Chapter 4
Poland's Forest Products Markets [1]

Highlights

- *Poland's wood industry is among the forerunners to emerge from the 10-year period of transition and transformations, 1989 to 1999, as indicated by dramatic rises in production and exports.*
- *Liberalization of foreign trade in 1995 stimulated exports, mainly to western Europe, and predominantly to Germany. In 1999 Poland exported twice as much sawnwood, 8 times more particle board, 9 times more paper and paperboard and 12 times more furniture than in 1989.*
- *Furniture is the fastest-growing export product, primarily to western Europe, and this sector holds tremendous potential for further development and will be the driving force behind the development of wood industry.*
- *In comparison with other branches of Polish economy, the forest and forest industries sector is relatively well prepared for integration into the EU.*
- *Positive net trade in wood products reduces the national negative foreign-trade balance.*
- *A certified wood market has not yet developed in Poland.*
- *New associations and organizations within the wood sector were established during the last 10 years of political and economic transformations.*
- *In Poland the per capita consumption of wood products, with the exception of particle board, is low compared to EU countries.*
- *Production of MDF started in 1994 and OSB in 1997 and demand by export markets has grown rapidly.*
- *The Polish forest and forest industries sector is characterized by a high degree of raw material self-sufficiency, however industrial roundwood imports are increasing.*
- *Forest cover, of which over three-fourths is state owned, is forecast to grow to over one-third of the total land.*

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Secretariat introduction

This chapter is one of a continuing series of chapters focussing on one ECE region country's forest products markets. This chapter was written by Dr. Wladyslaw Strykowski, Deputy Director and Dr. Ewa Ratajczak, Head of Wood Industries Economics Department, Institute of Wood Technology, Poznan, Poland. We thank Dr. Strykowski and Dr. Ratajczak for their valuable contribution to understanding the current situation in one central and eastern country that is progressing following the transition to a market economy. Their in-depth analysis focuses on the successes of the wood industry in preparing for integration into the European Union. However, the process has been difficult and that aspect of the story is not told here. The 2001 Joint Timber Committee and FAO European Forestry Commission Study Tour has proposed to visit Poland with a theme of the steps being taken by the forest and forest industries sector in preparation for EU integration.

4.1 General economic developments

In the second half of the 1990s Poland was one of the most dynamically developing countries in central and eastern Europe as reflected by basic macro-economic indices (table 4.1.1). This rapid growth slowed slightly at the end of 1998 and beginning of 1999 as a result of the implementation of federal policies to cool down the economy.

The deterioration of general economic conditions was demonstrated by slower growth of GNP and of investment expenditures as well as in the rise of unemployment. These phenomena were further accompanied by the increase in foreign trade deficit which reached 74 billion Polish zlotys ($18.6 billion). The wood products foreign trade balance in 1999 was positive and amounted to $1.3 billion.

The increase in the number of unemployed, over 2.5 million in February 2000, can be attributed to the Russian crisis, worsening economic conditions in western Europe as well as to the on-going restructuring processes of Polish industry (mainly smelting and coal mining industries).

On the other hand, in 1999 and in the first quarter of 2000, as a result of relatively high foreign investments, an increase in employment could be observed in the wood, furniture and pulp and paper industries. Total foreign investment was estimated by the State Agency for Foreign Investment at the end of 1998 at $100.1 billion. The biggest investors in the forest-wood sector included International Paper Company from the United States which invested $370 million in the paper industry and Kronospan (particle board and OSB) from Switzerland with an initial sum of $300,000.

TABLE 4.1.1

Polish economic indicators, 1996-1999

(% annual change)

Specification	1996	1997	1998	1999
Gross national product	6.0	6.8	4.8	4.1
Investments	19.2	22.2	15.8	17.1 [1]
Inflation	19.9	14.9	11.8	7.3
Rate of unemployment	13.2	10.3	10.4	13.0

[1] Initial data, enterprises employing more than 5 persons.

Source: "Information on Socio-Economical Situation of Poland", Statistical Bulletin for 1995-2000, Central Statistical Office, Warsaw, 2000.

When analysing data concerning industrial production for 1999, it is worth noting that there was an increase of wood and wood products output by 15.5% and of furniture production by 8.5% over 1998.

4.1.1 Development of the building and construction industry

In 1996-1999, mean annual growth of construction expressed in fixed prices was approximately 10%. The situation was much worse in the housing industry, in which there had been a regression for several years, because there is no coherent system of economic incentives. Between 1995 and 1999, only 70 to 80 thousand flats were built annually. This level of production can be compared to that of the 1950s. This explains why the housing deficit in relation to needs is estimated at 1.5 to 2 million flats.

The situation in the building and construction industry exerts a direct impact on the wood product market. Moreover, construction can stimulate or constrain consumption either directly (via the application of a given wood product in a housing unit which is either being built or repaired) or indirectly (as a consequence of needs connected with interior wood uses e.g. furniture). Generally speaking, the indirect impact of the demand associated with the development of building and construction industry is delayed and begins to show several years after the completion of a housing complex.

4.1.2 Wealth level of society

The primary and most general wealth determinant of a given society is the level and rate of growth of GNP. The demand for goods is influenced by the share of consumption in GNP and the level of disposable income (table 4.1.2).

