

Chapter 5

Wood raw material – production, trade and consumption

Highlights

- Roundwood was in oversupply in Europe in 2000 following the extensive windthrow from the December 1999 storms, which mainly affected France, Switzerland, Denmark and Germany.
 - The storm damage had these effects on roundwood markets in the EU/EFTA subregion in 2000: an acceleration of production and exports by 12% and 50% respectively, a 30% drop in prices, and a 19% increase in net imports.
 - Despite the surplus windthrow volumes in 2000 in western Europe, exports of wood raw material to western Europe from CIS as well as from central and eastern European countries increased rapidly by 13% and 8% respectively.
 - A change in traditional roundwood trade flows is occurring in the UNECE region as evidenced by a significant decrease in Germany's net trade with countries of the EU/EFTA subregion owing to a sharp increase in roundwood imports from the CIS since 1995.
 - Roundwood production and consumption in the CIS increased significantly, by nearly 60% from 1998, although it had decreased annually since the beginning of market reforms.
 - Incomes from expansion of roundwood exports from CIS and "Other Europe" countries are increasingly used to improve obsolete machinery leading to increased productivity and medium-term domestic purchasing power.
 - While the United States lost some market share in Japan, industrial roundwood trade between the United States and Canada is increasing.
 - Production and consumption of roundwood in the UNECE region both rose almost 5% in 2000, to reach 1.3 billion m³ in 2000, mainly because of the storm damages in Europe; however, removals remain still well below the supply potential of the forests.
 - Roundwood exports and imports both increased in UNECE region in 2000 by roughly 18%, while net exports expanded same time by 22%.
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Introduction

There are some specific data quality issues concerning wood raw materials:

- Distinction between the types of roundwood products (logs, pulpwood, wood fuel and other industrial roundwood) is rather difficult both in practice and statistically. For example, pulpwood with larger diameter can be used as small-size sawlogs and vice versa.
- In trade statistics no distinction is made between pulpwood, logs and other industrial roundwood.
- For most of the CIS countries the secretariat has estimated roundwood removals based on TBFRA and FAO data.
- In order to compare subregions over time the secretariat also made trend calculations for a few important countries which did not provide current data via the Joint Forest Sector Questionnaire; for example Canada. These data are not shown in the published tables, but are included in regional and product totals.
- Production is used here as a synonym for removals, which are defined as forest roundwood volumes felled and removed from the forests.
- Removals includes personal needs of forest owners which in some countries, especially after the December 1999 storms, could have reached significant volumes.

5.1 UNECE region developments

In 2000 the situation in the European roundwood markets is heavily influenced by the roundwood oversupply caused by the nearly 200 million m³ of windthrow from the three storms in December 1999¹ (table 5.1.1).

For France, Switzerland, Denmark and Germany, the most affected countries, in the order of magnitude of downed timber compared to average removals, the volume of windthrow was nearly 100 million m³ more than normally harvested. Is it estimated that only about the half of this volume was brought to markets in 2000. In some cases roundwood still remains in the forests, either because of high harvesting and transportation costs or unacceptable wood quality, or for ecological reasons. Further roundwood volumes are still stored in special facilities in order to stabilize the roundwood markets.

TABLE 5.1.1

December 1999 windthrow versus 1998 annual removals in Europe
(Million m³)

	Windthrow volumes 1999	Annual removals 1998	% of annual removals
France	139.6	42.9	325.4
Switzerland	12.1	4.2	288.1
Denmark	3.5	2.2	159.1
Germany	30.0	39.0	76.9
Sweden	5.0	58.1	8.6
Poland	2.0	23.3	8.6
Austria	0.4	14.0	2.9
Lithuania	0.4	4.9	8.2
Total	193.0	188.6	102.3

Sources: National reports, www.uncece.org/trade/timber and UNECE/FAO TIMBER database, 2001.

