

Chapter 7

Wood Raw Material – Production, Trade and Consumption

Highlights

- Production of roundwood in the ECE region, at 1.2 billion m³ annually, is far below the volume of annual growth.
 - The demand for roundwood in western European countries is increasingly dominated by an ever smaller number of large wood processing companies, leading to weaker pricing power of the traditional small private and municipal forest owners and state forest services.
 - The social demand for non-wood benefits is increasing in forests near urban areas, which leads to additional pressure on the forest owners and their incomes in these areas.
 - Market forces have stimulated central and eastern European countries and the CIS to, at least temporarily, increase exports of roundwood. This is a major determinant for current developments in roundwood markets of the ECE region.
 - Since 1996 exports to western Europe from the CIS and central and eastern European countries increased rapidly, by 36.2% and 9.5% respectively. These exports influence the traditional roundwood trade flows in other parts of ECE region and outside of it.
 - If indications of about 20 to 30 million m³ in illegal cuttings in the CIS countries are correct, they would mainly reduce the tax revenues, and not the sustainable level of removals.
 - CIS roundwood production and consumption decreased through 1998, but turned around and increased in 1999 by 13.8% and 7.9% respectively.
 - The dynamic development of roundwood exports in the CIS and central and eastern European countries should lead in the medium term to increasing income as a base for improving processing equipment, productivity and domestic purchasing power.
 - Roundwood production and trade accelerated in Europe in 2000 following the extensive windthrow from the 1999 storms.
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Introduction

As a background to the description of primary-processed products, this chapter describes the main developments in production and trade of roundwood. Production is used here as a synonym for removals, which are defined as forest roundwood volumes felled and removed from the forests. When reported, removals include personal needs of forest owners, which in some countries could reach significant volumes.

Distinction between the types of products (logs, pulpwood¹, wood fuel and other industrial roundwood) is rather difficult both in practice and statistically. The structure of roundwood products in the statistics is based on long-standing traditions. It starts from structuring roundwood in the direction of use. With the changes in wood processing technologies during the last decades this distinction is less and less valid. For example pulpwood with larger diameter can be used as small-diameter sawlogs. For these reasons it is often impossible to make direct links between particular roundwood products and their use in the wood processing industry.

In 2000 the situation in the European roundwood markets is heavily influenced by an oversupply of roundwood caused by the nearly 200 million m³ windthrow of December 1999 (see special chapter 3). This chapter describes roundwood production, trade and consumption mainly through 1999, focussing on the development between 1998 and 1999, the latest period for which statistics are available.

In light of the differences in roundwood production and trade between various countries of the ECE region, several sub-regions were defined for this chapter: EU/EFTA, "other Europe" (otherwise known as central and eastern European countries), the CIS and North America. A listing of countries in the ECE region may be found in the annex.

The data quality differs between countries, products, and years. So far, only a few countries of the CIS region provide data to the timber database, including the largest producer, the Russian Federation. For most of the CIS countries the secretariat has estimated roundwood removals based on TBFRA² and FAO data. In future, the secretariat will attempt to collect more reliable data from the CIS and "Other Europe" countries, considering their dynamic development and possible influence to the European timber markets.

Even in those CIS countries which supplied data, the economic and social situation is such that the possibilities

of errors (e.g. due to unrecorded production and trade) cannot be excluded. In order to compare regions over time the secretariat also made trend calculations for a few important countries, which did not provide complete, current wood raw materials data via the Joint Forest Sector Questionnaire (for example Canada). Possible inconsistencies between grand totals for roundwood and totals from sub-items are caused by the fact that some countries provide only grand totals without any desegregation by products. In some cases it was impossible to calculate an apparent consumption, because of missing data for one of the items: production, exports or imports.

7.1 ECE region developments

The ECE region is an important part of global forest resources. Nearly 43% of the global forest area is located in ECE countries. More than 1/3 of global removals is produced in this region (table 7.1.1). The share of global removals is decreasing for the whole region and for all of the analysed sub-regions, excluding the "Other Europe" countries, whose share of removals has shown a slight increase from 1995 to 1998.

