *Kendu* leaves, *mahua* flowers, fodder grass, honey, chope, myrabolam, *sabai* grass, hides and horns and lac are worth mention. *Kendu* leaves which are used in manufacture of *biris*, enjoy a very good reputation in Calcutta market and fetch appreciable revenue sometimes up to the tune of 7 to 8 lakhs of rupees a year. Fodder grasses are exploited by the Namkum Military Farm and the Animal Husbandry Department and are also exported. Honey is of very good quality although the quantity in which it is available does not permit its collection on commercial scale. *Mahua* flower is one of the most, important minor forest produce which is allowed to be collected by the villagers free of any royalty and is of great value for the poor people and approximately 1.25 lac maunds is exported annually partly raw (30 maunds) and part in form of shellacs "(30 maunds equivalent to 75 maunds of raw lac). Major part of this crop however comes from the area which are outside demarcation, mostly from *raiya* and *gairmazartua* land and only a small fraction is contributed by the Kundri Lac Orchard which is worked departmentally. This is the only lac orchard in the State which is run by the Forest Department inside the forest demarcation by the assistance of the Lac Research Institute, Namkum. Operations are all done on scientific principles and under the guidance of trained personnels of Namkum Lac Research Institute and it has formed a formidable training ground for the trainees of the Institute who pour in the numerous batches at the different periods of operation to this orchard for their practical training.

## REVENUE FROM FORESTS AND APPROXIMATE OUTTURN.

The forests of this district had to be worked for a long time at considerable financial loss, the reasons of which had to be frequently examined. The precarious financial position necessitated periodic amalgamations of Hazaribagh and Palamau Divisions. Analysis of the past figures shows that the total deficit of Palamau forests from the year of establishment of the Division upto March, 1932-33 was Rs. 8,12,221. The Division has run on surplus budget from the year 1933-34 onwards. The following table gives the figures of revenue and expenditure quinquennially up to the year 1951-52 and annual figures from 1953-54 up to the year 1956-57

Year.	Revenue. Surplus or	Expen liture.		Capital		
		A-Conser- Vancy.	B-Establish- Ment.			
				Outlay. deficit.		
1	2	3	4	5	6	
7						
	Rs.	Rs.	Rs.	Rs.	Rs.	
1938-38 ..	4,91,007	1,05,094	2,31,875	17,195	3,53,473	
	1,38,592					
1938-43 ..	7,39,550	1,53,582	2,28,438	..	3,17,409	
	4,08,631					
1943.48 ..	24,73,341	3,69,010	3,76,080	20,463	13,60,590	
	17,07,746					
1948.53 ..	66,81,135	15,62,388	14,76,774	2,26,040	29,57,724	..
1933-54 ..	19,11,561	5,39,288	2,20,774	2,74,605	6,07,518	..
1-954-55..	18,48,530	5,94,906	2,47,592	3,22,739	5,56,162	
	1,38,5C2					
1955-56 ..	22,46,484	6,79,697	2,62,070	2,65,301	11,42,443	..
1956.57 ..	30,77,727	5,45,826	2,90,508	2,96,098	13,42,645	..

The outturn of different types of forest produce could not be collected of the remote past but that of the last 20 years is reproduced below :-

Year	Timber in thousand cwt.	Fuel in thousand cwt.	Bamboos in thousand	Grass	Other miner forest products in value
1	2	3	4	5	6
				Rs.	Rs.
1938.38 ..	28,55	28,04	89,54	46,183	34,094
1938.43 ..	15,82	8,71	1,67,22	55,929	59,874
1943.48 ..	16,80	4,95	50,94	1,08,358	1,15,517
1948.53 ..	10,47	14,42	1,37,93	37,740	1,15,517
1953.54 ..	11,72	21,31	58,66	11,405	2,60,526
1954.55 ..	11,20	23,03	80,53	8,774	2,67,950
1955.56 ..	11.64	27,43	31,75	9,488	3,32,938
1956.57 ..	11,81	24,24	43,28	5,578	3,40,845

### COMMUNICATIONS.

The principal line of export is the Gomoh-Dehri-on-Sone line of the E. Railway. The section from Daltonganj to Barkakana was constructed as part of Central Indian Coalfields Railway and was opened to traffic *in* 1929. The principal export stations are Mohammadganj, Untari Road, Garhwa Road, Rajhara, Daltonganj, Rechki, Barwadih, Chhipadohar, Kumandih, Latehar, Richughuta and Tori. From Chhipadohar station alone about 30 wagons of forest produce are despatched daily to different towns of U. P, Punjab, Bengal and Bihar.

