

## *Past System of Management*

**General History of the forests:-** The present Dhanbad Forest Division is a residuary of the old Manbhum Forests Division. The parent division started functioning from 1.11.1946. As a result of the award of the States Reorganisation Commission, 12 of the 21 Police Thanas of the original Manbhum District were transferred from Bihar to West Bengal and two were transferred to the Singhbhum District. The present Dhanbad Forest Division covers only the remaining 7 thanas, namely Tundi, Govindupur, Nirsa, Topchanchi, Chas and Chandankiari of Dhanbad Civil District.

Manbhum District was much behind in the matter of scientific forest management. No forest areas of the present day Dhanbad Forest Division came under scientific management until 1945, when the forests of the then Tundi estate were taken over by Government under the provisions of section 38 of the Indian Forests Act.

The forest of this division were subjected to indiscriminate cutting till the dawn of Independence. Heavy demands of local coal mines increased manifold by World- War- II and damaged heavily the already reduced forest area of the district and brought depletion of the forest. The only exception was the forests owned by the Jharia Water Board around Rajdaha Forest. pace of forest destruction went on until the situation deteriorate to such an extent that the Government had to take over the management of all forest lands under the Bihar Private Forest Act, 1946. Although this act aimed at the forests was being vested in the Government and the forests would forever be lost to the local people. This mis-understanding casued another wave of destruction when the owners cut and sold while the villagers cut and stored. Large scale breaking of land for cultivation purposes was also instigated. In between 1946 and 1950, until the Land Reforms Act. Came in to operation, the forests were repeatedly subjected to heavy exploitation. In 1958. most of the private forests were brought under the Indian Forest Act, 1927 Now the entire forest area in this division is the property of the State and scientific management has been extended to all these forests.

### **Past system of management and their result.**

On assumption of control of these forests by the Forest Department in 1948. a working scheme prepared by the Divisional Forest Officer and approved by the Conservator of Forests was introduced which brought coppice working with rotations 10-30 years. Rotation for the better and remote areas was 30 years while the forests which were full of high stumps, were put under 10 years rotation in order to do away with the high stumps as quickly as possible and to permit new coppice growth to from better pole crop. Most of the bamboo areas were brought under such working schemes

and a cutting cycle of 3 years was adopted. Results of regular working of bamboo areas brought in improvements in the bamboo forests of Jharia water Borad Rajabanspahar, Daludih, etc,

The forest working plan for these forests was drawn by Sri J.N. Sinha in 1955-56 for the period up to 1964-6. Sinha's plan ( 1955-56 to 1964-64) prescribed the following working circles :-

1. Selection Working Circles:-
2. Coppice Working Circles.
3. Soil and Water Conservation Working Circle.
4. Bamboo (overlapping) Working Circle.
5. Salai (overlapping) Working Circle.
7. Lax Working Circle.
8. Plantation Working Circle.
9. Protection Working Circle.

As a result of the recommendations of the State Reorganization Commission, portions of the old Manbhum district were transferred to West Bengal and Singbhum district. After adjustment of the areas, the working circles in operation in the Dhanbad district are SI.No. 2,3,4,7,8 and 9 listed above.

In this plan, bulk of the area was under the Coppice Working Circle. Felling series were constituted by grouping forests separately for forests with rights and those without rights and those more than 8 kms. to obtain his requirements from the annual coupe. Grouping was also necessary because the areas of forests were small and isolated. While grouping the forests another point of consideration was that the size of the annul coupe would not become either too small or too large.

The silvicultural system adopted was Coppice with Standards. Standards were kept to serve the sole purpose of augmenting the regeneration and providing bigger timer to limited extent.

For the forests of normal demand, the rotation was 40 years whereas for forests in areas of heavy demand, it was 20 years. Cleaning had been prescribed in the year following the main fillings. A thinning was also prescribed in the 11<sup>th</sup> year.

In coupes of 40 years rotation, 8 to 10 standards per area were to be retained while in coupes of 20 years rotation the standards to be retained were prescribed between 12 and 15 per acre. Semal, bhurkund chatni, kadam, Khair and bamboo were prohibited for cutting. In addition to standards health fruit bearing trees such as kend mahua, pair, mango and all healthy lac bearing trees such as kusum, palas, satsal, lipsi and putri and khandiyar were to be retained provided the total number of retained standards, fruit trees and lac host plants combined did not exceed 20 per acre.

In the constitution of the felling series, some allowance was made for blanks. Areas covered with shrubs and areas of annual coupes were calculated after excluding such areas.