TABLE 7.1.1

Ratio between ECE and global roundwood removals, 1995-1998
(% of global removals)

Sub-regions	1995	1996	1997	1998
EU/EFTA	8.43	7.85	8.05	8.14
Other Europe	3.07	3.15	3.25	3.31
CIS	4.21	3.87	3.90	3.36
North America	21.39	20.94	20.43	20.80
Total	37.10	35.81	35.62	35.61

Sources: ECE/FAO TIMBER and FAO databases, 2000.

Annually, nearly 1.2 billion m³ of roundwood is harvested in ECE countries, which corresponds to 0.8 m³ per hectare of forest area (TBFRA 2000). Depending on forest stand conditions and the accessibility of forests, the harvesting rate differs between regions. Possibilities for sustainable roundwood supply in the ECE region as a whole, and the sub-regions as well, estimated on the basis of net annual increment, are much higher than current harvests. The potential supply is not used so far, mainly for economic reasons. For example, in the case of Germany present production could be expanded by two-thirds while remaining in the framework of sustainable forest management. However, information exists about local and temporary over-cutting in some areas of the

¹ In contrast to the last Review this chapter includes pulpwood.

² Temperate and Boreal Forest Resources Assessment.

ECE region, more specifically illegal cuttings within some CIS countries.

Changes in the eastern Europe policy framework and the merging process of wood processing enterprises are the major determinants for current changes in roundwood markets of the ECE region.

7.1.1 Roundwood production

The central and eastern (“Other”) European countries are moving relatively fast towards market economies and roundwood production is characterised by dynamic growth (graph 7.1.1 and table 7.1.2). The production of roundwood in the “Other Europe” region grew by 4.1 million m³ per year between 1995 and 1999, accelerating by 7.1% from 1998 to 1999 (table 7.1.4). In this region removals amounted to 115.7 million m³ in 1999.

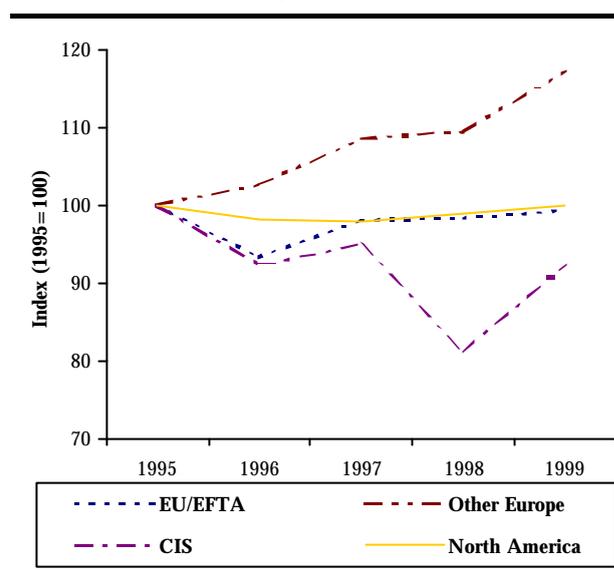
In comparison to the more or less stable increasing development in “Other Europe”, roundwood production in the CIS is still unsteady. The main reason is the fluctuation of domestic demand. Despite strong growth of 13.8% in 1999, production reached about 125 million m³, only 92% of the 1995 level and only 33% of the 1990 removals.

In contrast to the CIS, development in North America and the EU/EFTA appears stable. These two regions are still the leading producers of roundwood in the ECE region, with about 690 and 270 million m³

removals respectively.

Most of the harvested roundwood volume is used or traded locally, because of the high transportation costs in comparison to processed timber. Only about 7% of ECE

GRAPH 7.1.1
Development of roundwood production in the ECE area by regions, 1995-1999



Source: ECE/FAO TIMBER database, 2000.

