Chapter Four
MARKETING OF WOOD PRODUCTS IN INDIA

Indian Forestry System was discussed in the first two chapters. Marketing and different marketing concepts were also touched and relevance of marketing in forestry was established. Latest opinions and facts about forestry and forestry marketing were highlighted with the help of published relevant literature. The purpose of this chapter is to know the wood production and look into the forestry market, its structure, and its customers. The present marketing effort in the forest department will be understood with the help of data from Maharashtra State. This will help in bringing out more clearly the auctions and their role in the forestry system.

Different Wood Products:

Wood products are many. Following Table shows different wood products at a glance. Depending upon the degree to which the tree is broken down or subdivided in the process of making it ready for final use, the wood and wood products are named as follows:

1) Round wood; logs, poles
2) Chunks or squares
3) Thick slices; sleepers
4) Thin slices; planks, sawn timber
5) Very thin slices; peels, veneers
6) Particles, chips; and
7) Molecules, featuring nascent silvi-chemical processing; paper pulp
Each successive stage represents an increasing fineness of division of raw material in the process of manufacture and admits of fuller uniformity in the end product and thus closer adoption to mechanized use. Each stage is more adaptable than its preceding stage and more amenable to product research and development, and for greater proliferation of product types, styles and uses. It can be seen that the more advanced and capital intensive an economy, the later the stages of wood use it would employ and vice-versa.

**Market for Wood Products:**

The market is the set of all actual and potential buyers of a product. Wood being a versatile product has numerous uses and therefore has varied customers. Wood can be used in raw form with hardly any conversion. For example, a young tree can be cut from the base and its crown severed to make a pole which is used for housing, rafters, carts, fencing, mining, road building and so on. Wood log can be carved into articles of decorative use as well as for transportation in form of dugouts and canoes. Wood can be sawn into timber and then used into a number of uses like furniture, structural timber, box making, carriage making, etc. Wood can be sliced or peeled to make plywood or decorative surfacing. Wood can be used as it is or seasoned and made durable by coating paints or impregnated with preservatives. Wood can be burnt as fuel.
Wood can also be mechanically broken into particles to make 'reconstituted' products like particle boards, hardboards, etc. Wood treated chemically can be made into pulp and formed into paper. Wood also can be used for making synthetic fibres like rayon for clothing. In short, wood can be used to make any desired product. Depending on its ultimate use, wood can be said to have that many markets. Such markets may be made up of primitive tribal people, an agricultural population, or a housewife using wood to warm her hearth. Market can be the primary processors such as sawmills and plywood mills. Carpenters and artisans form a different kind of market. Market may be made up of high technology - capital intensive, wood processing units like paper mills. However, the emphasis of this study will be on the markets where the demand for round wood and primary processed wood exists. Because these markets obtain their requirements through the auctions, conducted by the Forest Departments, Forest Labourers' Cooperative Societies, Forest Development Corporations and the Forest Integrated Units.

Market Structure in Forestry:

Almost all forests in India are owned by the Government and there is a feeling that the Forest Department thus holds a monopoly in timber production. But trees also grow everywhere else outside government forests and their produce also comes to the market. Thapar estimates the removals from

1/SD Thapar: Second India & Forestry: 1975: p 16 & 24
such private tree lands accounting for almost 30% of recorded wood removal in the country. He further estimates that substantial requirements of round wood are met from private sources, large quantities of which go unrecorded. In short, the Forest Department is not the only supplier of wood products (and forest produce in general) and as such does not hold monopoly in that respect. If one considers the criterion of product homogeneity, one finds that there is no such homogeneity in wood products, and produce from same tree species varies considerably. If market knowledge is considered then one finds that market knowledge of the Forest Department is imperfect and there is hardly any conscientious marketing effort on its part. There are also many barriers in resource mobility in case of wood products. Finally it is a fact that the contractors and middlemen have a dominant role in distribution of wood products in the market. Besides a considerable segment of the market, the tribals and rural population obtains forest produce including wood products, directly from the forests without any middlemen. It is thus clear that the market structure, in Indian Forestry, is difficult to define sharply. According to Sharma, "free competition in market does not exist in respect of forest products, because (i) buyers and sellers are limited, (ii) heterogeneous character of forest products, - great difference in quality and access, and (iii) there is virtually no monopoly in forest products".

