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THE WOOD PROCESSING INDUSTRIES IN TURKEY 1/

Country paper
presented
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I - FOREST MANAGEMENT

1) Turkey's forests are exploited within the basis of the forest law (Forest Law No. 6831 Item 26), and technical requirements. According to the forest law legislated in 1937, preparation of management plans have started, and reconnaissance management plans of our forests (Ist. Period Plan), have been completed speedily within a short period. However, in order to provide a more continuous and orderly exploitation of our forests, the General Directorate of Forestry has started preparation of definite plans after the completion of reconnaissance plans, for a healthy planning in respect to time and place.

Definite management plans of 8,280,392 hectares of forest area has been completed between 1963-1968, by using aerial photography and mathematic statistical methods according to age and diameter classes.

In accordance with the investment programme of 1970, the preparation of management plans of a further 2,000 000 hectares in Eastern Black Sea and Mersin region is under way with 41 management teams.

2) Although the forest land of our country was declared as 10.5 million hectares until recently, the areas of our forests according to the findings of management plans prepared since 1963, are given below as to their management and exploitation types:

Exploitation type		Hectar	% as to Forest Area
High Forest	Normal	4,861,399	27
	Degraded	4,583,104	25
T O T A L		9,444,503	52
Coppice	Normal	2,554,978	14
	Degraded	6,273,712	34
T O T A L		8,828,690	48
GENERAL TOTAL		18,273,193	100

From the above it appears that forests of good quality which were not subject to various destructions cover 7,416,377 hectares (41%) and degraded forests, as a result of long years uncontrolled use cover 10,856,816 hectares (59%).

It is necessary to start studies on the reconstruction and improvement of these areas whose ecological conditions have not yet degraded so as to assure their reforestation.

3) Areas of our forests by tree species (1000 m³)

Conifers	9,940,617 Hectar	(54.4)
Broad Leaves	8,332,576 "	(45.6)
T o t a l	18,273,193 "	(100)

4) Growing stock in our forests (1000 m³)

High Forest			Coppice	General Total
Coniferous	Broad Leaves	Total		
549,879	197,176	747,005	96,841	843 896

The total production of our forests is indicated below:

Allowable Cut (m ³)					
	Selective cutting	Regeneration	Improvement	Cleaning	Total
Coniferous	406,304	3,736,375	2,923,988	550,210	7,616,877
Broad Leaves	98,207	1,197,248	1,000,090	447,857	2,743,402
T O T A L					10,360,279

Allowable cut in coppices (Stere) 4,139,668

The management plans of Turkey's forests will be completed in 1972-1973 using the modern methods.

5) Potential

According to the values stated in the management plans, which were prepared using new methods and in the management plans which were prepared using the uncompleted old methods, the annual volume potential of conifers and broadleaves of Turkey's forests is approximately 8.7 million m³ overbark. 6.3 million m³ of these are conifers and 2.4 million m³ are broadleaved.

It is understood that following the compilation of the new management plans the annual volume potential will be 18.921.103 m³ over bark and according to researches it was noted that the industrial wood produced represented 70 per cent i.e. 13.244 million m³.

Small diameter wood and wood residues which can be used in wood pulp industries and for particle board and fibreboards, are not included in this rate. If we take them into consideration then the result will be approximately 14 million/m³.

II - FOREST PRODUCTION

The production phase of industrial and fuel woods which are cut within the principle of forest management plans in our State Forest Directorates in the various regions takes much longer than the ones in most of other countries' Forest regions. The activities of the State Forest Directorates in the various regions also cover the in-forest transportation of forest products, the establishment of saw mills and production of logs.

Production from the State forests is made by the villagers in or near the forests, according to the management plans and within the principles determined by the Ministry of Forestry.

The definite results received from the forest directorates in the various regions and the programme of 1970 is as follows (million m³)

Year	Logs	Transmission Poles	Pit Props	Industrial Wood	T O T A L
1969	3.714	74	447	205	4,440
1970	4,608	117	516	366	5,607

Year	Fuel Wood (Stere)
1969	17,044,862
1970	17,663,772

Year	Secondary Products (Ton)		
	Resin	Storax	Bay leaves
1969	5,275	59	442
1970	6,570	52	298

After the necessary measures are taken to reach the 14 million m³ of industrial wood, which is the target for production in 1977, the production possibility in 1970-1977 is as follows: (1000m³)

<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
5700	6885	8071	9256	10442	11627	12813	13998

Since the production of forest goods is a temporary job for the 13 million villagers who live in or near forests, the ones who work in production, storage and transportation cannot be fully equipped and cannot be qualified workers.

Thus workers training camps are being established to train qualified forest workers. In future qualified and permanent workers' teams will thus be available.