On average over the last five years, roughly 1.3 billion m³ of roundwood were harvested in the UNECE region annually, which corresponds to 0.8 m³ per hectare of forest area (FAO Global Forest Resources Assessment 2000). The volume of roundwood removals is increasing slightly by about 33 million m³ annually, with a larger than normal increase of 4.6% in 2000. Depending on forest stand conditions and the accessibility of forests, the harvesting rate differs between subregions. Possibilities for sustainable roundwood supply in the UNECE region as a whole, and the subregions as well, estimated on the basis of net annual increment in forests available for wood supply, are much higher than current harvests. The full potential supply is not used, mainly for economic reasons, but also for increasing environmental demands from forests. However, there are concerns about the sustainability of wood supply in war-affected areas, e.g. in parts of former Yugoslavia as well as illegal cuttings in parts of CIS.

The UNECE region has an important part, nearly 43%, of global forest resources. More than one third of global roundwood supply is produced in this region (table 5.1.2). This share would be much higher if only industrial roundwood was taken into account. The UNECE region's share of global roundwood removals increased in 1999 essentially because of the recovery in CIS, which moved from 3.3% of the global removals up to a share of 4.8%. The North American share of world roundwood removals has remained constant at about 21% since 1996.

The major determinants for changes in roundwood markets in the UNECE region from 1996 to 2000 have been the ongoing stabilization in the policy framework of eastern European countries and the storm damages from 1999.

¹ For detailed information: "Effects of the December 1999 Storms on European Timber Markets", a special chapter in the Forest Products Annual Market Review, 1999-2000, 15 pages.

TABLE 5.1.2
Ratio between UNECE and global roundwood
removals, 1996 -1999
(% of removals)

UNECE regions	1996	1997	1998	1999
EU/EFTA	7.9	8.1	8.3	8.4
Other Europe	3.1	3.2	3.3	3.6
CIS	3.9	3.9	3.3	4.8
North America	21.0	20.5	20.8	20.9
Total UNECE	35.8	35.7	35.7	37.6

Sources : UNECE/FAO TIMBER and FAO databases, 2001.

5.1.1 Wood raw material production

Roundwood production in the UNECE region increased from 1996 to 2000 at an average growth rate of almost 33 million m³ annually and reached 1.3 billion m³ in 2000 (table 5.1.3).

The development of roundwood production in EU/EFTA countries was characterized by a significant increase of removals, corresponding to 11.6 million m³ annually on the average from 1996 to 2000. However, removals rose sharply between 1999 and 2000, by 11.7%, mainly due to the windthrows from the December 1999 storms.

The situation in most of the central and eastern European countries ("Other Europe") and also in CIS is stabilizing as a result of market economy reforms. Roundwood production was characterized by a dynamic growth in the CIS, especially between 1998 and 2000 (graph 5.1.1). Production grew annually in the CIS subregion by 12.1 million m³ on average from 1996 to 2000, and between 1999 and 2000 growth was 9.0%. However, CIS removals are still far below the peak level during the 1980s.

In comparison to the rapid growth in CIS removals during the last two years, roundwood production in "Other Europe" increased by only 5.3% in 2000.

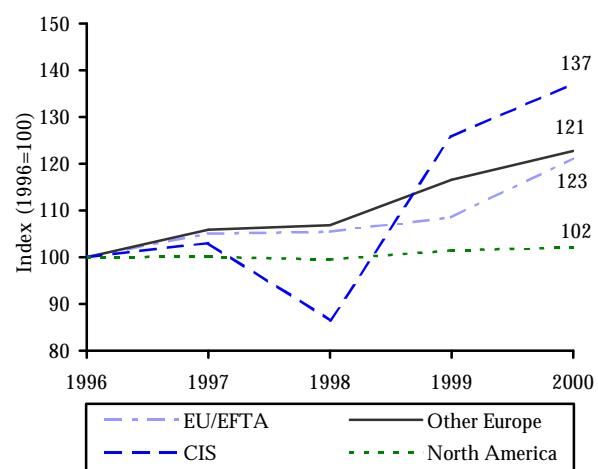
Developments in North America appeared stable. This subregion is still the leading producer of roundwood in the UNECE region, with about 690 million m³ removals annually. This is roughly 50% of total removals in the UNECE region and 20% worldwide.