Construction of Katni-Bilaspur line from Barwadih was taken up in 1948-49 and the distance of about 40 miles up to Sarnadih, a village of Surguja district of Madhya Pradesh situated just on the other bank of Kanhar River was opened. Due to financial stringencies construction was abandoned in 1950. When this railway line starts operating most of the forests of Garhwa Forest Division will be within 20 miles of the rail head.

The Forest Department owns 472 miles long roads in the district; viz., 172 miles in Palamau Division. 203 miles in Latehar Division and 97 miles in Garhwa Division. A number of District Board roads are running through the forest tracts and few of them have been transferred recently to the Forest Department. Daltonganj-Mahuadanr road was transferred to the Department from 24th milestone up to Mahuadanr with effect from the 1st April, 1953. The Koel river at Garu had been bridged in the year 1957. This has paved the way for better utilisation for forest produce available on the south of Koel river. With these improvements the present revenue of the district from the forests has swollen to Rs. 30,77,727. This is no less an achievement for the department. However, there is still scope for improvement. The installation of saw-mills at some of the rail heads is another redeeming feature contributing to the rise in revenue. After World War II, motor trucks came into existence

in large numbers and became the main means of transport of forest produce rendering the exploitation cost very low. Utilisation at present in no other division of the State is so advanced as it is in Palamau.

## CAMPING SITES AND PLACES OF INTEREST AND BEAUTY.

At present there are 28 forest rest houses in the district which are well furnished and maintained. They are reasonably comfortable and have made inspection of forests easier. Names of the forest rest houses are given below division wise:-

*Palama*—Lat, Mundu, Kerh, Barwadih, Betla, Kechki, Daltonganj, Kundri, Seoti and Karmahi.

*Latehar*—Aksi, Maromal, Baresand, Rud, Adhey, Amjharia, Mahuamillan, Sarju, Kumandih, Fulsu and Matlong.

*Garhwa*—Bhandaria, Chainpur, Kutku, Bishrampur, Bhounathpur and Railan.

*Gumla*—Netarhat (situated in Palamau district).

*Camping* grounds.-There are some excellent camping grounds situated inside the forests of this district. Bagechampa occupies the most picturesque site and in the old days it used to be a favourable camping ground of the Forest Officers. The names of Garu, Kutku, and Paraspani are worth mention as excellent camping sites.

*Places of interest and beauty.*-There are quite a large number of beauty spots. The following however are of importance :-

- (1) Lodh fall in Mahuadanr P.-S
- (2) Kanti fall in Chandwa P.-S.
- (3) Kutku rapids in Barwadih P.-S.
- (4) Kanhar gorge in Nagar P.-S.
- (5) Kechki.-confluence of Orenga and Koel in Barwadih P.-S.
- (6) New and old forts of Palamau in Barwadih P.-S.
- (7) Netarhat plateau in Mahuadanr P.-S.

*Protection.*-It might be stated that fire has been the single worst menace in the Palamau forests. Until the measures to combat this evil are made comprehensive serious retrogression will remain impending. The main causes of fire have been the collection of *mahua* flowers, honey, green grass, etc. The annual hunt by the tribal people has also been the cause of forest fires. Fires caused by glowing sparks emitted by the railway engines is not very uncommon. Cases of incendiary fires have also come to light.