TABLE 7.1.2

Production (removals) of roundwood by selected countries in the ECE Region, 1995-1999
(1,000 m³)

Region	Country	1995	1996	1997	1998	1999	Average growth rate	% Change 1998 to 1999
EU/EFTA	Sweden	63,600	56,300	60,200	60,600	58,700	-550	-3.1
	Finland	49,894	46,272	51,798	53,660	53,851	1,530	0.4
	Germany	39,343	37,014	38,207	39,052	37,634	-138	-3.6
	France	36,061	33,143	34,932	35,527	36,380	302	2.4
Total		270,833	252,529	265,388	266,186	268,921	983	1.0
Other Europe	Poland	19,088	20,316	21,635	23,107	24,300	1,322	5.2
	Turkey	19,279	19,411	18,050	17,668	17,617	-507	-0.3
	Czech Republic	12,365	12,600	13,491	13,991	14,203	507	1.5
	Romania	12,178	12,250	13,529	11,649	12,677	40	8.8
Total		98,726	101,249	107,073	108,053	115,684	4,072	7.1
CIS	Russian Federation	116,510	101,750	113,798	95,000	111,000	-1,777	16.8
	Belarus	10,455	15,707	7,585	7,765	7,375	-1,410	-5.0
	Ukraine	6,318	6,252	6,053	6,053	5,920	-100	-2.2
Total		135,295	124,710	128,465	109,816	124,971	-3,554	13.8
North America	United States	499,310	490,601	485,880	494,016	500,745	628	1.4
	Canada	188,346	183,546	187,753	185,955	185,659	-297	-0.2
Total		687,656	674,147	673,633	679,971	686,404	332	0.9
Grand Total		1,192,510	1,152,635	1,174,559	1,164,026	1,195,980	867	2.7

Source: ECE/FAO TIMBER database, 2000.

roundwood production is traded. About 65% of the industrial roundwood exports and 68% of the imports in ECE region is traded inside the region. There are significant year to year changes in roundwood trade, which the secretariat tried to analyse in the framework of this report, using FAO direction of trade data for industrial roundwood production (tables 7.1.3 and 7.1.4).

Unfortunately some data from the FAO database cannot be analysed in enough detail, for example exports from "Other developed" countries to the EU/EFTA region, which amounts to 61% of the exports from these countries. Table 7.1.3 shows the structure of exports by destination, table 7.1.4 gives the structure of imports by delivering countries.

7.1.2 Roundwood trade

Based on FAO statistics, the ECE region has 55% of the world industrial roundwood trade. Roundwood imports in the ECE region as a whole increased by 10.7% between 1998 and 1999 (table 7.1.5). This increase is lower than the increase in the rate of exports, which amounts positive to 15.1%. With only 8.3 million m³ net trade the region is still a net exporter of roundwood. The picture between sub-regions is quite different.

The largest exporter of the ECE region is the CIS region, with more than 30.2 million m³ roundwood in 1999. With a 36.2% difference between 1998 and 1999, the CIS region has the highest growth rate for roundwood exports. More than half of industrial roundwood exports from the CIS goes to EU/EFTA countries based on a high market potential in between these two regions. A startling 92% of industrial

TABLE 7.1.3
Industrial roundwood trade flows, exports by destination, average 1995-1998
(%)

Importing Region	Exporting region						
	EU/ EFTA	Other Europe	CIS	North America	Non-ECE	Other developed	Other developing
EU/EFTA	92	92	56	2	10	61	25
Other Europe	1	1	3	0	0	4	3
CIS	0		0			1	
North America	0		0	28	1	21	4
Non-ECE	3	0	39	69	83	6	59
Other developed	1	6	1	0	2	5	2
Other developing	2	1	0	1	4	2	8
Total, %	100	100	100	100	100	100	100

Source: FAO database, 2000.

TABLE 7.1.4
Industrial roundwood trade flows, imports by countries of origin, average 1995-1998
(%)

Importing Region	Exporting region							Total %
	EU/ EFTA	Other Europe	CIS	North America	Non-ECE	Other developed	Other developing	
EU/EFTA	23	20	28	1	4	18	7	100
Other Europe	8	7	37	1	5	25	18	100
CIS	12		0			88		100
North America	0		0	55	2	37	7	100
Non-ECE	1	0	21	23	36	2	18	100
Other developed	8	24	13	1	18	26	9	100
Other developing	9	6	2	6	27	12	38	100

Source: FAO database, 2000. intra trade

roundwood exports from “Other Europe” go to the EU/EFTA region. Roundwood exports from “Other Europe” increased rapidly by 9.5% between 1998 and 1999. The main reasons are lower prices, especially for low quality products, and the comparatively short transport distances from eastern suppliers to western markets. In fact wood quality is quite high but the ability to meet other specifications, such as length, diameter, product assortment or delivery deadlines, is low.