The loading to vehicles and stocking of forest goods are generally done by manpower. This causes delay in transportation activities which is done in short production period and also increases the transportation unit price.

III - UTILIZATION AND SALES

1) Storage and Preservation

Following the production, necessary steps will be taken to transport the forest goods both in summer and winter and will be sold in the main depots. Pooling, sprinkling and impregnation plans to enable the resistance and to prevent the degrading are required. After the beech species are produced by applying a periodic cutting and transportation system, it is possible to utilize them without any degrading at all. Due to the inadequate forest road system in the forests and unavailability of permanent workers periodic cutting and transportation are carried out on a very small scale. Therefore, preservation in pools is performed and presently there are 29 log pools with 77,000 m³ capacity in our various forest regions.

2) Standardisation

Approximately 30 main standards had been completed as the result of the studies held in the Turkish Standards Institute (TSE). These studies concern the national needs, forest products industry requirements etc.

3) Sales

Sales are made with different prices and terms under various sales conditions.

Most of the forest goods marketed in various ways, are sold by means of normal auction. (2.6 million m³ out of 5.6 million m³ was sold by means of auction in the programme of 1970).

Since beech species cannot be stored for a long time, following the production, and gets stained in a very short time, it is generally sold on an allocational selling basis.

The amount, which would be sold on allocational selling basis according to the 1970 production and consumption programme is as follows:

<u>S E C T O R S</u>	<u>Kind and Species of Forest Goods</u>	<u>Amount (m³)</u>
State Offices and Organizations	Logs	137,465
General Directorate of Forest Products Industry	"	371,270
General Directorate of State Railways	Logs for Railway Sleepers	55,047
SEKA Paper Mills	Pulp wood	846,623
Match Plants	Poplar logs	8,900
Plywood	Beech "	116,500
Beech Manufacture	Beech "	249,582
Turkish Coal Enterprise	Pit Props	302,131
Local Mines and Coal-Mines	Pit props	142,845
Y.S.E. P.T.T. T.C.D.D.	Transmission Poles	108,873
		<u>2,339,246</u>

4) Forest Goods Export Programme: (1970)

The General Directorate of Forestry was authorized to make sales to foreign countries and to the domestic market only for exportation, 221,400 m³ logs, 85,000 m³ lumber, 20,000 m³ railway sleepers were exported according to the 1970 export programme.

IV - TIMBER INDUSTRY:

The timber industry has a long historical background in Turkey. However, modernisation of timber factories, has been initiated in 1910. Today over 80 per cent of timber wood produced in Turkey has been processed by timber factories. Presently, there are more than 3900 sawmills in Turkey. Fourteen of them, which produce 10 per cent of total timber products, belong to the State.

V - MOSAIC FLOORING (PARQUET) INDUSTRY:

Today there are 22 mosaic flooring factories in Turkey. 15 of these factories belong to private enterprises. State establishments are integrated with sawmills. The total product of these factories was 800,000 m² in 1967. Turkey was a parquet importing country until 1960, and became an exporting country from 1962 on.

VI - PLYWOOD INDUSTRY

The plywood industry is located around the province of Istanbul in Turkey. In addition, there is one plywood plant in Ankara. In 1968, 45,000 m³ plywood have been produced. It is estimated that this capacity will be raised to 60,000 m³ by the end of 1972 through the additional investments of private enterprises.

VII - HARDBOARD AND PARTICLE BOARD INDUSTRY

The historical background of these new industries does not go back more than fifteen years in Turkey. The establishment of the particle board industry is more recent. Today there are three hardboard and two particle board factories in Turkey. In 1968, 32,000 tons of hardboard and 25,000 tons of particle board have been produced in Turkey.

VIII - FURNITURE INDUSTRY

In Turkey, the furniture industry is located in such big centres as Istanbul, Ankara, Bursa, Izmir, Eskişehir and Bolu. The industrial concerns in this field are very small and under the administration of individual entrepreneurs. For instance, only one out of ten registered plants in Istanbul employs 50 persons. And the total number of laborers working in these 10 factories is 218. In Ankara "Tepe Mobilya ve Metal Fabrikası", "Ağaçları Sanat Enstitüsü", "Sark Mobilya" and "Mes Mobilya" are among the most modern establishments using up to date management and production techniques.

The "Tepe Mobilya ve Metal Fabrikası" is an attached entity of Hacettepe University, which is in the process of establishment. Recently, 300 persons were working in the plant. All the University's furniture, joinery, carpentry and other decorative and physical facility needs are made by this plant. In

In addition, orders from such private and state organizations as banks and hotels are taken by the plant whenever its production schedule permits it to do so. Recently, the plant has also initiated the production of standard public furniture for the domestic market.