Generally speaking, it can be said that after a period of considerable impoverishment of Polish society at the beginning of 1990s, a slow, albeit systematic, improvement of living standards has been observed as

TABLE 4.1.2

Consumption vs. gross national product in Poland, 1995-1999

(% of GNP)

	1995	1996	1997	1998	1999
Consumption	77.8	79.6	79.6	78.9	
of which:					
Individual (from personal income)	63.7	62.2	62.6	63.4	63.2

Sources: For years 1995-1998, Statistical Yearbook 1999, Central Statistical Office; for 1999, Statistical Bulletin 2000, No. 2, 2000.

evidenced by an increase in individual consumption from personal income.

This trend is well illustrated by the level of gross monthly remuneration in Poland which, in 1999, averaged $463 with $470 in industry in general of which: in wood industry – $358, furniture industry – $342 and in pulp and paper industry – $522. The growth rate of mean gross real remuneration in 1999 was 3.4%.

4.1.3 Demographic factors

Demographic and social factors exert a significant impact on the demand for furniture and wood products. The population has stabilized over the last 5 years at 38.7 million, of which approximately two-thirds live in urban areas. Roughly two-thirds, 23.9 million, are of working age. Some 51% of the population is women.

On the basis of national statistics, it can be said that the structure of Polish society, due to preferences of individual groups of its population and their purchasing behaviour, exercises an important influence on the demand for wood products. First and foremost, it is the demand for end-products such as furniture, houses made of wood and flooring materials. This, in turn, affects the size and structure of the demand for various types of wood materials.

4.2 Forest resources

In 1998 the area of forests and forest lands in Poland associated with the forest economy was 9 million hectares, of which forests made up 8.8 million hectares corresponding to 28.2% forest cover. Bearing in mind economic and natural conditions prevalent in Poland, it is believed that forest cover of Poland could be increased to 34% of its total area. It is estimated that it will be possible to achieve this percentage point increase in forest cover in Poland in the middle of the next century.

The forest ownership structure above clearly shows the dominant share, 78.4%, of forest owned by the State and managed by State Forests (table 4.2.1). A national debate has been going on in Poland for some time now concerning the problem of re-privatization or privatization procedures of forests. The scale of re-privatization is determined by forests nationalized earlier the total area of which amounted to 4.9 million ha. It is quite likely that former owners will obtain compensations from the state, but it has not been decided yet as to the form of these compensations.

Private forests make up 17.1% of the total forest area in Poland of which 16% belongs to over 900 thousand individual owners. Private forests are characterized by excessive fragmentation so that the average area owned by one owner is less than 1 ha. Harvesting of timber in privately-owned forests is less than half of public forests mainly due to lower ages of forest stands and less efficient management.

For several years now we can observe in Polish forests a steady increase in the proportion of hardwood species in relation to softwoods. The proportion of hardwood species in stands increased from 21.9% in 1990 to 23.0% in 1999. However, despite these favourable processes, softwood tree species remain dominant, making up 77% of total forest area, of which pine and larch make up 69%. Generally speaking, it can be said that Polish forests are relatively young. Stands of lower age classes (up to 40 years old) are dominant, constituting more than 41% of forest area, while the share of adult trees (over 80 years of age) take up about 17%. Consequently, stand utilization will increase when a visible change in their structure takes place. Average stand age in State Forests is 55 years, while in private forests it is 36 years.

TABLE 4.2.1

Structure of forest ownership in Poland

	1,000 ha	%
Total forests	8,813	100.0
Public	7,304	82.9
Owned by State Treasury	7,226	82.0
of which:		
Managed by State Forests	6,915	78.5
National parks	181	2.1
Owned by communes	78	0.9
Private	1,509	17.1
of which:		
Property of individual owners	1,415	16.1
Land cooperatives	68	0.8
Others	26	0.3

Sources: For years 1995-1998, Statistical Yearbook 1999, Central Statistical Office; for 1999, Statistical Bulletin 2000, No. 2, 2000.

In 1999 wood resources (growing stock) amounted to 1.6 billion cubic meters of large timber, of which nearly 86% was found in State Forests. Mean resources calculated per hectare amounted to 184 m^3/ha, with 201 m^3/ha in State Forests and 118 m^3/ha in private forests. The annual increment of forest resources in Poland is estimated at 56 million m^3, while the current level of removals averages 32 million m^3 or 57% of the annual increment.

Although a steady improvement in forest condition has been observed since 1995, it still leaves a lot to be desired. In 1999 30.7% of trees showed severe damage because of air pollution and, in comparison with other European countries, this level of damage is estimated as very high. Also in 1999, 60 thousand hectares of land were either renovated or afforested in State Forests. Additionally, the total of almost 12 thousand ha of formerly agricultural land or wasteland was afforested as part of the scheme to increase the level of forest cover. Table 4.2.2 shows the amount of felled wood taking into account different forms of ownership.

In December 1999 strong winds caused considerable losses in Polish forests. It is estimated that approximately 2.2 million m^3 of mainly medium-sized spruce, pine and fir was damaged by those winds.

4.3 Institutional framework for forest and forest industries

Following forest sector transformation, the forestry sector and wood industry were separated. In 2000, forestry is the responsibility of the Ministry of Environment. The Department of Forestry, Nature and Landscape Protection is responsible for the co-ordination of forest policies and legislation, cooperation with other departments and other ministries as well as for the co-operation with foreign countries. The same ministry also supervises the Office of Forest Management and Forest Geodesy which is responsible for management planning.

