

PN 112-2-3
2507

FORESTRY PLANNING AND DEVELOPMENT PROJECT

CONSULTANCY REPORT

A WOOD USE OVERVIEW OF THE SAWMILLING/
CRATE/BOX MAKING; TRUCK & BUS BODY, TRACTOR
TROLLEY AND BOAT BUILDING; AND FURNITURE
INDUSTRIES OF PAKISTAN

By

MSJ Research Institute

Under Contract to:
Winrock International
58 Margalla Road, F 7/2
Islamabad, Pakistan

for the
Government of Pakistan
and
United States Agency for International Development

February 1991

An Overview

Sawmilling/Crate/Box Making Industry

**Truck & Bus Body, Tractor Trolley
and Boat Building Industry**

Furniture Industry

COPY

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Ref. No. MSJ/P-XVI/F-1/90

February 16, 1990.

MS. Mahmood I. Sheikh
Policy & Management Specialist
Forestry Planning & Development Project
Government of Pakistan - USAID
Winrock International
Technical Assistance Team
Islamabad.

Subject : WOOD BASED INDUSTRY SURVEYS

Dear Mr. Sheikh,

Please refer to your letter of December 26, 1990 and our letter No. MSJ/P-XVI/F-1/90 of January 2, 1991.

In the light of the observations made by the Review Committee to further improve the contents of our Reports, with special reference to the future demands of wood pertaining to these industries, we are pleased to state that we have since overcome the conceptual problems and enclose herewith an Overview, giving estimates of total consumption/requirement of the ten wood species commonly used in the three unorganised wood based industries. The methodology used and the assumptions have been explained in the report.

We trust this would meet your approval.

We extremely regret the delay in furnishing this additional information. The circumstances were beyond our control.

With kind regards,

Sincerely yours



S. SHUJAAT H. ZAIDI
Managing Director

MSJ RESEARCH INSTITUTE
Solutions through Research



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AN OVERVIEW

The profiles of the three wood-based unorganised industries have been presented separately for each, resulting from the surveys carried out by MSJ Research Institute in response to the assignment given by Winrock International/ICF USAID Islamabad. The three separate reports were individually designed in conformity with the questionnaire provided by the sponsors. This supplementary report is merely to portray an overall picture of the three unorganised wood based industries but in no way diminishes the significance of the individual reports. Indeed an effort is being made to attempt applying the results of the surveys country wide. However some other significant points also merit consideration.

All the three industries are entirely privately owned. Whether it is a large or small firm, the business is run either by an individual owner or with members of the same family. Several firms are registered as Pvt. Ltd., others have no formal registration. Many of the firms could at least be treated as cottage industries, free from the taxation laws. Likewise, the majority of the manufacturing units keep their employees number to the minimum permissible limit so that social security laws do not become applicable.

Sources of Wood Supplies

All the manufacturing units invariably obtain their wood supplies from private sources. Some do so from timber markets, but mostly the "middle man" plays a pivotal role as a supplier of wood. Whether the "middle man" procures the wood materials from private farm lands or he draws his supplies from Govt. Forest Contractors, is quite immaterial. The crux of the matter is that the manufacturing units get their wood supplies in accordance with their needs and specifications, at competitive prices. And this arrangement appears to be working satisfactorily although some problems occasionally arise which are not unsurmountable. Notwithstanding the confidence generally displayed by the manufacturers, the irrefutable fact remains that the wiser of them do genuinely feel concerned that the situation of wood productivity is grave. Every enlightened businessman who runs these industries, suffers from a sense of despondency and looks to a bleak future owing to the gradual depletion of the quality and volume of wood species supplies. There is therefore a growing tendency to use substitutes of solid wood in the form of chipboard, veneer, formica, etc. They are well aware indeed that wood is a peerless natural product. The increasing scarcity of quality woods of most popular species is a cause of concern and many manufacturers fear that market failures may prove to be a bottleneck for the pursuit of profitable business. The

magnitude could be judged from the rate of consumption/requirement, which has been detailed out in each individual report pertaining to these three industries. At this stage it would be worth considering what the countrywide needs or requirement of wood would be. An attempt must therefore be made to project these results and apply them countrywide.

Wood Consumption/Requirement

Taking up the task of total wood consumption/requirement in the country as a whole, by even these three unorganised industries, in the light of MSJ Research Institute work is by no means without obvious limitations. The MSJ Research Institute was entrusted with the work of carrying out a modest survey covering a small number of industries. On the other hand there is no comprehensive statistical data available in the public or private sector. So the most plausible methodology that presents itself is to make the MSJ Research Institute surveys as the base and build up the countrywide wood consumption/requirement on the data that has been recently collected and marshalled (as set forth in the 3 separate reports). More precisely stated, this means that the statistical data collected by MSJ Research Institute is to be rather debateable, yet, it is obvious too that until far more exhaustive, surveys are undertaken, in times ahead, there appears to be at present no better alternative.