The structure of wood raw material production in the UNECE region is dominated by logs (48%), pulpwood (26%) and wood fuel (13%). Production of other wood raw materials (chips and particles, wood residues and charcoal) was minor. Production of pulpwood increased rapidly, with an average growth rate of about 17.5 million m³ per year over 1996-2000. Between 1999 and 2000 growth of wood residues was the highest of all product

groups, at about 12.2%. At the same time other industrial roundwood is slightly decreasing by 3.8% (graph 5.1.2).

GRAPH 5.1.1

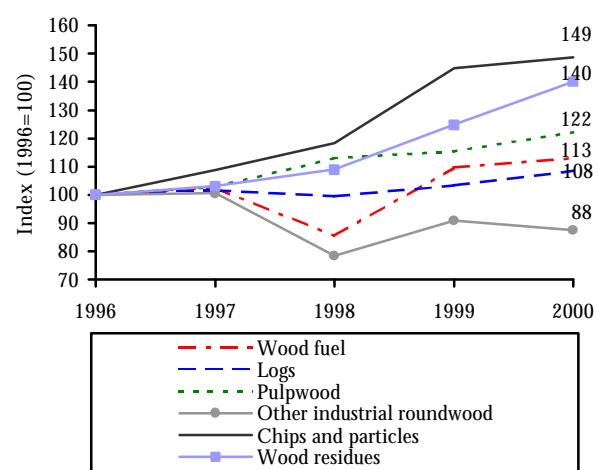
Roundwood production in the UNECE region, by subregions, 1996 -2000



Source: UNECE/FAO TIMBER database, 2001.

GRAPH 5.1.2

Production of wood raw materials in the UNECE region, by product groups, 1996 -2000



Source: UNECE/FAO TIMBER database, 2001.

5.1.2 Trade of wood raw materials

For the analysis of trade of wood raw materials two sources were used: TIMBER database and FAO trade flows data.

The TIMBER database, based on the Joint Forest Sector Questionnaire, has statistics on national exports and imports of forest products, but not on the direction of trade flows.

TABLE 5.1.3

Production of roundwood (removals) by selected countries, 1996 -2000
(1,000 m³)

	1996	1997	1998	1999	2000	Average growth rate	% change 1999 to 2000
EU/EFTA	253,183	266,042	266,921	274,682	306,785	11,584	11.7
of which:							
Sweden	56,300	60,200	60,600	58,700	61,800	950	5.3
Germany	37,014	38,207	39,052	37,634	54,361	3,412	44.4
Finland	46,272	51,798	53,660	53,637	54,263	1,782	1.2
France	33,143	34,932	35,527	43,008	50,170	4,213	16.7
OTHER EUROPE	99,878	105,735	106,719	116,372	122,589	5,606	5.3
of which:							
Poland	20,287	21,635	23,107	24,268	25,652	1,336	5.7
Turkey	19,411	18,050	17,668	17,615	17,767	-372	0.9
Latvia	8,080	8,922	10,030	14,008	14,488	1,790	3.4
Czech Republic	12,600	13,491	13,991	14,203	14,441	439	1.7
CIS	124,123	127,890	107,374	156,168	170,253	12,054	9.0
of which:							
Russian Federation	101,750	113,798	95,000	143,600	158,100	14,250	10.1
Belarus	15,707	7,585	5,902	6,561	6,136	-2,017	-6.5
Ukraine	6,252	6,053	6,053	5,920	5,920	-80	0.0
NORTH AMERICA	674,063	674,683	670,635	684,043	687,878	3,699	0.6
Canada	183,462	188,803	176,619	186,402	187,444	556	0.6
United States	490,601	485,880	494,016	497,641	500,434	3,143	0.6

Source : UNECE/FAO TIMBER database, 2001.

Using the FAO direction of trade data, trade flows of industrial roundwood were analyzed in more detail. Based primarily on the Joint Forest Sector Questionnaire and UN COMTRADE statistics, the FAO database is available only up to 1999.

The indicated UNECE subregions and the "non-ECE" subregion include all countries which are specifically mentioned in the FAO database. The categories "Other developed" and "Other developing" contain the volumes traded which are shown in the FAO Yearbook of Forest Products as "NES" (not elsewhere specified). "Other developed" can therefore include, in some cases, countries of UNECE subregions whose trade was too minor to be reported separately. Unfortunately, some data could not be analysed in detail; for example, exports from "Other developed" countries to the EU/EFTA subregion, which is based on the FAO statistics, amounts to nearly 8.3% of global roundwood trade.