"Agacisleri Sanat Enstitüsü" employs 200 persons. It does not work on standard furniture production. Its production goes mainly to the Ministry of Education or other state organizations. It also takes orders from big hotels, theatres, banks and other similar private and state establishments.

One of the other furniture factories which is worth a mention is "Sim Mobilya Fabrikası" in Odemis. This plant is producing standard folding furniture.

The rest of the furniture factories or workshops are working on the basis of individual orders or they work for retail furniture sale companies. They do not apply modern manufacturing techniques. They are mostly individual and private concerns. Co-operative enterprises have not been developed yet in this field. 65 per cent of the establishments in this field belong to private entrepreneurs, 22 per cent to unlimited liability companies, 10 per cent to limited liability companies and only 2 per cent to the incorporated enterprises.

IX - JOINERY INDUSTRY

The joinery industry in Turkey is mainly made up of small establishments. Generally they take orders from building construction companies and work for private and state departments. They do not apply automation and manufacturing processes. Only "Elka Fabrikası" located in Istanbul produces standard doors.

The Turkish Standards Institute has prepared four standards relating to doors, and door frames in order to make it possible to develop manufacturing production in this field. The standardisation of windows and window frames has also recently been undertaken by the same Institute.

X - OTHERS

There are also some veneer plants in Istanbul, Izmir and Mardin. These factories have enough capacity to meet the needs of the country's domestic market.

The case and basket making (packing) industry has mostly been developed in those coastal importing and exporting cities and in those fruit and vegetable growing cities such as: Adana, Antalya, Izmir, Istanbul and Samson.

The coach building industry is located in Izmir, Istanbul and Bursa.

In addition there is a hardboard "Sumer Levha" and a low capacity formica plant in Bolu.

The number of establishments according to the various years are as follows:

	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>
Furniture	-	3558	4333	3561
Joinery	-	6982	7929	8668
Forest Products Industry	1184	-	1389	1752

XI - FOREST PRODUCTS INDUSTRY

It is estimated that there has been an average of 6.5 per cent annual increase in the field of forest products industry during the first period of the State Plan, 1962-1967. In addition, there is two to four fold of increase over this average in the production of mosaic flooring, particle board, hardboard and coach building at the same period. This increase of production indicates the increase of the domestic market demands.

In general, comparing the other industries, development of the woodworking industry is considerably slow. The main reasons of this may be summarised as follows:

- 1) The production of raw materials is under the State control and most of the private concerns cannot get enough supply easily to meet their production needs.
- 2) Standards of raw materials are not at the same level as the international standards.
- 3) There is not any institution making research and study to follow the recent technological and industrial developments in this field.
- 4) Educational institutions training personnel at various levels for this industry are not well equipped and developed.
- 5) As a result of the rapid expansion in the plastics industry, and ever-growing competition between plastics and wood products the development of this industry has become quite difficult.
- 6) There is not any encouraging export programme and policies for the products of this industry.

The Production of Forest Products in 1962 and 1955 to 1969, and the Estimated Production in 1972

Production Groups	Amount	Production 1962	Production 1956	Production 1967	Production 1968	Estimated Production 1972
Summed	1000 M ³	1426,4	1700,0	1900,0	2016,0	2860,0
Joinery	1000 M ³	1654,9	2119,0	2250,0	2400,0	3300,0
Board Flooring	1000 K ²	250,5	500,0	900,0	900,0	1132,7
Plywood	1000 M ³	19,0	32,7	33,8	35,0	48,5
Fibreboard	1000 Tm	12,8	21,0	25,4	31,0	49,3
Particle Board	1000 Tm	2,0	4,9	5,1	15,0	28,8
Chairs	1000 Pr.	-	1080,0	1100,0	1250,0	...
Furniture	1000 sets	81,0	100,0	100,0	120,0	150,9
Veneer	1000 M ²	1701,3	1858,0	1927,0	2000,0	2285,8
Pavilion	1000 M ³	-	-	190,0	520,0	...