In view of the above observations, the methodology being adapted is explained below and the results obtained have been tabulated accordingly.

Methodology

The average annual consumption of the main wood species in the three sampled respective unorganised wood industries have been statistically calculated. Illustrating this point for the furniture industry it may now be assumed that if :

Annual consumption of Shisham is	a
Number of firms using Shisham is	b
Average annual consumption of Shisham is	X

then

$$\begin{aligned}
 X &= a/b \\
 \text{or } X &= \frac{941369}{a} \times \frac{227}{b} \\
 &= 4147 \text{ cft.}
 \end{aligned}$$

With such an approach, if the annual consumption of Shisham in the Punjab be X', then X x X' will be the total for that province. Specially 4147 x 1741 = 7,219,927 cft., reflects the total consumption of Shisham in the Punjab pertaining to the unorganised furniture industries.

Now the number of furniture firms operating in the Punjab becomes a pivotal point and the reliability of the source of such information becomes the criterion of correctness. In case the publication of the Punjab Govt. namely "Directory

of Industrial Establishments", is to be relied upon, which asserts that "all the industries irrespective of size have been recorded by door to door survey", it becomes highly questionable and the accuracy rather doubtful. The reason for this is not far to seek, because it details out far fewer firms in a given location than the actual recent surveys carried out by MSJ Research Institute, actually found a much larger number of manufacturing units of the furniture industry in the same location. This point must be illustrated. The Directory shows only two firms of furniture industry in Chiniot, Distt. Jhang, Punjab, while the partial listing made by MSJ Research Institute interviewers in this sample location actually found 413 manufacturing units functioning. This disparity is apparently irreconcilable. Nevertheless, since the Directory is a Govt. publication, it does carry an authenticity. However, the 1988 publication of the Directory bases its information on the survey done in 1986. During the intervening four years period, there has been considerable growth in the industry and the surveys by MSJ Research Institute have been carried out in 1990. Obviously, therefore, a greater reliance could be justifiably placed on the MSJ Research Institute survey results. Consequently such a discrepancy could least be overcome by multiplying MSJ Research Institute results of surveys of annual consumption of Shisham wood in Punjab i.e. X' mentioned above, by the compounded growth rate of small scale manufacturing sector, which is 8% as given in the "Economic Survey of Pakistan 1990".

Viewed in this perspective, the annual consumption of Shisham in the Punjab related to the unorganised furniture industry could be projected as follows :-

$$\begin{aligned}
 & X' \times (1 + 0.08)^4 \\
 \text{i.e.} \quad & 7,219,927 \times 1.85093021 \\
 & \quad \quad \quad (X') \\
 = & 13,363,581 \text{ cft.}
 \end{aligned}$$

Such then is the methodology and approach which has been adapted for calculations and applied to each of the species of wood consumption in every province.

With regard to the sources from which the number of manufacturing units have been taken these are shown below against each of the provinces :-

Punjab	Directory of Industrial Establishment 1988
N W F P	"Directorate of Labour Welfare - data sheet 1986
Sindh	Industrial Potential Reports - Sindh Small Industries Corporation 1984
Balochistan	MSJ Research Institute Surveys 1990

Countrywide Projection

The results that have been detailed out in the individual reports of the three unorganised wood based industries (namely Furniture/Sawmilling/Truck) if blown up according to the pattern explained in the foregoing page would give a

countrywide projection of wood consumption/requirement. These though, may not be necessarily precise because, for instance, when it is borne in mind that MSJ Research Institute surveyed, compiled and reported results of 63 furniture manufacturing units in 12 cities, while 177 cities of Pakistan have 7017 firms. Obviously therefore, MSJ Research Institute covered about 0.9% of this industry in the country. Thus the objectivity of such projection may be open to question. Nonetheless the base itself is beyond doubt and therefore remains the only reliable data at present available which could have an applicability covering the country.

With such reservations, the projections made in view of the above explained methodology may be judged for whatever these may be worth. Thus, the total consumption of the ten wood species commonly used in the three unorganised wood based industries as covered by MSJ Research Institute comes to 659,277,418 cft. in the whole of Pakistan. A break up of species wise wood consumption/requirement in the country has been tabulated in the following pages.

ESTIMATES OF CONSUMPTION OF WOOD
BY SPECIES IN PAKISTAN(1990)

S p e c i e s	Consumption in Cft.
Shisham	166,404,218
Deodar	132,508,303
Kail	3,872,026
Mulberry	64,648,470
Kikar	80,943,096
Poplar	150,023,440
Sufaida	58,747,214
Cheer	1,833,509
Partal	214,309
Teak	82,833
T O T A L	659,277,418

ESTIMATES OF CONSUMPTION OF WOOD BY SPECIES
IN FURNITURE INDUSTRIES (1990)

In Cft.