Although there is no monopoly in Forestry, the Forest Departments by the sheer size of their activities, dominate the market. Free competition does not prevail. It is the buyers of the wood from Government forest that determine the timber trade, its supply, its price etc. Department's role stops at auction. Duerr\textsuperscript{3} explains the buyer-seller relation in forest economy in this way: "Except in the nearly perfect markets, there is always one group, either the sellers or buyers, who take the major initiative in making market contacts. The timber buyers are saw-mill operators, or other manufacturers, independent loggers, logs or pulpwood dealers, and the like ....

...... they are performing a service to the wood-using industry and society in undertaking the difficult and labourious and unrewarding task of assembling scattered sources for efficient use. The fact that it is the buyers and not the sellers who take the lead in the markets, that serve the timber owner. ......... One must not overlook the social service that the buyers perform. Society at large would be living less abundantly were it not for this class of middlemen. The costs of their activities are paid partly by timber owners—but partly also by users, in accordance with the principle of incidences".

Customers for Wood Products:

The customers of wood products can be grouped into different categories depending upon as to how the wood is obtained and what use it is put to.

1 **Private Consumers:** Private consumers of wood products in raw, non-converted form are considered here. In this, we include the population that depends upon the forests, in their vicinity, for small timber and firewood for their own consumption. This is a major group as discussed in earlier sections in Chapter Two. There are different estimates regarding consumption of firewood in India. Asian Development Bank\(^4\) estimates it at 63\% of all wood produced in India, whereas Thapar\(^5\) puts it at 57\%. It is however clear that major share of wood produced today is used as firewood.

2 **Domestic Users:** Domestic use of wood by individual households in processed form, such as construction material (doors, windows, rafters), and household furniture, etc.

3 **Industries:** The industries which use wood as a raw material. There are 18 broad categories of wood-based industries in the country as seen earlier.

4 **Others:** In this category come the government departments like Public Works Department (both Central and State), State Electricity Boards, Irrigation Department, Mining, Defence Department, Ship Building, Urban Housing Boards, and so on.

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\(^4\) ADB: Asian Agricultural Survey: 1969

\(^5\) SD Thapar: India's Forest Resources; Birla Institute of Scientific Research: 1975
Out of these four groups the first one generally obtains its requirements from forest directly. Group two almost entirely depends upon the timber merchants, and saw millers and furniture manufactures in local markets. Group three obtains raw materials, generally on long term leases, at subsidized rates, particularly in case of plywood, pulp and paper, matchwood industries. Group four obtains most of its requirements from Forest Department and FDCs. Balance is made up from private timber contractors and the market.

5 Export Market: This category is catered by both the Forest Department and private contractors, through the State Trading Corporation. Recently the Government of India has banned the export of timber in log form since 1980\(^6\). There is more emphasis on finished and semi-finished wood products for export. Following Table shows the Foreign Trade of India for the year 1974-75 in wood products\(^7\).

<table>
<thead>
<tr>
<th>S1 No</th>
<th>Product</th>
<th>Value of Imports (CIF) in Million Rs</th>
<th>Value of Exports (FOB) in Million Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1)</td>
<td>Wood lumber and cork</td>
<td>21.9</td>
<td>94.1</td>
</tr>
<tr>
<td>2)</td>
<td>Pulp and Waste Paper</td>
<td>98.3</td>
<td>0.1</td>
</tr>
<tr>
<td>3)</td>
<td>Wood furniture, wood and cork manufacturing</td>
<td>3.0</td>
<td>88.5</td>
</tr>
<tr>
<td>4)</td>
<td>Paper and paper board manufacturing</td>
<td>588.5</td>
<td>74.7</td>
</tr>
</tbody>
</table>

Maharashtra state exported 6000 m\(^3\) of timber in 1976.