In relation to this, the EU/EFTA region is the biggest importer. Imports here increased since 1996 and grew further, by 8.9 %, between 1998 and 1999. The imports are coming mainly from the CIS (28%) and the “Other Europe” region (20%) as well as from other developed countries. The EU/EFTA region receives about 23% of industrial roundwood from countries inside this region and exports 92% to the countries of the same region; in other words there is considerable intra regional trade.

TABLE 7.1.5
Roundwood exports and imports by selected countries in the ECE Region, 1997-1999
(1,000 m³)

Region	Country	1997	1998	1997	1998	1999	Average growth rate	% Change 1998 to 1999
EXPORTS								
EU/EFTA	Germany	4,919	2,992	4,032	4,871	3,987	1	-18.1
	France	2,475	2,227	2,282	2,857	2,894	147	1.3
	Sweden	1,725	1,621	1,393	1,420	1,333	-98	-6.1
	Switzerland	1,016	979	1,147	1,006	1,218	43	21.1
Total		15,098	11,635	13,629	15,146	15,072	346	-0.5
Other Europe	Estonia	2,637	1,898	2,915	3,792	3,759	414	-0.9
	Czech Republic	2,161	2,687	2,657	2,497	2,626	74	5.2
	Latvia	2,429	1,467	2,124	2,760	2,953	234	7.0
	Lithuania	1,769	952	765	792	938	-182	18.4
Total		11,260	8,903	11,068	13,194	14,537	1,085	10.2
CIS	Russian Federation	18,374	15,915	17,845	19,972	27,350	2,201	36.9
	Belarus	175	670	711	812	1,323	244	62.9
	Ukraine	1	307	465	465	778	171	67.3
Total		18,550	16,892	19,021	21,250	29,451	2,616	38.6
North America	United States	12,817	11,937	10,864	12,290	12,433	-42	1.2
	Canada	1,187	955	701	2,029	2,917	453	43.8
Total		14,004	12,892	11,565	14,319	15,350	412	7.2
Grand Total		58,912	50,322	55,283	63,909	74,411	4,459	16.4
IMPORTS								
EU/EFTA	Finland	9,389	6,613	6,775	9,347	10,301	456	10.2
	Sweden	7,667	5,066	7,745	9,301	10,482	987	12.7
	Austria	4,618	4,747	5,433	5,237	7,154	556	36.6
	Italy	5,058	5,156	4,742	5,456	5,197	58	-4.7
Total		43,904	34,700	40,183	46,892	51,054	2,649	8.9
Other Europe	Turkey	782	1,249	1,049	1,346	1,510	155	12.2
	Czech Republic	335	218	505	784	817	153	4.2
	Poland	485	349	268	372	560	17	50.6
	Slovenia	324	258	333	294	490	37	66.6
Total		2,701	2,870	3,526	4,208	4,943	582	17.5
CIS	Russian Federation	975	481	335	228	152	-190	-33.3
	Ukraine	471	315	160	160	57	-98	-64.6
	Republic of Moldova	31	31	31	31	31	0	0.0
Total		1,476	827	526	419	239	-288	-42.9
North America	Canada	6,563	6,156	6,753	7,012	6,990	171	-0.3
	United States	977	752	810	4,973	7,054	1,638	41.8
Total		7,540	6,908	7,563	11,985	14,044	1,808	17.2
Grand Total		55,621	45,305	51,798	63,504	70,280	4,752	10.7

Source: ECE/FAO TIMBER database, 2000.