The prescription of this working circle not be given effect to 11 felling series. Coppice coupes could not be laid out as large scale afforestation programme for soil conservation had to be taken up with the fund provided by the D.V.C. In most of the areas prescribed, cultural operations have not been carried out perhaps due to paucity of funds and also because the thinning prescribed at the age of 11 years was not necessary.

The Soil and Water Conservation working circle comprised the forests situated in the catchment of the Rajdaha Reservoir topchanchi Range which was owned by the Jharia Water Board. The main object of management was to maintain the catchment area with full forest cover as far as possible in order to enable the catchment to act as storage chamber of rain water for a supply to the reservoir in the monsoon period. The silvicultural system was complete protection and improvement of the crop through removal of dead and dry trees. Exploitation of bamboo, however, was allowed. For trees the rotation was physical one and for bamboo the cutting cycle was kept at 4 years. The prescriptions have been followed with good results.

For Bamboo Overlapping working circle the cutting cycle adopted was 4 years for 4 felling series and 3 years for remaining felling series, Wherever the clumps were found congested and in immediate need for removal of high stumps and to relieve congestion, the cutting cycle prescribed was 3 years. The cutting series was fixed on area basis taking 500 acres more or less as area of annual coupe. The prescriptions of the Bamboo Working Circle have been followed. The results have been generally good except in Tundi pahar coupes where sale of annual coupes was not regular. The area has also been subjected to heavy damage due to theft.

The Plantation Working circle covered only "the smaller of the numerous blanks up to 30 acres in extent, the larger ones having recommended to be dealt with by the afforestation Division. "Plantation work has not been done according to the prescription of Sinha's plan.

Protection Working Circle covered areas which to sparsely clothed or where completely bare and hard soil did not permit regeneration to come up. The special object of management was to maintain and nurse whatever crop was still standing on rocky hill tops and eroded areas. No felling was prescribed. Some scattered patches of sal forests with bare floor and no regeneration were also put in this working circle. In this type complete closure to grazing was prescribed.

Afforestation work has been done in this division for past 20 years since 1953. Selection of areas and technique was based on the afforestation schemes prepared from time to

time, keeping in view the priority of the sub catchments in urgent need of treatment. The entire division falls within the Damodar catchment and funds for afforestation are provided by the D.V.C. The selection of areas, annual target, etc. has also been influenced by the funds provided by them.

Following is the Revenue and Expenditure of Dhanbad Forest Division from 1965-66 to 1974 -75 .

YEAR	REVENUE	EXPENDITURE NON PLAN	EXPENDITURE UNDER PLAN	TOTAL EXPENDITURE OF THE DIVN
1	2	3	4	5
1964-65	88,726	99,050	2,93,024	3,92,074
1965-66	41,369	1,08,075	3,43,391	4,51,466
1966-67	41,213	1,22,179	4,,71,455	5,93,115
1967-68	54,207	1,34,610	3,49,266	4,84,006
1968-69	75,825	1,43,884	4,30,217	5,74,101
1969-70	96,703	1,72,391	4,91,173	6,63,564
1970-71	91,817	1,69,614	5,75,096	7,44,710
1971-72	1,50,060	1,92,314	6,58,203	8,50,517

YEAR	REVENUE	EXPENDITURE NON PLAN	EXPENDITURE UNDER PLAN	TOTAL EXPENDITURE OF THE DIVN
1	2	3	4	5
1972-73	1,10,000	8,31,135	38,000	8,79,535
1973-74	3,91,952	8,36,384	3,554	8,39,938
1974-75	2,73,837	8,30,238	NIL	8,30,238

***REVIEW OF LAST WORKING PLAN OF SR L.K. PANDEY (76-85)***

Main objects of management of Sri. L.K. Pandey plan was to protect and maintain proper forest cover to improve the stock and quality of the existing crop. Increase of productive capacity, effective functioning of river valley projects, conservation of soil were the secondary objectives of the last plan. It was emphasised to protect the catchment area of Topchanchi reservoir of Jharia Water Board.

To achieve the above objectives, the following circles were prescribed.

- i. Coppice Working Circle.
- ii. Plantation-cum Rehabilitation Working Circle.
- iii. Protection Working Circle.
- iv. Sisal Plantation Working Circle.

- v. **Bamboo ( overlapping) Working Circle.**
- vi. **Plantation Bamboo (overlapping) Working Circle.**

***COPPICE WORKING CIRCLE:-***

- i. The forest of this working circle was located only in "Topchanchi" and Tundi "ranges with an area of 3719.91 Ha.
- ii. The Silvicultural system adopted was clear felling with coppice regeneration.
- iii. Rotation was 20 years.
- iv. Coppice felling service were constituted by grouping the forest of 2 to 3 villages.
- v. A provision was made for the felled area to be closed grazing at least for 5 years, after main felling.