Forests which belong to the State Treasury (81.9% of all forests) are supervised directly by a state run organization called "Lasy Pa½stwowe" (State Forests) in which we can distinguish the following three levels of supervision: 1. General Direction of State Forests; 2. Regional Direction of State Forests (17); and 3. Forest Districts (412). State Forests are run by the General Director with the aid of General Direction and Regional Directions of State Forests.

In the field of forestry, Poland realizes active co-operation with foreign countries and is a signatory of all major international contracts and agreements. For several years now the Central Statistical Office has been responsible for the development and dissemination of information connected with forestry in the form of a periodical entitled "Forestry". All major research projects

TABLE 4.2.2

Removals from Poland's forests, by forest ownership, 1990-1998

	1990	1995	1998
TOTAL (1,000 m^3)	18,676	22,492	24,917
Stemwood	17,617	20,651	23,107
Public forests	16,272	19,181	21,886
Owned by State Treasury	16,231	19,050	22,980
of which:			
Managed by State Forests	15,906	19,942	2,149
National parks	103	200	174
Owned by communes	41	131	127
Private forests [a]	1,345	1,470	1,221
Slash [b]	1,056	1,840	1,810
Stump wood [c]	3.3	0.7	0.1
Removals of stemwood per 100 ha of forest area in m^3	202.6	235.8	262.1
Public forests	225.4	264.1	299.6
of which:			
Managed by State Forests	233.7	273.4	310.8
Private forests [a]	91.2	98.4	80.9

[a] Until 1997, estimated data.

[b] Exclusively in public forests.

[c] A small volume of stumps is harvested.

Source: Central Statistical Office, 1999.

connected with forestry are carried out by the Research Institute of Forestry which cooperates with numerous foreign centres.

The most important legislative act regulating management of forest resources is the Forest Bill of 1991 together with the following amendments.

The Forest Bill comprises such legislative acts, enactments and regulations as:

- *The Nature Protection Bill of 1991 (currently under amendment),*
- *The Bill on the Protection of Farm and Forest Land of 1995,*
- *State Forest Policy of 1997,*
- *Enactment No 30 on Forest Promotional Complexes of 1994,*
- *Enactment No 11 on Ecological Basis of Forest Management,*
- *National Programme for the Increase of Forest Cover, 1995,*
- *Spatial Planning Bill.*

Furthermore, from 1990 to 1997 about 30 legislative regulations were published in the form of Ministerial Ordinances which are considered important for forest economy.

Generally speaking, non-privatized enterprises of wood, furniture and pulp and paper industries are supervised either by the Minister of Treasury or regional governors. Some sawmills are state owned now but they too should be privatized within 3 years. The Ministry of Privatization which was established at the beginning of 1990s was changed into the Ministry of Treasury which is the owner of all enterprises (including wood industry enterprises) which have not been privatized so far.

The structural and economic transformations taking place in Poland have led to changes in the approach to economic management and planning in industry. Newly developed programmes are of strategic character and are associated primarily with the development and utilization of the state budget as well as with the creation of marketplace mechanisms in relation to the above mentioned enterprises. Another important area of activity is privatization of state enterprises and development of the banking system.

The Ministry of Economy is responsible for the development of the economy. In the mid 1990s, bearing in mind the process of the integration of our country with the European Union, the Office of European Integration was established. Both forestry and wood industry have, in recent years, been intensively involved in preparations for the integration into the European Union.

For the past few years, organizations responsible for the transitional economy have been very active. They include: Agency for Industrial Development, State Foreign Investment Agency, Agency of Technique and Technology. Enterprises of the wood, furniture and pulp and paper industries have established new non-compulsory associations or producers' organizations which represent these companies and fulfil many other functions which are necessary for their proper operation.

The following associations and organizations have been established so far: Association of Wood-based Panels Producers, Polish Economical Chamber of Furniture Producers, The Polish Economic Chamber of Woodworking Industry, Association of Polish Papermakers, Polish Association of Eur-Pallets Producers.

The Institute of Wood Technology in Poznan, which has restructured to the conditions of market economy, carries out a wide range of activities for purposes of wood industry enterprises, while the Cellulose and Paper Institute in Lódz performs similar services for the pulp and paper industry.

4.4 Effects of the transition process

During the ten-year period of the implementation of the market economy in Poland, the foundations were laid to achieve economic targets. One of the major objectives was privatization of the economy.

Privatization processes in the wood sector are more advanced on average than in Polish industry. In 1999 more than 93% of production of the entire wood and furniture industries as well as 95% of the pulp and paper industry was manufactured in the private sector. Privatization in the whole Polish manufacturing industry is approximately 70%. The building woodwork, furniture and pulp and paper industries are the most privatized sectors.

It should be stressed that in Poland the importance of small and medium companies doing business in wood processing is much higher than on average in the entire Polish industry. In 1999, small enterprises (up to 50 persons) employed about 45% of workers in the wood industry. Of this over 35% were employed in furniture industry and 24% in the pulp and paper industry. However, in the entire Polish industry only about 23% of employment is in small enterprises. Small firms manufacture approximately 38% of the production value in wood industry, 35% in the furniture industry and 17% in the pulp and paper industry. The total proportion for the entire industry is 20%. As a rule, small wood processing companies are more efficient than big companies.