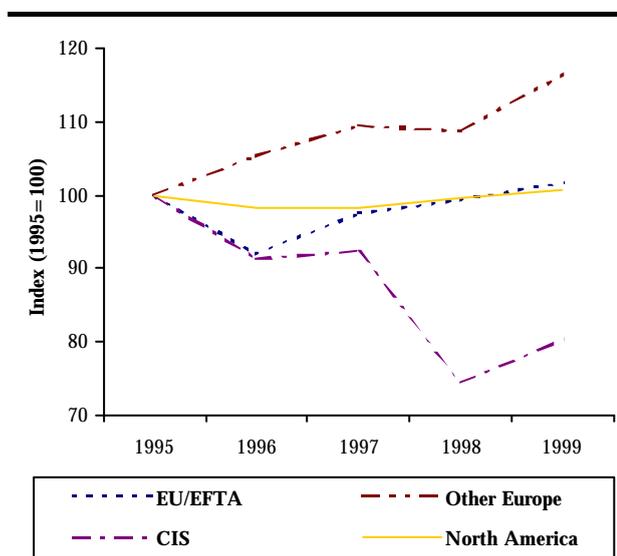
In North America the situation is characterised by slightly increasing roundwood exports and rapidly growing imports with a growth rate of 17.2% between 1998 and 1999. At 15.4 million m³, exports are now only slightly higher than imports. Roundwood exports are mainly (69%) going to outside of the ECE region or staying in the region as intra-trade (28%). 55% of North American industrial roundwood imports are coming from inside the region and 37% from other developed countries outside the ECE region.

7.1.3 Apparent Consumption

Following trends of roundwood production and trade of ECE region, the development of apparent consumption increased by 2.5% between 1998 and 1999 and reached a volume of 1.2 billion m³.

There is stable development for the EU/EFTA and North America (graph 7.1.2). In contrast, consumption in the CIS region fell from 1995 to 1998 to 74% of the 1995 level and increased rapidly in 1999 up to a level of 80% of 1995 roundwood consumption. The reason is mainly the continued weak domestic demand. Obviously, little income from roundwood exports is brought back into the development of domestic production capacities.

GRAPH 7.1.2
Development of apparent roundwood consumption in the ECE area by regions, 1995-1999



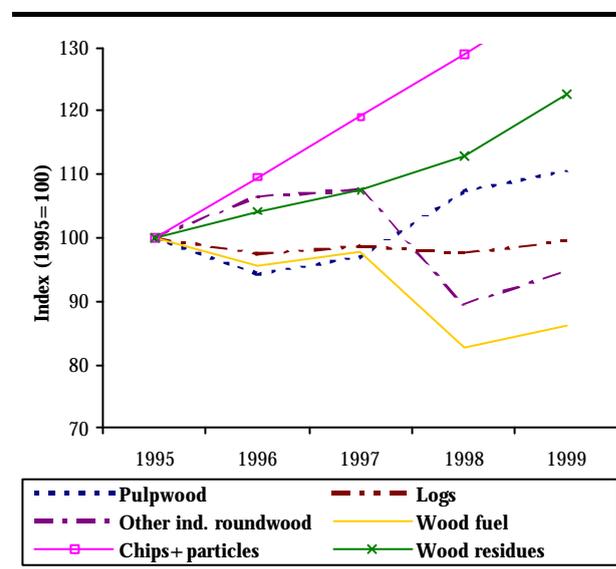
Source: ECE/FAO TIMBER database, 2000.

The picture is more optimistic in the "Other Europe" region, where increasing production, exports and imports led also to increasing consumption. Between 1998 and 1999, roundwood consumption increased by 7.1%, which is slightly less than the growth rate in the CIS, where the consumption growth rate amounted to 7.9%.

The structure of roundwood products in ECE region is changing. Production of pulpwood (round and split) is increasing rapidly, with an average growth rate of about 11.2 million m³ per year from 1995-1999 (graph 7.1.3). Between 1998 and 1999 the growth of pulpwood production was about 3.0%. At the same time, wood fuel, other industrial roundwood and also log production is slightly decreasing. The "production" of wood residues has grown faster than that of any other type of wood raw material since 1995.

The picture varies between the ECE sub-regions, which will be described in the following sections.

GRAPH 7.1.3
Development of roundwood production in the ECE area by product groups, 1995-1999



Source: ECE/FAO TIMBER database, 2000.

7.2 Developments in EU/EFTA

Nearly 270 million m³ of roundwood was produced in EU/EFTA countries in 1999, a moderate growth in roundwood production and consumption in comparison to the development in "Other Europe" and the CIS. During 1995 and 1996 production decreased by 18.3 million m³. Between 1998 and 1999 it increased negligibly, only by 1%, whereas the production of logs decreased by 1.4% or by 2.0 million m³.

In 1999, removals in Sweden and Germany decreased, while the supply in Finland and France maintained a positive trend. Sweden and Finland were still the biggest producers, with 58.7 and 53.9 million m³ of roundwood removals respectively.