5.1.2.1 Analysis based on the TIMBER database

Because of the high transportation costs in comparison to processed timber, less than 10% of

UNECE region roundwood production is traded internationally. The region as a whole is a net exporter of roundwood, with 13.1 million m³ in 2000. Net exports are expanding, especially after the December 1999 storms in Europe. Roundwood imports as well as exports in the UNECE region as a whole increased by about 18% between 1999 and 2000, whereas since 1998 the net exports of the UNECE region have roughly doubled (table 5.1.4).

The main reason for this expansion in trade was the increasing exports from the Russian Federation since 1996. The average growth rate amounted to nearly 4 million m³ per year. Roundwood exports from Russia in 2000 were 31.4 million m³. The main reasons behind the growth in exports are lower prices, weakness of domestic conversion of roundwood as well as comparatively short transport distances from eastern suppliers to western markets. There are some signs that the expansion of exports of roundwood is only a medium-term development, because in the long term exports of value-added products should augment.

The EU/EFTA subregion is the largest importer, where roundwood imports nearly doubled since 1996. They grew by 19.3% between 1999 and 2000, reaching a

TABLE 5.1.4
Roundwood exports and imports in the UNECE region, 1996 - 2000
(1,000 m³)

	1996	1997	1998	1999	2000	Average growth rate	% change 1999 to 2000
EXPORTS							
EU/EFTA	12,240	14,301	16,062	16,247	24,310	2,609	49.6
of which:							
France	2,573	2,655	3,258	3,442	6,590	882	91.5
Germany	3,046	4,063	4,902	4,033	5,013	390	24.3
Switzerland	998	1,160	1,021	1,239	3,789	566	205.8
Denmark	222	236	288	290	1,757	312	505.9
Other Europe	10,005	12,941	15,292	16,001	17,290	1,763	8.1
of which:							
Estonia	1,927	3,041	3,875	4,016	4,432	599	10.4
Latvia	1,946	3,139	4,251	3,751	4,353	543	16.1
Czech Republic	2,817	2,827	2,661	2,798	2,030	-160	-27.5
Slovakia	567	1,081	735	1,232	1,759	254	42.8
CIS	17,710	19,950	22,343	29,968	33,781	4,216	12.7
of which:							
Russian Federation	16,675	18,753	20,947	28,280	31,430	3,904	11.1
Belarus	670	711	881	834	945	67	13.3
Ukraine	356	479	508	844	844	134	0.0
North America	13,224	11,897	14,407	14,022	14,994	566	6.9
Canada	1,155	901	2,067	2,248	2,984	500	32.8
United States	12,069	10,996	12,339	11,775	12,010	66	2.0
IMPORTS							
EU/EFTA	34,700	40,253	49,036	52,476	62,579	6,798	19.3
of which:							
Sweden	5,066	7,745	9,301	10,428	11,904	1,636	14.2
Finland	6,613	6,775	9,347	10,301	10,004	1,031	-2.9
Austria	4,747	5,433	5,237	7,093	8,464	909	19.3
Spain	1,974	2,137	4,150	3,243	7,533	1,222	132.3
Other Europe	2,915	3,546	4,194	4,933	6,075	771	23.1
of which:							
Turkey	1,249	1,049	1,346	1,430	1,883	165	31.7
Czech Republic	218	505	784	817	954	178	16.8
Poland	394	288	372	591	732	98	23.9
Slovenia	258	333	294	491	496	63	1.0
CIS	827	526	483	396	497	-79	25.4
of which:							
Russian Federation	481	335	228	153	223	-70	45.8
Belarus	0	0	60	150	105	36	-29.9
Kazakhstan	0	0	0	0	76	15	...
North America	6,908	7,563	8,044	7,685	8,118	254	5.6
Canada	6,156	6,753	7,012	6,201	6,543	22	5.5
United States	752	810	1,032	1,484	1,575	232	6.1

Source: UNECE/FAO TIMBER database, 2001.