Systemic transformations resulted in a considerable strengthening of the forest-wood processing sector in

Poland as evidenced by the higher share of this sector both in the national income and in foreign trade balance.

The quality of many wood products manufactured in Poland is at world level quality, e.g. furniture and wood-based panels.

4.5 Integration into the EU

In comparison with other branches of the Polish economy, it can be said that the forest and forest industries sector as a whole is relatively well prepared for the process of integration with the EU member states. However, the situation varies depending on individual sectors and groups of enterprises of different sizes.

Generally speaking, a relatively higher degree of adjustment can be observed in large enterprises and the level of preparedness is believed to be worse in small- and medium-sized firms. On the other hand, when the problem is analysed from the point of view of various branches, the situation is better in such industries as wood-based panels, building woodwork, woodpulp and furniture. However, in sawmilling and paper manufacturing industries, it is relatively worse.

The major advantages of the Polish wood industry are: 1. high degree of advancement of privatization processes; 2. relatively high proportion of foreign investments; 3. high degree of self-sufficiency regarding the supply of wood raw material and wood materials; 4. considerable production potentials, i.e. excess capacity; 5. considerable adjustment of standards and regulations have been made to those currently in force in the EU member states. Additionally, the following elements also speak in favour of Poland: relatively low level of remuneration and energy prices in Poland, political stability and constantly improving economic stabilization expressed by a rising national income (albeit, somewhat weak last year).

The most serious obstacles in the adjustment of the wood industry to the requirements of the EU include: low labour efficiency; lower than the average level in the EU countries of modernization of production of certain wood products; considerable wear of production equipment; and limited possibilities of self-financing for further development.

At the moment of Poland's accession to the European Union, the majority of Polish entrepreneurs expect more opportunities than threats for the development of their firms.

4.6 Forest industry – production and consumption

The wood industry was among the first to overcome the crisis of the "transition period". This can be attributed primarily to dynamically developing furniture exports, and second to the restructuring of furniture enterprises, including on-going processes of ownership transformations.

After certain initial problems at the beginning of privatization, the current situation in Polish wood industry appears to have stabilized. In 1998 the proportion of wood, furniture and paper industries in gross national product amounted to 1.8%. Over 10 years, the share of wood industries in the total manufacturing (value of production) industry increased from 4.6% in 1989 to 8% in 1999.

Approximately 260,000 persons are employed in wood industries (data from 1999, in firms employing more than 5 persons) which constitutes 8.5% of all people employed in industry: about 119,000 persons are employed in the furniture industry, 32,000 in building woodwork industry, 35,000 in the sawmill industry, 14,000 in the wood-based panel industry and 39,000 in the pulp and paper industry.

The Polish wood industry is extremely dispersed, with the exception of wood-based panel and pulp industries. Out of over 60,000 firms, about 6,200 enterprises employ over 5 persons but only 860 companies engage more than 50 workers (this group includes nearly 390 furniture companies). In this current period of transformation, it was possible to observe processes of production concentration in some sectors of wood industry. This was especially true in the case of particle board and furniture production and this trend was similar to that observed in western Europe.

The economic crisis and the shock accompanying the initial phase of transformations were so severe that only some of the industries using wood as raw material were able to achieve the level of production of the late 1980s (table 4.6.1). This refers, in particular, to sawnwood, especially pine (graph 4.6.1). On the other hand, a favourable economic trend can be observed in the case of wood-based panels (graph 4.6.2) and paper (graph 4.6.3).

In the last decade, the wood industry was one of the industrial sectors which was characterized by the highest rate of production growth. However, in the last two years this rapid rate of production growth has slowed down: this slowdown was particularly noticeable in the sawmill and wood-based panel industries (table 4.6.2). The causes of this slump include:

- *the collapse of the eastern market in mid 1998 which reduced export possibilities (especially of Polish furniture);*
- *economic stagnation observed in some western countries which are crucial markets for Polish wood products;*
- *persistent crisis on the housing market; and*

- *lack of revival in the internal demand resulting from the pauperization of large sections of the population.*

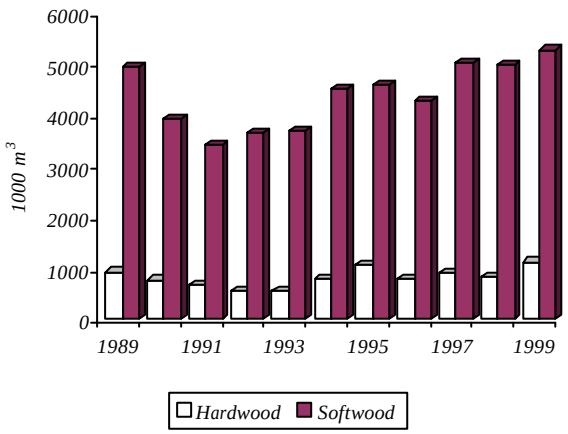
No significant changes in the possibilities of development of Polish wood industries are predicted in 2000.