(... not available)

Condition of the Sawmills and the Wood Panel Industry in Turkey in 1968

Types of Product	Number of Establishments	Average Daily Capacity (M ³ /hr.)	Total Annual Capacity (1000M ³)	Consumed Raw Material (1000M ³)	Percentage of Utilization of the Capacity	Production (1000 M ³)
Timber	9904	4,9	7891	3587,0	45	357,0
Plywood	10	57,0	170	130,5	77	45,5
Particle Board	2	80,0	48	73,0	89	42,3
Hard Board	3	43,0	39	104,0	88	34,0

Source: Special Fund Project of the Ministry of Forests

SUMMARY

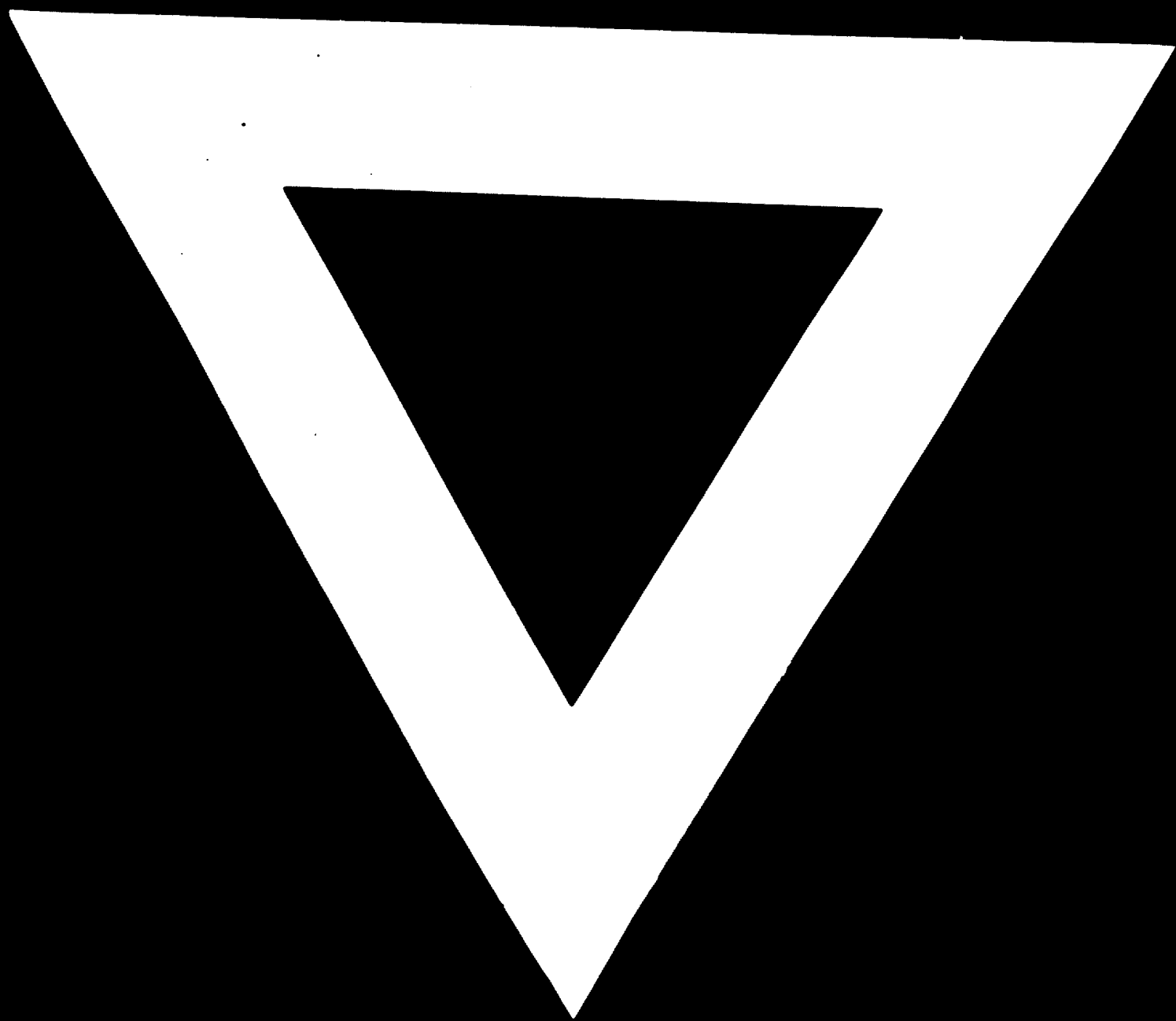
As this brief review of the forest management and production indicates, there is need to develop better plans and programmes and apply new management systems in Turkey.

There is need to develop forest management methods and educate better the unqualified workers. In addition, transportation activities have to be modernised and forest road systems have to be developed.

There is also a gap between the total annual capacity of the industry and the utilisation of this capacity. Most of the wood utilisation establishments in various fields are small private concerns and they are not able to apply modern management and production methods.

In short, it may be correct to say that furniture and other secondary wood processing industries are in their development stage in Turkey. In order to speed up the development efforts in this field, it is necessary to introduce new management and production techniques, to encourage big investments, to raise the standards, to train better qualified personnel at various levels, to establish research and study centres and to develop better plans and programmes.





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