\(^6\)/News Item in Indian Express; Nov 29, 80
\(^7\)/Source, Central Forestry Commission: Bulletin 1976
Production of Wood by Different Agencies and their Markets:

The different agencies of wood harvesting were discussed in earlier chapter. Here we discuss their production in Maharashtra state and the markets for their produce. In all 397 coupes were sold to contractors in the State in 1978 which accounted for 25% of the total coupes worked in the year. Remaining coupes were worked through FLCS (39%) and Forest Department (36%). The FDCM felled over 14000 ha area through its 20 Project Divisions. Timber and firewood extracted by the FD, FLCS and FDCM either reached the Government Depots, Society's, or FDCM Sale Depots, or in case of firewood, was sold to purchasers at stumpsite. Forest Department and FLCS have 48 sales depots in the state. FDCM has 5 sales depots of its own. In the year 1978-79 the departmental depots sold 90,374 m$^3$ of Teak and 45,178 m$^3$ of miscellaneous round timber. In the Corporation depots 22,600 m$^3$ teak and 33,330 m$^3$ of miscellaneous round timber was auctioned. In addition these depots combinedly handled sale of 51,000 m$^3$ of firewood. State Forest Department owns four saw mills, which processed 1878 m$^3$ round timber in 1978. There are altogether 2545 saw mills in the state as per the report by Mac Innes.\(^8\)

\(^8\)/PIS-FAO-IND/77/014/Report by Saw Milling Consultant J Mac Innes: July 1979
Forest Department also run three saw-mill-seasoning-wood preservation units (Integrated Units) to process secondary miscellaneous timber. Three such units together processed 8975 m$^3$ of miscellaneous round wood.

Sawn wood showed following pattern of utilization in the State:

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction purposes</td>
<td>41%</td>
</tr>
<tr>
<td>Furniture manufacture</td>
<td>16%</td>
</tr>
<tr>
<td>Packaging and Box wood</td>
<td>10%</td>
</tr>
<tr>
<td>Sleepers</td>
<td>4%</td>
</tr>
<tr>
<td>Joinery</td>
<td>24%</td>
</tr>
<tr>
<td>Other uses</td>
<td>5%</td>
</tr>
</tbody>
</table>

56000 firewood stacks from two project divisions of FDCM, sorted out by required pulpable species were supplied to Ballarpur Industries, Ballarshah. Firewood was also sorted out, particularly in Divisions near Bombay market by species like Teak, Dhauda, Ain and Mixed; and by utility into carpenters' wood, firewood and sticks (Kandi). This firewood was sold at sale depots. 3800 m$^3$ firewood was sawn in Government Saw Mill at Allapalli for special supply to mines (Western India Coal-fields). Integrated Units also manufactured furniture worth Rs 13 lakhs for supply to various departments. Some secondary sawn wood was supplied to Revenue Department for rural housing schemes for building cheaper houses for rural poor.
Customership at Government Timber Depots:

At Ballarshah Government Timber Depot, 95% of the timber was purchased by customers from outside Maharashtra, 50% of which went to southern states. 10% each went to Delhi and Bombay. Purchasers from local markets were few. Major purchasers of processed wood from the Integrated Units were Coal Mines, Ordnance Factories, Maharashtra State Electricity Board and MS Road Transport Corporation. The Dahanu Integrated Unit supplied processed wood to MSEB, Central Railway, MSRTC, Central Prison-Nasik, Indian Navy, PhD. 45% of processed wood was purchased by timber merchants. At Paratwada Unit and Timber Depot, out of 226 purchasers, 182 were Saw Millers and timber merchants. Purchasers from outside were from Madhya Pradesh-5, Uttar Pradesh-1, Delhi-4, Andhra Pradesh-2, Kerala-4, Tamil Nadu-2, Karnataka-3, West Bengal-1, and Assam-2. From among the 202 purchasers from Maharashtra, 47 came from Pune, 23 from Amravati, 18 from Bombay and 10 from Jalgaon. Others were from nearby areas of Paratwada. Bombay city has 203 wood working firms including saw mills, furniture manufacturers, toy firms, coat hangers manufacturing unit and packing case units.