Tendencies similar to those observed in the production sectors can be noticed in wood products consumption. Currently, the use of sawnwood is 9% lower than in 1989 because of the downturn in the construction industry and the decrease of furniture production. The consumption of plywood was down by 16%. On the other hand, consumption of particle board is almost twice as high as ten years ago, fibreboard 24% higher, paper and paparboard, up by 53% and furniture up by 40% (table 4.6.3).

Per capita consumption of wood products in Poland is much lower than in the EU countries. When we compare the level of wood consumption in Poland with that in the EU member states in 1998, it is evident that it was about 70% in the case of sawnwood, 93% for particle boards, 56% for MDF boards, 23% for fibrous pulps and 30% for paper and paparboard. The only exception is the fibreboard sector where the consumption in Poland is over twice that of western European countries (presumably because of consumption of fibreboard by the furniture industry, which is export-oriented). When expressed as wood equivalents, then the per capita utilization of all wood-based products in Poland in 1998 amounted to 0.42 m³ (r).

GRAPH 4.6.1

Sawnwood production in Poland, 1989-1999

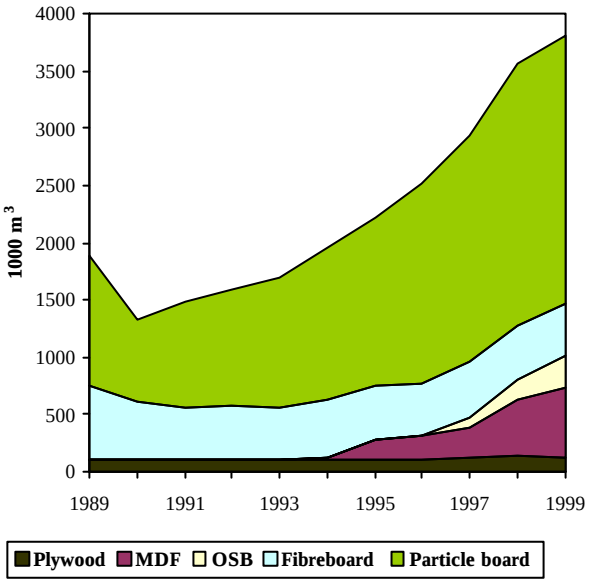


Note: For 1999, estimated data.

Sources: Central Statistical Office and Wood Technology

GRAPH 4.6.2

Wood-based panels production in Poland, 1989-1999



Note: For 1999, estimated data.

Sources: Central Statistical Office and Wood Technology Institute, 2000.

TABLE 4.6.1

Wood products production, 1989, 1998, 1999

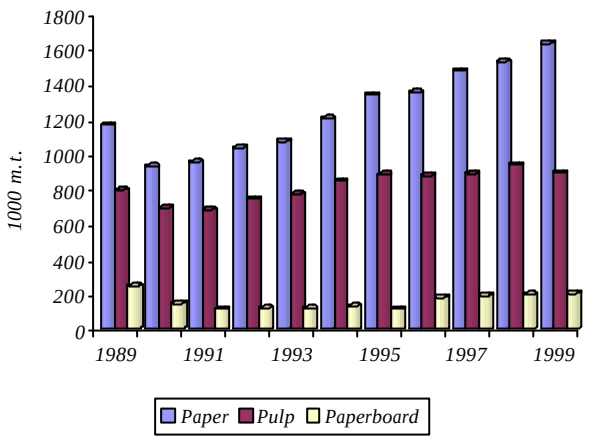
	Unit	1989	1998	1999 [a]	% change 1989-1999
Sawnwood	1,000 m³	5,860	5,830	5,650	-3.6
Particle board	1,000 m³	1,132	2,452	2,620	+131.4
Fibreboard	1,000 m³	635	975	1,060	+66.9
Plywood	1,000 m³	112	134	129	+15.2
Pulp	1,000 m.t.	791	934	891	+12.6
Paper	1,000 m.t.	1,405	1,718	1,830	+30.2
Furniture	million $	882	2,594	2,500	+183.0

[a] *Estimated data.*

Sources: Central Statistical Office and Wood Technology Institute, 2000.

GRAPH 4.6.3

Pulp, paper and paperboard production in Poland, 1989-1999



Note: For 1999, estimated data.

Sources: Central Statistical Office and Wood Technology Institute, 2000.

4.7 Trade of wood and wood products

The development potential of Polish wood industry has always been and still is directly related to export possibilities. For several years now 70 to 80% of the furniture production has been exported. 15% of sawnwood, 22% of flooring, 22% of particle board, and over 40% of fibreboard are exported. On the other hand, imports play a significant role only in the case of fibrous pulp (29% imported), and paper and paper products (56% imported). Imports as a per cent of domestic production are 14% for furniture, 5% for sawnwood, 7% for particle board and 12% for fibreboard.

In 1989 Poland exported wood products (including furniture and products of pulp and paper industry) worth approximately $395 million, while in 1999 the value of these exports reached $3.7 billion, almost 10 times higher (not adjusted for inflation). The rate of growth of exports of wood products, especially furniture, in the entire 10-year period was greater than the rate of growth for all Polish exports. The year 1998 was exceptional when, in the wake of the crisis in Russia, the growth rate of furniture exports clearly declined.