EU/EFTA region, with 51 million m³, is the biggest importer and at the same time with 36 million m³ the only net importer of ECE region. While imports grew

between 1998 and 1999 by 8.9%, exports decreased by 1.2% and amounted to 16 million m³ roundwood in 1999. The EU/EFTA region has consolidated its position as an importing roundwood region. The most important importers of industrial roundwood are Finland and Sweden, importing in 1999 about 10.3 and 10.5 million m³ respectively. Most of these volumes were imported from Russia and the Baltic region. In Austria roundwood imports increased by 36.6% between 1998 and 1999 and reached 7.1 million m³. Imports here are mainly coming from the Czech Republic and Germany.

The exports are mainly intra-trade (92%), excluding roughly 0.6 million m³ industrial roundwood, which in 1998 went from Germany to Czech Republic.

Expanding exports from “Other Europe” and the CIS countries, mainly going to western Europe, are changing traditional trade flows. For example, Germany decreased the total roundwood net exports from 2.7 million m³ in 1995 to 0.59 million m³ in 1999, while at the same time nearly quadrupled net imports from the CIS (table 7.2.1).

TABLE 7.2.1
German roundwood net trade, 1995-1999
(1,000 m³)

	1995	1996	1997	1998	1999
EU/EFTA	2925.7	1700.6	2130.6	2073.7	1319.5
Other Europe	-282.4	-336.3	-245.1	-101.3	-213.8
CIS	-13.5	-39.1	-63.3	-135.8	-523.2
Non-ECE	39.2	43.5	40.7	13.7	11.8
Total	2669.0	1368.8	1862.9	1850.3	594.3

Source: ZMP, 2000.

The EU/EFTA region imports also about 12.9 million m³ wood residues, chips and particles and exports 11.3 million m³, which means that in these products, and unlike other ECE regions, the EU/EFTA region is also a net importer (table 7.2.2). Germany increased exports through 1998, while at the same time Belgium & Luxembourg increased their imports, possibly from Germany.

In view of the above noted trends of slightly decreasing production and increasing imports, consumption increased by 2.4% and reached 304 million m³ in 1999. After a drop of more than 20 million m³ in 1996 consumption in EU/EFTA region is now nearly on the same level as in 1995.

7.3 Developments in “Other Europe”

Roundwood production in “Other Europe” countries increased quickly during the last five years with an average growth rate of about 4 million m³ roundwood per

year. Between 1998 and 1999 removals increased by 7.6 million m³, which corresponds to a growth rate of 7.1%. The major source of this current growth is coming from Latvia, Estonia as well as Romania. Since 1996 Poland is the largest supplier in this region with about 24.3 million m³ in 1999, behind Turkey and the Czech Republic.

Log production in “Other Europe” region is increasing rapidly, especially in Latvia, where the growth between 1998 and 1999 amounted to 2.3 million m³ logs.

With 12.5 million m³ of roundwood in 1999, this region is the second net exporter after the CIS. The development of harvesting is the reason for the rapid increase in exports of 9.5% between 1998 and 1999, leading to a volume of 16.8 million m³ in 1999. In 1998 significant volumes of industrial roundwood went from Estonia (2.9 million m³) and Latvia (2.5 million m³) to Finland and Sweden and from the Czech Republic to Austria (1.7 million m³).

Imports by countries of the “Other Europe” region also increased rapidly by 17.5%, but the volume, in comparison to the EU/EFTA region, was still minor. Large volumes of industrial roundwood were coming from Russia to Turkey (0.6 million m³ in 1998).

Exports of wood residues, chips and particles also increased rapidly by 12.3 % between 1998 and 1999, reaching 2.3 million m³. After North America, the “Other Europe” region is now becoming the second most important net exporter of these products, with about 2.0 million m³. Exports increased mainly in Estonia (by 200,000 m³ per year during 1995 and 1999).

Taking the above into consideration, since 1998 the “Other Europe” region became the third most important roundwood consumer in ECE region, overtaking the CIS. The consumption growth rate between 1998 and 1999 corresponds to 7.1%.

7.4 Developments in the CIS

In comparison to the “Other Europe” region, most of the CIS countries are only in the beginning of a stabilisation of their policy framework, so the development of roundwood markets is characterised by high volatility. The data for the CIS region is dominated by those for the Russian Federation, by far the biggest producer and consumer in the region.