Fire protection has been in force since 1881-82 and was given particular attention. The percentage of success was very high. Mr. Nicholson thought rigid fire protection to be difficult and as such experimented with early burning in Palamau forests. Early

burning was introduced in 1932 and complete fire protection was aimed at only in plantations and young coppice coupes. This practice also had its own defects. Firstly in many cases such burning was done too late and smouldering stumps within the early burnt areas were suspected to be

the cause of subsequent late fires. Secondly, departmental burning operation led the public to assume that the Forest Department had come to view forest fires with equanimity. The practice of early burning had to be suspended under the express orders of the Conservator of

Forests, since a lot of complaints about damage were received from the owners of the neighbouring forests. Since 1936 efforts have been made to completely protect the forests from fire. This impetus of fire protection was carried onward till 1945. In 1946 when the management of the Private Forests was taken over, the old tradition was lost in the wake of new problems. The department has been able, to consolidate management during the last ten years. Fresh efforts to revive the old tradition in the direction was made since 1954-55 which succeeded in rigidly fire protecting by 94 per cent of the area. The zeal had been kept up in the subsequent years and roughly 94 per cent of the area have been protected annually since then. During the Second Five-Year Plan a sum of Rs. 2,50,000 has been set apart for fire protection. A truck has been purchased to enable the staff to rush to the place of occurrence immediately for fighting fire. It will be rather a sad commentary to admit that in India we have no advanced means of fire fighting like U. B. A. and the U. K.

*Grazing.*-No statistical data are available as to the number of cattle that graze in Palamau forests. But there is no shadow of doubt that most of the cattle population of the district depend on the forests. From the areas where forest is sparse, cattle are brought to the reserve areas, and the owners' camp there with cattle for all the year round. The same area is grazed daily without keeping ill view the disaster that may impend. The department in a bid to remove any discontentment among the villagers has not been charging any fees from persons residing in the thana in which the forest is located. Levy of fee used to exercise

some control on large-scale grazing. Grazing and feeding are almost uncommon in this district. The usual practice so far has been to close the annual coupes and allow unrestricted grazing elsewhere. Rotational grazing has never been put into operation in practice. Sheep fanning is an important constituent of the rural economy in Bhawanathpur, Nagar Untari, Hussainabad, Chatterpur, Ranka and parts of Garhwa and Badarthana of the district. Goats are not numerous and generally keep to the village land. Forest grazing by sheep is on increase during the rains with the commencement of the paddy season. The sheep never stay too far away in the forests as they remain in constant rear of wild animals. So long the forests were under the dispensation of the landlords sheep grazing was freely permitted. The sheep do damage to the young seedlings by nibbling the young shoots.

*Frost.*-Frost causes damage to coppice shoots and young seedlings in sub-mountain tracts and in villages. The damage is more severe in and around abandoned village sites. *Sal* is the principal species which suffers from frost. Retention of large number of standards is the remedy in coppice coupes. The incidence however is low.

Forest offences are rather on the increase everywhere. It is less, in the Old Reserved and Protected Forests and more pronounced in the New Private Forests.

There was a wave of encroachment upon the newly acquired Protected Forests. The conditions were created on account of the fact that the demarcation of such large tracts was done in a hurry and within a very short period. In order to rectify some of the mistakes in

demarcation some lands here and there were excluded out which ultimately have an impetus to the people to encroach on more lands. Efforts have been made to go over the entire demarcation line in each village excluding all such lands which were on the fringe and were

under cultivation. Encroachments which however, were situated in the heart of the forests were viewed with concern and were dealt with, rigidly. Wherever the encroachments were illegal the offenders were prosecuted and ousted from the area and wherever the lands happened to be *raiya* they were acquired under the provisions of the Land Reforms Act. The state of boundaries in these newly acquired Protected Forests are, therefore, now reaching some stability.

Dealing with the protection part of the forests it will not be out of place to mention that on account of repeated fires, heavy incidence of grazing, lowering of water level which are manifest and also other reasons; (viz., attack of fungi or insects or physiological diseases which are not manifest and which have not been investigated so far) a very large number of *sal* trees and also some *asan* have started drying from the top all over the forests of the district. The casual organism or the factors responsible for the dieback which commenced only about 4 to 5 years ago and has by now spread over a very large area has not yet been investigated and efforts are being made most seriously to find out the same. Meanwhile the alarming rate of dieback has left no alternative but to stop all green fellings at least in nine felling series of the Reserved Forests of this district. Pending investigation into the causal factors there is no other remedy but to fell and remove the dry trees lest they spread the disease or the germs of destruction to the remaining trees. The dry stems after felling naturally do not leave any chance to reproduce as the roots have either already dried or decayed or have become disease infected. Unless of course, such vast tracts are once again covered up by artificial plantations which will not only be very much expensive but also impracticable to a very great extent. The area ultimately may be converted into grassy blanks with no valuable tree growth.