TABLE 4.6.2

Production of forest industry in Poland, 1991-1999

(Annual % change based on constant prices)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
All manufacturing	-8.0	2.9	96.4	13.1	10.2	8.8	11.2	4.8	4.4
Woodworking industry	-2.6	15.4	3.7	11.7	19.4	3.0	18.1	11.6	15.5
Pulp and paper industry	-3.9	12.0	6.6	26.7	17.7	12.0	16.6	9.1	14.7
Furniture industry	1.3	13.4	12.2	19.9	21.7	23.0	24.3	16.1	8.5 [a]

[a] Estimated data.

Sources:

TABLE 4.6.3

Wood products consumption in Poland, 1989, 1998, and 1999

	Unit	1989	1998	1999 [a]	% change 1989-1999
Sawnwood	1,000 m^3	5,590	5,211	5,065	-9.4
Particle board	1,000 m^3	1,168	2,588	2,220	+90.1
Fibreboard	1,000 m^3	589	692	730	+23.9
Plywood	1,000 m^3	140	117	118	-15.7
Pulp	1,000 m.t.	963	1,043	1,110	+15.3
Paper	1,000 m.t.	1,463	2,088	2,240	+53.1
Furniture	million $	750	1,081	1,050	+40.0

[a] Estimated data.

Sources: Central Statistical Office and Wood Technology Institute, 2000.

The opening up of borders in 1995 as well as considerable liberalization of foreign trade of wood and wood products stimulated trade. In 1999 Poland exported over twice as much sawnwood, 8 times more particle board, 9 times more paper and paperboard and 12 times more furniture than in 1989 (table 4.7.1).

The main market outlets for Polish products in this period were western European countries. At present, the majority of the trade takes place with the EU member states. In 1999 about 75% of wood products and pulp and paper products as well as over 80% of furniture were sold to the EU countries. At the same time, the EU is an important supplier to the Polish marketplace. Approximately 58% of wood products, 85% of furniture, 48% of pulp, 88% of paper and 81% of paper products come from the EU. Germany is by far the most important trade partner.

In 1999 about 60% of softwood sawnwood exported, 40% of plywood , over 50% of flooring material, 38% of particle boards, 34% of MDF and 58% of furniture were exported to German markets. At the same time, Germany's share of Poland's imports were particle board, including OSB 6%, fibreboard 67%, MDF over 81%, furniture 30%, and paper and paparboard 30%.

4.7.1 Pulpwood and sawlogs

Practically speaking all industrial roundwood removals are processed by domestic wood processing plants. According to initial data, the export of industrial wood in 1999 amounted to 395 thousand m^3, i.e. 2% in relation to total removals (graph 4.7.1). On the other hand, Poland imported 570,000 m3 of industrial roundwood, which constitutes slightly more than 2% of production. This trend has remained unchanged for a long time.

Poland exports industrial wood primarily to Austria (32% in 1999) and the Czech Republic (25%) as well as to Denmark (9%), Germany (8%), Italy (8%) and Sweden (7%). The main suppliers of wood raw material to Poland are: Belarus (36%), Lithuania (26%), Ukraine (14%), Germany (12%) and Russia (8%).

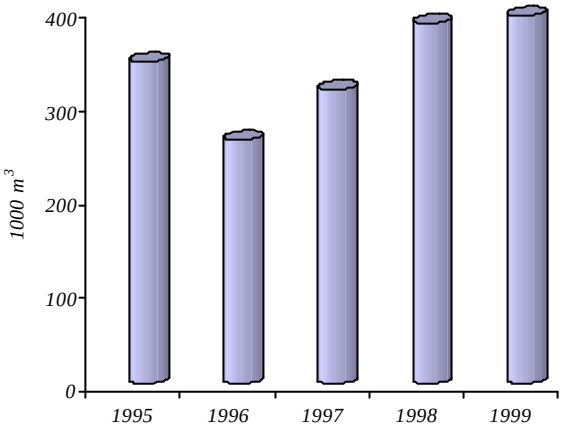
Half of the industrial roundwood exported is sawlogs and 30% is pulpwood. In the case of imports, the proportions are reversed with 68% being pulpwood and only 17% sawlogs.

The last two years witnessed a significant (47%) increase in pulpwood imports resulting from development of the Polish pulp and paper industry and new investments in MDF and OSB production which use this type of wood raw material.

In official statistics MDF is included in fibreboard and OSB is included in particle board, however, their individual importance is growing (tables 4.7.2 and 4.7.3).

GRAPH 4.7.1

Export of industrial roundwood in Poland, 1995-1999



Note: For 1999, estimated data.

Sources: Central Statistical Office and Wood Technology Institute, 2000.

TABLE 4.7.1

Exports and imports of wood products in Poland, 1989 and 1999

Products	Unit	Export			Import		
		1989	1999 [a]	% change 1989-1999	1989	1999 [a]	% change 1989-1999
Sawnwood	1,000 m^3	386	840	+117.6	119	255	+114.3
Particle board	1,000 m^3	69	580	+740.6	105	180	+71.4
Fibreboard	1,000 m^3	122	455	+273.0	76	125	+64.5
Plywood	1,000 m^3	25	81	+224.0	53	70	+32.1
Pulp	1,000 m.t.	15	41	+173.3	187	260	+39.0
Paper	1,000 m.t.	168	610	+263.1	110	1020	+827.3
Furniture	million $	148	1,850	+1,150.0	29	360	+1,141.0

[a] Estimated data.