Roundwood production in the region as a whole was decreasing through 1998 but then turned around and increased in 1999 by 13.8%, and in Russia by 16.8%, reaching 125 million m³ in the CIS. Nearly half of this volume increase was logs, with production in 1999 of 4.5 million m³. Pulpwood production is increasing extremely fast (27% between 1998 and 1999), last year reaching 39.4 million m³.

TABLE 7.2.2
Exports and imports of wood residues, chips and particles, 1995-1999
 (1,000 m³)

Region	Country	1995	1996	1997	1998	1999	Average growth rate	% Change 1998 to 1999
EXPORTS								
EU/EFTA	Germany	1,878	2,987	3,522	7,677	6,250	1,343.4	-18.6
	France	1,160	1,211	1,156	1,318	1,491	76.9	13.2
	Austria	2,120	1,707	557	699	842	-356.5	20.5
	Belgium & Luxembourg	635	465	407	407	872	41.7	114.4
	Total	7,127	8,072	7,429	12,013	11,344	1,237.4	-5.6
Other	Estonia	178	748	747	888	1,026	183.7	15.6
Europe	Czech Republic	492	552	479	339	497	-20.3	46.6
	Latvia	135	198	235	334	514	89.4	53.9
	Slovakia	10	157	185	181	151	30.6	-16.4
	Total	1,054	1,865	1,824	1,907	2,346	262.7	23.0
CIS	Russian Federation	533	644	701	529	600	1.9	13.4
North America	United States	5,552	7,237	6,212	6,064	6,296	31.5	3.8
	Canada	1,488	1,717	1,707	1,498	1,391	-41.3	-7.1
	Total	7,040	8,954	7,919	7,562	7,687	-9.8	1.7
IMPORTS								
EU/EFTA	Belgium & Luxembourg	1,196	1,117	1,866	1,866	2,169	269.5	16.3
	Austria	2,470	2,583	839	734	921	-494.9	25.5
	Italy	1,235	1,155	1,499	1,703	1,757	159.2	3.2
	France	1,552	1,114	1,278	1,294	1,015	-89.3	-21.6
	Germany	453	720	873	2,041	1,913	424.1	-6.3
	Total	10,051	10,493	10,950	12,679	12,884	785.0	1.6
Other	Estonia	2	70	108	524	522	149.3	-0.4
Europe	Hungary	121	199	450	34	49	-31.0	44.7
	Slovenia	58	49	69	84	119	15.8	42.1
	Czech Republic	8	23	54	65	73	17.2	12.3
	Total	217	398	708	736	835	157.2	13.4
CIS	Ukraine	1	1	3	3	4	0.6	45.3
North America	Canada	1,344	933	1,611	1,816	2,223	264.2	22.4
	United States	1,227	1,583	1,464	707	518	-229.4	-26.7
	Total	2,571	2,516	3,075	2,523	2,741	34.8	8.6

Source: ECE/FAO Timber database, 2000.

The current data may be underestimated because of unrecorded removals (e.g. from illegal fellings). The volumes for such cuttings is estimated by various publications in the range of 2 to 20 million m³ roundwood, which would correspond to roughly 1- 15% of the reported removals. In spite of increases in roundwood production in Russia, the potential levels are not fully realised. According to the Ministry of Economics, the country could cut up to 500 million m³ a year, without any adverse effect on forest yield or the environment (World Wide Wood, 2000).

The CIS roundwood exports are increasing rapidly, reaching 30.3 million m³ in 1999. Between 1998 and 1999 exports grew extremely fast, by 36% or by roughly 8 million m³. In addition to Russia, Belarus and Ukraine were responsible for this increase, where the growth rate amounts to 62%. Also the export of wood residues, chips and particles grew at a high rate of 13.4% between 1998 and 1999.

In 1998 more than the half of the exports of industrial roundwood from the Russian Federation were going to EU/EFTA region: about 7.6 million m³ to Finland and 2.0 million m³ to Sweden. 6.7 million m³ of industrial roundwood were exported outside the ECE region, mainly to Japan and China. China's share of Russian roundwood exports rose yet again in the third quarter of 1999, rising by a massive 230%. The areas closest to export markets, e.g. north-western parts of Russia, have more opportunities to maintain export markets.