Species	Pakistan	Punjab	Sindh	N.W.F.P.	Balochistan
Shisham	87,287,011	13,353,581	73,012,969	744,581	165,880
Deodar	29,790,829	4,567,377	24,912,793	254,059	56,600
Kail	3,872,026	592,086	3,239,543	33,037	7,360
Mulberry	64,648,470	9,897,636	54,076,507	551,469	122,850
Kikar	55,862,004	8,552,434	46,726,892	476,518	106,160
Poplar	82,971,049	12,701,900	69,403,695	707,774	157,680
TOTAL	324,431,389	46,675,014	271,372,399	2,767,438	616,538

ESTIMATES OF CONSUMPTION OF WOOD BY SPECIES
IN SAWMILLING INDUSTRIES (1990)

Species	In Cft.				
	Pakistan	Punjab	Sindh	N.W.F.P.	Balochistan
Deodar	102,677,924	70,162,656	30,038,977	1,660,655	815,636
Shisham	78,673,328	53,759,654	23,016,303	1,272,418	624,953
Poplar	67,052,391	45,818,748	19,616,536	1,084,467	532,640
Sofaida	58,747,214	40,143,591	17,186,812	950,144	466,667
Kikar	24,925,604	17,932,352	7,292,119	403,133	198,000
TOTAL	332,076,461	226,917,001	97,150,747	5,370,817	2,637,896

ESTIMATES OF CONSUMPTION OF WOOD BY SPECIES IN
BUS/TRUCK BODY MAKING INDUSTRIES (1990)

Species	In Cft.				
	Pakistan	Punjab	Sindh	N.W.F.P.	Balochistan
Cheer	1,833,509	1,188,682	294,631	350,196	-
Shisham	411,329	266,658	66,102	78,569	-
Partal	214,309	138,888	34,429	40,992	-
Kikar	135,655	87,943	21,800	25,912	-
TOTAL	2,594,802	1,682,171	416,962	495,669	-

CONSUMPTION OF WOOD BY SPECIES
IN BOAT BUILDING IN SINDH
(Estimates 1990)

Species	Volume in Cft.
Teak	82,833
Deodar	39,550
Shisham	32,550
Kikar	19,833
Total	174,766

WOOD BASED INDUSTRIAL UNITS (1990)
IN PUNJAB

C i t y	Furniture & Related	Sawmills	Truck And Bus Body
Attock	21	08	-
Bhawalpur	42	-	-
Bhawalnagar	28	-	-
Chakwal	05	02	-
D.G. Khan	33	102	18
Faisalabad	29	-	-
Gujranwala	80	179	13
Gujrat	64*(99)	129	-
Jhang	314*(2)	05*(Nil)	52*(57)
Jhelum	25	30	-
Kasur	09	02	01
Khanewal	03	25	-
Khushab	-	25	-
Lahore	541*(407)	363*(326)	75*(44)
Leiah	-	88	-
Mianwali	-	50	-
Multan	42	334*(290)	09
Muzaffargarh	03	154	02
Okara	06	-	-
R.Y. Khan	08	-	-

Contd.....

Rajanpur	03	67	-
Rawalpindi	65	31	45*(15)
Sahiwal	03	01	-
Sargodha	16	128*(111)	02
Sheikhupura	166	51	-
Sialkot	135	85	01
T.T. Singh			
Total 25%	1741	1859	224

* Reported by MSJ Research Institute.

Source: Directory of Industrial Establishment, Directorate of Industry & Mineral Development 1988.

WOOD BASED INDUSTRIAL UNITS (1990)
IN SINDH

C i t y	Furniture & Related	Sawmills	Truck And Bus Body
Karachi	378*(1110)	58*(75)	16*(24)
Hyderabad	105*(585)	38*(Nil)	06*
Sukkur	60*(79)	12*(Nil)	08*(11 Boat)
Badin	172	01	-
Dadu	292	-	-
Jacobabad	349	117	-
Khairpur	383	27	-
Nawabshah	562	35	-
Sanghar	793	-	-
Shikarpur	241	52	-
Tharparkar	452	51	-
Thatta	09	07	-
Larkana	-	15	-
Total 73%	5139	430	30(35 Boat)

* Reported by MSJ Research Institute.

Source : Industrial Potential Reports - 1984
Sindh Small Industries Corporation.

WOOD BASED INDUSTRIAL UNITS (1990)
IN N.W.F.P.

C i t y	Furniture & Related	Sawmills	Truck And Bus Body
Abbotabad	02	01	-
D.I. Khan	29 *(1)	-	13*
Mardan	34*(2)	09*	-
Peshawar	31*(21)	20*	38*
Haripur	-	14*	-
Swat	01	-	-
Bannu	-	-	15*
Total 1.4%	97	44	66

* Reported by MSJ Research Institute.

Source : Directorate of Labour Welfare, N.W.F.P., 1986.

WOOD BASED INDUSTRIAL UNITS (1990)
IN BALOCHISTAN

C i t y	Furniture & Related	Sawmills
Quetta	35 *	36 *
Sibi	05 *	04 *
Total 0.57%	40	40