Sources: Central Statistical Office and Wood Technology Institute, 2000.

Bearing in mind the predicted further increase of the domestic demand for paper, MDF and OSB, it is expected that in 2000 the trend for growing imports of pulpwood will continue, although expressed in absolute figures the quantities will not be very high (approximately 265,000 m^3).

4.7.2 Sawnwood

It is estimated that in 1999 Poland exported 840,000 m^3 sawnwood, which was 2% more than in 1998. More than 70% of exports comprise sawn softwood, primarily pine. In 1999 more than 62% of softwood exports and 23% of sawn hardwood was sold on the German market and this situation has remained unchanged for several years now. Other softwood customers include the Netherlands, Denmark and Italy (table 4.7.4). Sawn hardwood is sold also to Italy, Sweden, Denmark and Austria (table 4.7.5). It is forecast that in 2000 the export of sawnwood will reach approximately 1,100,000 m^3.

Imports reached the volume of 255,000 m^3 in 1999, and in comparison with 1998, were 23% higher. Sawnwood is imported by Poland primarily from countries of eastern Europe. In 1999, 46% of sawn softwood came to Poland from Russia (up from 35% in 1998) and 24% from Belarus (up 17% from 1998) (table 4.7.6). Sawn hardwood is imported to Poland mainly from Slovakia and Germany. (table 4.7.7). Imports are expected to increase to the level of 350,000 m^3 in 2000.

TABLE 4.7.2

MDF consumption, production and trade in Poland, 1994-1998

(1,000 m^3)

	Consumption	Production	Exports	Imports
1994	13	15	9	7
1995	63	168	115	10
1996	137	196	100	41
1997	191	246	104	49
1998	348	500	212	60

Source: Wood Technology Institute, 2000.

TABLE 4.7.3

OSB consumption, production and trade in Poland, 1994-1998

(1,000 m^3)

	Consumption	Production	Exports	Imports
1996	22	0	0	22
1997	140	100	39	79
1998	50	170	170	50

Source: Wood Technology Institute, 2000.

TABLE 4.7.4

Sawn softwood exports from Poland, 1999

	Volume (m^3)	Share (%)
Germany	341,000	62
Netherlands	49,500	9
Denmark	38,500	7
Italy	38,500	7
Belgium	33,000	6
Other	49,500	9
Total	550,000	100

Source: Wood Technology Institute, 2000.

TABLE 4.7.5

Sawn hardwood exports from Poland, 1999

	Volume (m^3)	Share (%)
Italy	92,800	32
Germany	66,700	23
Sweden	20,300	7
Denmark	20,300	7
Austria	20,300	7
Other	69,600	24
Total	290,000	100

Source: Wood Technology Institute, 2000.

TABLE 4.7.6

Sawn softwood imports by Poland, 1999

Source	Volume (m^3)	Share (%)
Russia	66,700	46
Belarus	34,800	24
Ukraine	11,600	8
Czech Republic	8,700	6
Other	23,200	16
Total	145,000	100

Source: Wood Technology Institute, 2000.

TABLE 4.7.7

Sawn hardwood imports by Poland, 1999

Source	Volume (m^3)	Share (%)
Slovakia	25,300	23
Germany	23,100	21
Ukraine	14,300	13
Latvia	12,100	11
Belarus	7,700	7
Other	27,500	25
Total	110,000	100

Source: Wood Technology Institute, 2000.

4.7.3 Wood-based panels

Between 1989 and 1999 the export of wood-based panels increased more than five times. In this period, Poland began to produce new kinds of boards, i.e. MDF in 1994 and OSB in 1997, which became quite attractive products to export markets (graph 4.7.2). For example, in 1998 one fourth of the export (216,000 m^3) was MDF. In the same period of time the import of wood-based panels increased by 1.6 times.

The majority of these imports included particle board which was necessary for the dynamically developing furniture industry. In comparison with 1998, exports of wood-based panels increased by 29% in 1999, while imports dropped by nearly a half.

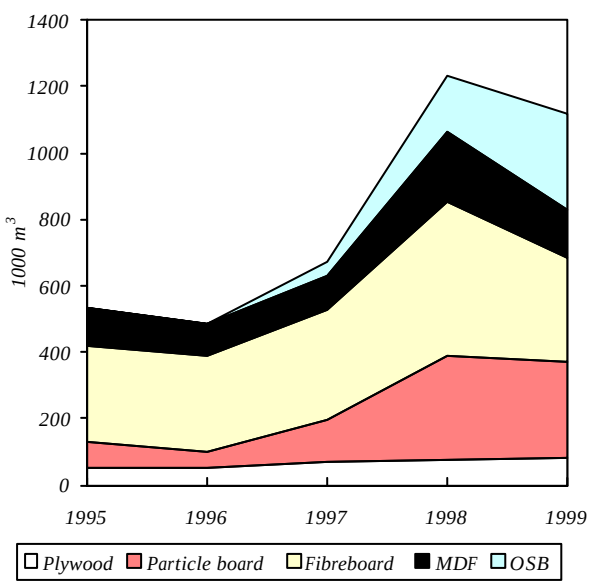
More than 50% of wood-based panels exported from Poland are particle board, including a growing share of OSB.