Special Demands for Wood by Species and Sizes in the State:

Inferior miscellaneous wood, of Salai, Kakad and Mowai, mostly went to Nagpur for preparing fruit boxes. Nagpur is
the biggest timber market of India according to the PIS/FAO survey mentioned earlier. Timber is received in this market from Maharashtra and Madhya Pradesh and is sawn in 336 sawmills, all owned by private merchants in the city. The sawn wood then further goes to following markets. 6-8% Calcutta, and 20% to Delhi, 25% to Madras and rest to Bombay and Gujarat. Sleeper and other larger sizes are demanded in Delhi market, 5"x4" (12.5x10 cm) are for Gujarat. Small sizes of sawn timber such as 5x5 cm, 7.5x5 cm and battens are required in Madras. Teak is mostly favoured in Delhi, Bombay and Madras markets. Ain timber has large demand in Saurashtra and coastal areas of Gujarat. In Nagpur market, timber trades and saw millers are mostly Gujaratis. Punjabis have monopolised processing of inferior timbers particularly for making packing cases and photo frames. Plywood and Trade-I quality Teak from Ballalasahah (known as famous CP Teak) is purchased by Plywood and Veneer manufacturers from Eastern India and other parts of the country. Charcoal manufacture is being gradually taken over by Sikhs and Punjabis in Vidarbha region of Maharashtra State. FDCM has also entered in this field and manufactured over 7 lakhs Charcoal bags from its firewood produced in interior Project Divisions of Chandrapur region in 1978-79. Firewood from the Nasik Circle in Maharashtra has a good demand in many sugar factories situated nearby in Godavari-Pravara belt. Firewood in Thane circle also has a demand for distillation of country liquors in Bombay city.
Forest Based Industries:

While considering customership for wood from government forests, forest-based industries need also to be taken into account. They are becoming important users of wood and other forest products. Development of such industries forms an important aspect of National Forest Policy and Government's Industrial Policy. Forest-based industries are particularly encouraged in backward areas. They obtain their raw material requirements from the Forest Departments and FDGs and from the timber market. These forest-based industries come in two categories. There are types who bid in the departmental auctions for their requirement, and therefore become important customers to the department. Such industrial firms send their representative to the auctions and their presence helps boost competition in such sales— as they purchase large quantities. There are other industries which are newly started and are encouraged by the government under its industrial policy. Such industries, for example, the paper mills, are encouraged to work in backward areas with a view to develop the region. They are assured the raw material supplies by the government. The prices for such raw material are negotiated at government level and yearly quotas are assigned to various forest divisions. The Ballarpur Industries Ltd is a good example of such industry which manufactures paper from bamboos and hardwoods in Chandrapur district in Maharashtra.
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Economic Features of Different Forest-based Industries:

A brief comment on these industries will be useful. Four main primary forest industries are recognised, viz Saw-Milling, Pulp and Paper, Plywood and Board Products. Other minor primary wood based industries are - Charcoal manufacture, wood wool manufacture, wood distillation, etc. Secondary wood industries are - furniture, container, box match, wood working and various paper converting industries. Pulp and paper and board products yield the highest gross product per unit of raw material. Moreover, they do not use high value timbers but utilize to an increasing extent wood residues both from other forest industries and from forest operations. The value added per unit of raw material is more in these industries than in saw-milling. However pulp and paper industry is far more capital intensive than others. Some economic features of each of these industries are as follows:

(i) **Saw Milling**: In this both raw material and finished product are bulky and costly to transport. Hence this industry is often located near the forests. Value added in processing is small and there are no significant economics of scale. Raw material costs take 50-70% of total costs, 25% to 50% of raw material emerges as wastage.

(ii) **Pulp & Paper**: Very capital intensive in investment, 30-50% costs accounted for by raw material; because of use of chemicals, water and
power in processing, they are heavily localized; there are considerable economies of scale, labour requirements are small but 35-45% labour needs to be skilled.

(iii) Plywood: It requires large sized timber logs. Up to 50% cost is for raw material. Adhesives are costly items in processing and up to 35% labour needs to be skilled. Hardwoods are more used in this industry.

(iv) Fibre Board and Particle Board: Wood costs account for up to 40%; Economies of scale are possible; ample fresh water is necessary in processing; resins are important items of cost; labour requirements are modest.

