

CHAPTER – IV

LOGGING AND DEPOT MANAGEMENT

4.1. Harvesting of Timber

This is done for the areas having a mature crop. The harvesting of the forest area is done as per the sequence given in the working plan or the working scheme made for the particular Forest Division based on following parameters:

- After studying the forest area
- The trends of the past working,
- The period required for growing to get the desired girth without any deterioration (Rotation),
- The local demand, etc.

There are silvicultural systems and the Working Plan Officer has to adopt a suitable system after considering the factors mentioned above with due diligence. Apart from the above, there are areas having young and middle aged crops, which are also to be tended properly so that good harvest is possible at the maturity of the crop. Tending includes thinning of the crop so that the available nutrients in the soil are available to the trees retained to grow faster and fetch more value at the time of maturity. The frequency of thinning also depends on the age of the crop and the rate of growth of valuable trees. The sequence of the felling in different areas is given in the working plan and also shown on the map. The working plan is then scrutinized by the committee in which the representative of Government of India is also a member. After the approval by the Government of India the working plan is sanctioned by the state. On the basis of the sanctioned working plan, harvesting of the coupes (Annual area for harvesting) is made as per the marking rules for the removal of trees. All trees marked for felling are given serial numbers at the base as well as at the height of 4.5 feet with the hammer mark of that felling area and the record of such trees is kept by recording the serial number, name of the species and its girth at breast height of 4.5 feet. Almost similar procedure is adopted by the Forest Development Corporation.

4.2. Logging of Trees felled

After felling the trees are cut into salable logs in such a way that the defects in the naturally grown tree are eliminated and at the same time there is minimum wastage of wood. This operation is called logging. Each log of the tree felled is numbered. If the tree number 100 produces 3 logs the numbers will be 100/1, 100/2, and 100/3. The measurements of the length of each log, its girth at the mid point of the length is measured and recorded in the logging register against the tree as well as on the thick end of the log. Many a times logs so obtained are required to be fashioned for removing the external defects like knots etc, so that its gradation is improved and it fetches more price at the sale depot. Fuel wood obtained is piled in the stacks of 1m in height, 1 m width and 2 m length or for the multiple of 2 m length in the forest either for sending to the sale depot or selling at site.

4.3. Transport to the Sale Depot

While transporting the material the details of each and every log in terms of its length and girth is listed i.e. log No, length and the mid girth on the challan in duplicate and sent along with the vehicle of transport whether truck or bullock cart. The depot staff checks the list and tallies with the actual material received at the depot. One copy of the duplicate challan is then sent to the origin of the transport, which is kept with the office copy in the challan book. This is how the record of each and every log is maintained.

4.4. Establishment of the Depots

Normally the material whose transport cost will be much more as compared to the expected sale price is transported and sold at the nearest place in open auction. Such small depots are present in almost all the Forest Divisions of the state where regular sales are made for very small quantities of the wood related to the offence cases, drift and wind fallen material, material obtained from the tree felling cases of the private Adiwasi lands. Only better quality material whose market value is more than the transport cost is sent to the established traditional central depots. Such central depots are also situated in every Forest Division. Thousands of cubic meters of timber of different species, different length and girth classes and different grades are sold at these depots. In other words these depots can be considered as the wholesale marketing centers for our study.

4.5. Depot Management

In the depot, material of assorted length and girth classes, of different grades and species is received. Usually the selling rate depends on the species, quality/grade, girth, and length of the log. In addition to the logs, timber pole of different species of assorted length and girth classes are also available. It is physically impossible to sell an individual log or the group of the logs of same species of the same length and girth. Therefore, the forest department made the classification as timber, poles (locally called as balli or wasa.), and fuel. Any piece less than 15 cm girth at the center and less than 1 meter length is treated as fuel wood. Any piece 15 cm or more in girth at the center and more than 1 meter length is classified as pole.

Girth Classes

The girth classes are in centimeter and are categorized as under:

1.	<25	Pole
2.	25 c.m. to < 35 c.m.	do
3.	35 c.m. to < 45 c.m.	do
4.	45 c.m. to < 60 c.m.	Logs
5.	60 c.m. to < 90 c.m.	do
6.	90 c.m. to < 105 c.m.	do
7.	105 c.m. to < 120 c.m.	do
8.	120c.m. to < 135 c.m.	do
9.	135 c.m. to < 150 c.m.	do

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| 10. | 150 c m. to < 180 c. m. | do |
| 11. | 180 c.m. to < 210 c.m. | do |
| 12. | 210 c.m. to 240 c.m. | do |
| 13. | > 240 c.m. | do |

Thus there are thirteen girth classes.

Length Classes

The following are the length classes in meter.

(i) < 2 meters, (ii) 2 to < 3 meters, (iii) 3 to < 4 meters, (iv) 4 to < 5meters, (v) 5 to < 6 meters, (vi) 6 to < 7 meters, (vii) 7 to <8meters, (viii) > 8 meters. These length classes are adopted for both timber and for poles.

Species

The species, which are identified for classification in the depots, are Teak, Ain or Sajad, Haldu, Bija, Shisham (Rose wood), Karam, Shiwan, Mowai, Kakad, Khair, Tendoo. Beside these, other logs of miscellaneous species grouped together as miscellaneous species.

Though there are orders for the classification mentioned above, many times there is a tendency to mix the logs of different girth and length classes particularly when the material is of lower grade as an exception. Teak and Poplar are the most demanded species in the timber trade. However, the prices of different classes of teak and poplar have gone so high that a common man cannot afford it.

4.6. Grading of Timber

Grading of timber is based on the natural defects found in the timber like bend, twist, taper, surface cracks, knots live and dry, heart rot, hollowness, shakes etc. The log, which has the minimum defects, is graded in the superior grade. From data collected from Dang, managed by the Forest Department, it is found that the timber is graded into six grades or quality classes. The Forest Department has considered the defects like hollowness or heart rot, twist, knots cracks and taper and made six grades. The grade I will have minimum defects whereas the grade VI will have maximum defects. The poles are classified into three grades. The table giving the details about the defects allowed in different grades is given in the **Annexure I**.

4.7. Classification of Material in the Depot

Immediately after receipt of log in the depot, each log is given the depot number and its girth and the length are re-measured and recorded by chisel no and also its grade is allotted. There are 6 grades, 13 girth classes, 8 length classes, and 12 species. Thus there are $6 \times 13 \times 8 \times 12 = 7488$ classes for timber classification. So far as the poles are concerned there are 3 grades, 3 girth classes, 8 length classes and about 5 species for which there is a preference for poles. The number of combinations for the poles will be $3 \times 3 \times 8 \times 5 = 360$ classes. It is true that all the classes may not be there in the

central depots in each and every sale. But this shows the magnitude of the work that is involved in the analysis of the rates for above-mentioned classes and the trend in the prices is found out.

4.8. Preparation of Lots

The material in the sale depot is stacked into lots as per the classes mentioned above. Each lot will have the logs of the same species, same grade, and the same girth and length classes. As far as possible the lots are prepared in such a manner that it should contain at least one truckload or wagonload of the material to facilitate the purchaser for transportation of the material after purchase. However, this is dependent on the availability of the material. When the stacking in lots is complete, the senior officers further inspect the lots and if any misclassification is found they are corrected. Then the lots are serially numbered and a small board is put on the lot mentioning its grade, length, and girth class, and total timber volume with number of pieces in the lot so that the purchaser see all the details about the lot and physically verify. Thus the depot or lots are made ready for the sale.