*Rights and concessions.*-The reserved forests constituted prior to 1923 were gazetted free of rights. Most of those gazetted since that year are burdened with major or minor rights. The Protected Forests and the Khalsa Forests are burdened with general rights prevailing in the forests of Chotanagpur districts.

The general rule regarding admittance of rights is that persons living in the villages situated in the neighbourhood of such forests have been given some kind of right or the other for taking forest produce. The rights, however, in the newly taken over

Protected Forests have acquired unmanageable proportions. The rights admitted by the Forest Settlement Officer appointed under the Bihar Protected Forests Act, the settlement order of which could not be finalised as the said Act became defunct after the forests vested in the State under the Land Reforms Act are practically unlimited and are mainly based on the entries made in Khatian Part 2 prepared at the last survey settlement. The Forest Settlement Officers have been appointed to determine the rights and pass fresh settlement orders in respect of the new Protected Forests. The principal rights admitted in such forests are as follows:-

- (1) Right to take timber for construction and repair of houses and for agricultural requirements. Taking kitchen as unit each family has been allowed to take 9 cwt. per year.
- (2) Right to take firewood. An average family is allowed 168 *cft.* of stacked firewood.

The above quantities are subject to the capacity of the annual coupes and can be limited or reduced.

- (3) Right to graze cattle in the forests except in coupes up to 5 years of age.

The defect in the admission of such rights as stated above has been that they are unlimited and growing while the area of forest has been dwindling many fold since the last cadastral settlement. The population has increased disproportionately. If the rights of the village in any particular forest were mentioned in Khatian Part 2 they have been admitted in toto, subject to the limitation that the quantity of timber and firewood have been arbitrarily fixed. No list of households or right holders giving the nature and extent of their rights on any particular forest was prepared. The potentiality or otherwise with respect to the capability of the annual coupes to cater the demands of the right holders as admitted by the Forest Settlement Officer was never assessed. The position therefore, is that in this category of forest, unlimited growing rights have been admitted without any consideration of the productive capacity of the forests.

Besides the above rights a number of concessions have been admitted by executive instructions issued from time to time which are as follows :-

- (i) Concession to take head load of dry firewood by the poor and landless people without any payment, for their own use, sale or barter.
- (ii) Concession to remove "Jhanti Jhuri" of thorny species for 'gherawan' purposes.
- (iii) Concession to remove all edible flowers and fruits free of any royalty.
- (iv) Concession to take wood for cremation purposes.

The concessions listed in (i) and (ii) above are acting very adversely to the interest of forest conservancy as the stock of dry and fallen firewood on the forest floor is not unlimited and that people sneak into the forests with axes concealed, fell the saplings anywhere and everywhere they like and let them dry up before they remove the same. Similarly unrestricted removal of thorny species from all over the forests results in exposure of the soil and desiccation which ultimately reflects in further retrogression.

## **LABOUR SUPPLY.**

In the remote past some difficulty was experienced specially in the Reserved Forests in procuring labour and as such forest villages were established at Bijaipur, Gutus, Pandra and Ramandag during the year 1920-23. In 1932 a small forest village was started a Mundar with the idea of supplying labour for departmental lac operation at Mako and Kurumkheta. The village does not exist now. Recently some more forest villages, viz., Latu, Henar, Khrumkheta and Kujrum have been constituted, settlements in them however have still to be done. The villagers in the forest villages are given land to cultivate free of rent. In exchange, however, they supply labour on daily wages prevalent in the area during the season. The obligation on the part of the villagers is to meet the demand of the Forest Department before engaging themselves on any other type of work. In recent years, however, labour supply does not form any problem and it is available in plentiful almost everywhere. In the newly acquired Protected Forests, Khalsa Reserved Forests and the Old Protected Forests they present no difficulty.