Supply of wood to Forest-based Industries in Maharashtra:

Forest-based industries are becoming important users of wood and other forest produce. Maharashtra State has formulated a Forest Industries Policy to rationalise their demands and supplies of raw material from government forests. Under this policy, forest-based industries are to be established within or in proximity of forest regions in the State. Entire production of certain tree species like Simal, Khair, Kalam, Haldu, Bamboo and Rosha grass is to be reserved for specific industries. Others are to get their raw materials on long leases, with an initial period of 20 years. Industries making better utilization and having export potential for their pro-

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Maharashtra Forests: A Bird's Eye-view: March 1978
ducts are to be favoured. Raw material is to be supplied on a royalty basis, which is decided by negotiation by a High Power Ministerial Committee of State Government. Presently fourteen such industries obtain the wood and few more are under consideration. Royalty rates vary according to the quantities and accessibility. 17,000 m³ teak wood, 13,000 m³ miscellaneous wood and 2,61,000 MT of mixed hardwood in committed to these industries per annum. Government has also carried out a survey of thirteen forest rich districts of the State in 1970 to identify surplus raw material and potential forest-based industries and their location. This Report also suggested some actions on the part of Forest Department for improving their marketing activities. These include, rational organization for collection of forest produce, training forest labour in collection, logging, storage, etc; improved practices in conversion like better sawing of logs by adoption of log diagramming techniques; better prophylactic treatment of woods to enhance their useful life; building up of an efficient road system.

Distribution Channels for Wood in Indian Timber Trade:

In an industrial economy, the distribution system consists of a large, sophisticated, and dynamic set of institutions which link product origination and product consumption.

10/ Maslekar: Ib id - p 163-166
11/ Forest Industries: Scope for Development in Maharashtra SIICOM: May 1970
The majority of exchange transactions are not consummated for the purpose of ultimate consumption. Collectively, the institutions which help in reaching the product from the producer to the consumer, constitute a distribution system. And this system has certain kinds of middlemen, such as wholesalers and retailers, who facilitate the exchange process. Figure 4.12 explains the distribution channels in a modern economic system. Channels are the routes for forward movement of products. Depending upon the number of institutions of exchange process generally four levels of marketing channels are recognized. For example, a zero level indicates no middlemen between the producer and consumer. Three level denotes a system where the product passes from producer-to-manufacturers to wholesaler-to retailer and finally to consumer. While it passes from hand to hand in different stages of distribution towards the ultimate consumer, it also gets graded, sorted out, processed and gets altered in form, even it may get altogether transformed into a totally different product like rayon or paper pulp, where the original wood cannot be identified.

Distribution channels in India's timber market show five levels. Wood consumed by local population, and supplied by the Department and FDC to certain industries or Public undertakings involves no middlemen. In all other cases,

wood reaches the consumer through timber merchants and their agents, to saw-millers, manufacturing units, wholesalers and retailers. In many cases, timber merchants saw their timber or convert it into charcoal and supply on wholesale and even retail basis. Sharma\textsuperscript{13} explains marketing of forest products in India as given in Figure 4.2

Maslekar\textsuperscript{14} found the distribution channels for wood in Maharashtra State as shown in Figure 4.3. It can be seen from that diagram that there are five principle channels of distribution of wood products in Indian timber market. A brief comment with reference to the Figure 4.3 on each one of them will be relevant for our understanding:

a) The direct or zero level channel:

This is the oldest channel in forestry where no middlemen are involved between the forests and its users. People residing around forests have been granted certain rights and concessions. They go to forests, not necessarily to the notified areas or coupes, and cut trees and obtain their requirements for their own consumption. \( A_1 \) comes under this type. In \( A_2 \), a modification of direct channel, the concessioners remove wood, not entirely for their own consumption. They sell surplus in townships to earn their livelihood. However,

\textsuperscript{13} LC Sharma: Op cit: p 142
\textsuperscript{14} Maslekar: Ib id: p 179
DISTRIBUTION CHANNELS IN MODERN ECONOMIC SYSTEM

PRODUCT ORIGINATION

DISTRIBUTION SYSTEM

RAW MATERIALS PRODUCERS (MINES, FARMS, FORESTRIES, FISHERIES, etc.)

WHOLESALE

MANUFACTURERS (CONSTRUCTION, ASSEMBLY, PROCESSING, etc.)