Coppice coupe were not worked during 10 years by State Trading wing of the Department. Regeneration could not be established due to excessive biotic pressure. JFM initiatives have worked to restock these forests during last decade.

**Plantation-Cum- Rehabilitation Working Circle:-**

- i. Total area under this working circle was 23125.49 acres ( 9339.85 Ha.)
- ii. This working circle consisted of area having Sal rooted waste. Afforestation area including those treated under DVC Soil Conservation-cum-afforestation programme.
- iii. Object of management was to establish sal by afforestation and soil conservation.
- iv. The silvicultural system prescribed was clear feeling with coppice and artificial regeneration with a 10 year rotation.  
Pace of plantation activities was good from 85 to 90. Later on due to resource current target was drastically reduced, plantation sponsored by DVC and BCCL are generally under taken now a days. Old plantation were mostly removed illegally and no regular harvesting could be done by the department.

**Protection Working Circle:-**

- i. This working circle consisted of forests of Jharia Water Board situated in the catchment of Rajdaha reservoir, hilly area unfit for coppice working circle of plantation-cum-Rehabilitation working circle and hillcoks with scanty vegetation.
- ii. Area of this working circle was 1260.66 Ha. ( 31,235 acres).
- iii. Object of management was to protect Rajdaha catchment of Jharia Board by maintaining full forests cover over it.

- iv. No felling except that of Bamboo was prescribed. The catchment area in and around Rajdaha reservoir has badly been damaged by local population. Demand of fire wood is very high and it is easier to transport firewood and small timbers through G.T. road which passes reservoir reducing its life considerably.

#### **Sisal Plantation Working Circle.-**

- i. Main objective of this working circle was to raise sisal in blanks and open areas to meet fibre requirement.
- ii. The silvicultural system adopted was clear felling with artificial regeneration.
- iii. Rotation prescribed was 10 years.
- iv. Under this only one series i.e. Mohanpur Sisal plantation series was formed. Although there is great potential of Sisal plantation in the division, in spite of recommendation no such Sisal plantations were raised during last plan period. There are old sisal plants which should be harvested.

#### **Bamboo (Overlapping) Working Circle:-**

- i. This working circle overlapped with coppice, protection and plantation-cum-rehabilitation working circles covering areas having natural bamboo in commercially exploitable quantity.
- ii. It also covered some artificially raised bamboo plantation areas adjoining the existing bamboo felling series.
- iii. The area of the working circle was 15578.74 acres /6291 Ha.
- iv. There were 11 cutting series of which 4 were to be worked on 4 year. Cutting cycle and the rest with 3 year cycle. Bamboo plantation and forests were badly treated by both cattle and human beings, resulting in near depletion of bamboo forests. They should be revived.

#### **Bamboo Plantation ( Over Lapping Working Circle:-**

- i. This working circle covered all areas with artificially raised bamboo.
- ii. It also overlapped with those parts of rehabilitation-cum-plantation W/C where bamboo had been successfully established in commercially exploitable quantities.
- iii. Plantation area other than that of bamboo was not included in this working circle.
- iv. Only one. Species i.e. **Dendrocalamus strictus** had been raised in plantation area under working circle.
- v. Area covered under this working circle was 2479.95 Ha.

- vi. Main objective was scientific working of bamboo on a 4 year cutting cycle.
- vii. The following cutting series were constituted.
  - (1) Chas range. :- a) Brindavanpur, kashijharia cutting series. Chandankiari cutting series. b) Barmasia cutting series.
  - (2) Topchanchi Range:- Khuriratera-Daldahi C.S. Presently no new Bamboo plantation is being raised during last 10-15 years.

**Statistics Of Growth And Yield :-**

104. There is no sample or research plot in Dhanbad Forest Division. Local statistics regarding the growth of sal or other species are not available. The all India Yield table for Sal ( Coppice) quality 'B' has been kept as guide for fixing rotation.

105. The Yield figures of the leased bamboo cutting series last worked are given in Table. From these figures, the average yield of Bamboo comes to 0.23 trees/acre.

106. *Acacia auriculiformis* has been planted over a fairly appreciable area in this division. The plantations is generally mixed with other species like sissoo, bamboo etc. Growth data have been collected from pure *Acacia* plantation raised by DVC on almost similar sites in Barhi Range of Hazaribagh West Division from 1960, 1962, 1966, 1967, 1968, and 1970 plantation laying out 0.22 acre plots and from 3-4 such plots in each year plantation. Although they are not statistically vetted plots, the data have been reproduced here to give an idea of its rate of growth. No further research data for last 15 years are available for the district.