In some countries, such as Belarus for example, wood

exports are necessary to pay for grain imports (World Wide Wood, 2000). Roundwood imports decreased at the same time and are now only a minor 0.2 million m³.

Consumption of roundwood was decreasing sharply during the last five years by 6.6 million m³ per year, especially in 1998, caused mainly by the mid-1998 economic crises. Only in 1999 consumption did grow by 7 million m³ or 7.9 %. The same picture is ascertainable in nearly all countries of this region. One of the main needs is to return revenues from exports of resources both to the general public budget and to the renovation of obsolete technical equipment in the forest sector.

7.5 Developments in North America

As in the EU/EFTA region, the wood raw material markets in North America are relatively stable. In 1999 in this region 680 million m³ roundwood were produced, of which nearly 400 million m³ were logs and 200 million m³ were pulpwood. Roughly 500 million m³ of total removals are supplied by the United States.

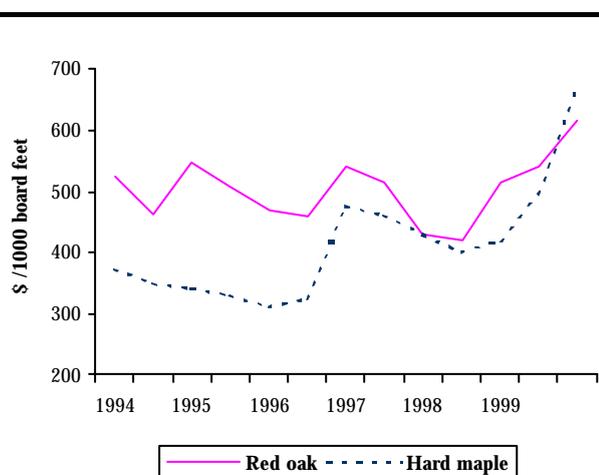
As reported last year in the Review, the forest management in US National Forests in the Pacific Northwest is changing to support non-wood benefits, which leads to a decrease of roundwood supply from these forests. During the first half of 2000 the Forest Service timber sales totalled 2.1 million m³, down by 11.6% from 2.4 million m³ during the same period a year earlier and in comparison with 1995. In total, from all forestlands, harvests are still on the same level as in 1995. However roundwood demand has shifted to private forests for supply, mainly in the south-eastern region of the country. This could be a reason for the current increase in US sawlog prices (graph 7.4.1).

The statistics show that pulpwood production in United States was increasing, especially through 1998 by an average annual growth rate of 5.9 million m³, whereas the production of fuel wood there decreased by 4.9 million m³ a year.

Logs exports to Japan decreased significantly from 7.3 million m³ in 1995 to 4.8 million m³ in 1999 (Japan Wood-Products Information and Research Center, 2000). Despite this fact, roundwood exports are still increasing slightly, by 7% for the region as a whole. Because of rapidly increasing imports of roundwood in the United States, mainly coming from Canada, but also from outside the ECE region, the position of North America as a roundwood net exporter is decreasing. In 1999 net trade amounted to only 1.4 million m³ roundwood exports. Despite this fact, roundwood exports are still significant with about 15.4 million m³ in 1999. The main destination of these exports is Japan with 4.4 million m³ industrial roundwood in 1998 and Canada with 3.5 million m³.

GRAPH 7.4.1

United States hardwood log prices, 1994-1999



Note: Prices paid for red oak and hard maple, grade 1 logs, delivered to sawmills, Doyle log scale.

Source: Ohio Timber Prices, Ohio Division of Forestry, 2000.

Therefore, apparent consumption increased slightly, by 1.8 million m³, during 1995 to 1999 and by 1.1% between 1998 and 1999. In light of the use of trend estimations for roundwood production of Canada, consumption developments are not reliable enough to discuss them in more detail here.

More than the half of North American industrial roundwood imports and 28% of the exports are intra-trade between the US and Canada.

The United States is a net exporter of wood residues, chips and particles, with about 5.8 million m³ in 1999. The imports of wood residues, chips and particles decreased in the United States, while the exports of these products are still on a high level of more than 6 million m³.