According to initial data, in 1999 Poland exported 580,000 m3 of particle board (84% more than in 1998), 455,000 m3 fibreboard (the same level as in 1998) and 31,000 m3 of plywood (13% less than in 1998).

Approximately 38% of particle board export is to Germany, 8% to Denmark, 8% to Ukraine, and 6% to Lithuania. The main customers for Polish fibreboard are: Germany 45%, Holland 9%, the Czech Republic 8% and Great Britain 8%. Plywood is exported mainly to Germany 41%, Sweden 13%, and Denmark 10%.

GRAPH 4.7.2

Export of wood-based panels in Poland, 1995-1999



Note: For 1999, estimated data.

Sources: Central Statistical Office and Wood Technology Institute, 2000.

Poland imports wood-based panels primarily from Germany and countries of eastern Europe. In the case of particle board, about 31% is imported from Germany, 27% from Lithuania and 12% from Estonia. For fibreboard, 68% is purchased from Germany and 9% from Belarus. 39% of plywood comes from Russia and 29% from Belarus.

It is expected that in 2000 the export of particle board will increase to 650,000 m3. The export of fibreboard will fluctuate in the range of 460,000 m3, while plywood exports, following increase of domestic demand, will decrease to 83,000 m^3.

4.7.4 Woodpulp and paper

Mean paper and paperboard consumption in Poland is relatively low and amounts to about 55 kilograms per person per year.

In contrast to all wood products there has been, for many years now, a trade deficit in Polish foreign woodpulp and paper trade. In 1999, this surplus was over six times higher in the case of woodpulp and 1.7 times higher – in the case of paper and paperboard. According to initial data, the export of woodpulp in 1999 amounted to 41 thousand tonnes and was 2.7 times higher than in 1989 but 45% lower than in 1998. Paper exports in 1999 reached 610 thousand tonnes and was by 3.6 times higher than ten years ago and by 10% more than in 1998.

Nearly 90% of Polish woodpulp exports are to Germany. Paper and paparboard exports are to Germany, 22%; Italy, 16%; France and Great Britain, 7% each.

Imports of woodpulp in 1999 reached about 260,000 tonnes, 42% more than the previous year. In the period from 1989-1999 imports of paper and paparboard increased by over 9 times to the level of 1.0 million tonnes. Poland exports mainly packaging paper and imports high quality paper and special types of papers.

The main suppliers of woodpulp to the Polish market are: Russia (33%), Finland (19%), Sweden (18%), the United States (14%). Paper is imported from Germany (30%), Finland (21%), Austria and Sweden (10% each).

4.8 Certified forest products

Polish forests were one of the first in Europe to initiate the implementation of international certificates confirming the compliance of management practices with environment protection regulations. The certificates guarantee the conformity of raw materials and processed products with stated origin, hence they should, in theory at least, create a market for certified wood. So far, six out of the existing seventeen Regional Directions of State Forests were awarded certificates within the framework of the Forest Stewardship Council (FSC) certification

scheme. Moreover, three wood processing plants were awarded "chain of custody" certificates. This certificate confirms that a given product was obtained from wood harvested in certified forests in compliance with Forest Stewardship Council regulations.

On the basis of available information there is no ground to claim that there is a market of certified wood in Poland. Since 1998 General Direction of State Forests has stopped monitoring the process of certification of domestic customers of wood from certified forests ("chain of custody" certificate), which is why no information is available on the demand for certified wood on domestic market. There are no special prices for certified wood in the system of prices offered by the State Forests. It can, therefore, be said that if there is a market in Poland for certified wood, then it is still a "dormant market".

4.9 Prospects for wood industry

In the wake of the systemic transformations in Polish economy in the years between 1990 and 2000, the importance of the wood industry has increased remarkably as evidenced by the increase in the share of this sector of industry in national income, value of total production sales and a considerable and steadily growing positive foreign trade balance.

Transformations of the Polish wood sector moved faster than in the other branches of Polish economy. However, considerable differences occurred in the process of changes both in individual sectors and in groups of enterprises of this industry. Despite periodic difficulties occurring not only in the demand but also in production, future prospects for the development of the Polish wood industry could be assessed as very promising.

It can be expected that the driving force for development will remain furniture export, however the growth rate will slow. It appears that paper conversion, e.g. box manufacturing and other conversions, is a sector with bright perspectives.

The important factors which will influence further development of the forest and wood industry sector in Poland are the rich domestic raw materials and the low energy prices and labour costs. It can be expected that the above advantages of Polish industry will be further fortified by creating an appropriate business environment to encourage both production and export. This kind of positive economic climate could include:

- *stabilization of Polish economy and further improvement in the majority of macro-economic indices;*
- *development of the housing sector;*
- *further improvement of demand in the domestic marketplace;*
- *development of the huge eastern market potential; and*
- *such popular factors as "return to nature" and construction with ecological materials, especially wood.*

Because the Polish society aspires to increase consumption, it can be assumed that the current low level of consumption of basic wood products in comparison with mean European standards will favour an increase of demand for wood products. This, in turn, will promote further development of wood industry. However, per capita national income in Poland, which is several times lower than in western European countries, will prevent the rapid achievement of the consumption level of wood product similar to that of western European countries. All in all, considering the predicted population growth, it can be assumed that Poland may be able to reach per capita consumption indices for most wood products similar to the current ones in western Europe towards the end of the next decade.