WHOLESALE

RETAILERS

HOUSEHOLD CONSUMERS

ORGANIZATIONAL CONSUMERS

PRODUCT CONSUMPTION

(COURTESY: BEN M ENIS)

FIG: 4.1
DISTRIBUTION CHANNELS IN INDIAN FORESTRY SYSTEM FOR FOREST PRODUCTS

(Courtesy: L C Sharma)
this practice has now taken alarming proportions and causes huge losses to the forests, as many landless people have made this a means of their livelihood. $A_3$ is the modern modification of the direct channel by government itself. The Department has opened retail shops, particularly for selling firewood, in townships at subsidized rates. Main idea behind this practice is to discourage people from going to forests and cause their depletion. Secondly, the Department accepts its social obligations and tries to make available an essential forest product to people at cheaper-than-market prices. At times coupes sold to private contractors have to first supply a stipulated quantity of wood to villagers before starting their work, at fixed prices. $A_4$ and $A_5$ can be said to be the outcomes of similar realization in which Government ensures the raw material supplies to industries in both private and public sectors, directly, generally at subsidized rates in form of royalty or scheduled rates.

b) Through the Contractors:

This had traditionally been the channel of distribution of forest products in India. It is still a dominant type in most of the states, where standing forest crops are periodically auctioned of to timber contractors. Department, after the auction, does not concern with further activities in timber trade. There are two types of timber contractors involved.
In one case such contractors fell and log the timber and firewood, assemble it, carry out grading at certain traditional markets and sell to further buyers, without any processing. They maintain large timber inventories for this purpose. Second type maintains its own saw mills. They sell sawn wood in bulk as well as in retail. Industries also depend on this channel for their requirements. The same channel generally undertakes movement of wood to the household consumers in towns and cities.

c) Through Forest Labourers' Cooperative Societies:

This channel was encouraged and evolved by the Governments in some states, primarily to remove the timber contractors, and also to encourage economic uplift of tribal people, who worked as forest labourers. The forest coupes are allotted to such Forest Labourers' Cooperative Societies, who carry out felling, conversion and transport of material to sale depots, under supervision of the Forest Department. Material is auctioned of and the net profit in the work is shared by Government and society in some agreed proportion. (Most common is 80:20 to Government and Society respectively). All expenses are reimbursed to society at mutually agreed rates. Department and the Society have no role to play after the auctions.
d) Through the Department or through the Forest Corporations:

The Department itself undertakes all the activities, from felling to selling. This is done in very valuable crops, or under certain requirements of silviculture and management. Activity of the department ends at auctions in sales depots. Forest Development Corporations also do the same in areas allotted to them. However, in both the above channels C and D, contractors, though removed from forests, come into picture as buyers of auctions and facilitate further disposal of wood in the market, up to the ultimate consumer.

e) Through Departmental Processing Units:

This is also a comparatively new channel, particularly developed to encourage use of hithertofore unsaleable timber species. This is done with a view to relieve pressure on traditionally popular but now scarce species like Teak, Deodar, Sal, Fir, etc. Government carries out processing like sawing, seasoning, and preservative treatment. At times joinery and furniture making is also done. The processed wood is then supplied to government and public undertakings directly or sold to purchasers in competitive biddings in periodical auctions.

Middlemen in Distribution of Wood.

The discussion so far clearly brings out the importance of the middlemen in timber trade. The Department and
its other wings like Forest Corporation, FLCs or Processing Units produce wood and bring it to their sale depots. Auctions take place at these depots where the wood is released to the market. But the farther distribution is mainly done by the middlemen. Auctions therefore can be termed as the important thresholds in timber marketing in India. Mehta\textsuperscript{15} explains the importance of middlemen in general Indian market in following words: "Diversity and dispersion of the market, underdeveloped communication and transportation systems, dearth of well developed distribution companies at local and regional levels, and paucity of resources on the part of companies to devote setting up direct distribution system, makes the dependence on intermediaries often indispensable. Luckily, the distributive trade is well developed, with considerable trading insights. But it's marketing task often is limited to storage, financing and servicing". The case of timber trade is no different.

Conclusion:

This chapter explained different wood products. The market for wood products, its structure and the customers for the wood were also discussed. Different forest-based industries and their economic features were seen. Raw material

supplies to them and their share in total wood production were noted. Distribution channels in Indian timber trade were explained. Importance of the middlemen was brought out. The auctions turn out to be the threshold of timber marketing, through which the wood produced in Government forests is released to the market. In the next chapter auctions will be studied in detail.