TABLE 5.1.5

Exports and imports of wood residues, chips and particles, 1996 -2000
(1,000 m³)

	1996	1997	1998	1999	2000	Average growth rate	% change 1999 to 2000
EXPORTS							
EU/EFTA	8,072	7,429	12,251	8,365	8,253	130	-1.3
of which:							
Germany	2,987	3,522	7,677	3,653	3,097	35	-15.2
France	1,211	1,156	1,318	1,568	1,804	160	15.1
Austria	1,707	557	699	842	961	-121	14.1
Belgium	...	...	...	698	671	...	-3.9
Other Europe	1,871	1,824	2,091	2,486	2,572	206	3.4
of which:							
Estonia	748	747	1,070	1,158	796	51	-31.3
Latvia	198	235	334	514	733	135	42.6
Czech Republic	552	479	339	497	662	24	33.2
Slovakia	157	185	181	151	165	-2	9.3
CIS	644	701	529	600	651	-9	8.5
North America	8,954	7,919	7,562	7,774	7,035	-398	-9.5
Canada	1,717	1,707	1,498	1,575	1,830	9	16.2
United States	7,237	6,212	6,064	6,199	5,205	-408	-16.0
IMPORTS							
EU/EFTA	10,493	10,950	12,724	12,002	12,330	473	2.7
of which:							
Italy	1,155	1,499	1,703	1,759	2,082	211	18.4
Germany	720	873	2,041	1,204	1,533	196	27.3
Belgium	...	...	...	1,489	1,324	...	-11.1
Finland	740	943	1,079	1,118	1,229	115	9.9
Other Europe	399	707	219	333	480	-21	44.4
of which:							
Slovenia	49	69	84	119	154	26	29.5
Czech Republic	23	54	65	73	95	16	30.1
The fYR of Macedonia	0	1	1	1	86	17	12137.1
Hungary	199	450	34	49	46	-71	-5.3
CIS	1	3	3	5	6	1	12.0
North America	2,516	3,075	2,827	2,044	2,271	-152	11.1
Canada	933	1,611	1,816	1,112	1,328	29	19.4
United States	1,583	1,464	1,011	932	943	-181	1.2

Source: UNECE/FAO TIMBER database, 2001.

record of 62.6 million m³. The imports came mainly from CIS and "Other Europe" subregion, and also from "Other developed" countries. The EU/EFTA subregion receives about one fourth of its industrial roundwood imports from countries within the subregion and exports nearly 90% to the countries of the same subregion (intra-trade).

Simultaneously, the net import of roundwood to the EU/EFTA subregion increased by 4.2 million m³. In 2000, the roundwood net imports of EU/EFTA countries amounted to 38.3 million m³.

North American exports fell from 13.2 million m³ in 1996 to 11.9 million m³ in 1997, which could be linked to the reduced harvesting on national forests in the United States. The subregion is a stable net exporter with more than 6 million m³ annually.

At 3.4 million m³ the UNECE region was an important net exporter of wood residues, chips and particles. The main exporters are EU/EFTA subregion with 8.3 million m³ in 2000 and North America with 7 million m³. The EU/EFTA imported 12.3 million m³ of these materials in 2000. While exports of the UNECE region decreased between 1999 and 2000, owing to a 3.7% drop by the United States, imports grew by 4.9%. This led to a decrease in net exports over 1996-2000 by 29.3% (table 5.1.5).

5.1.2.2 Analysis based on FAO trade flows database

The analysis of industrial roundwood trade flows for the period 1996-1999 indicates that the UNECE region has more than the half of the global industrial roundwood trade (tables 5.1.6 and 5.1.7). Trade within the UNECE region (intra-trade) shared more than one third of global roundwood trade.

The most important flows of roundwood trade inside the UNECE region were the exports from the CIS, mainly from Russia, to the EU/EFTA subregion corresponding to 11.7% of global trade. The exports were mainly going to Finland and Sweden.

Another important flow of industrial roundwood was the 9.3% of global trade from EU/EFTA countries to EU/EFTA countries (intra-trade). The main industrial roundwood flows here were going from Sweden to Norway and from Germany to Austria. The EU/EFTA subregion receives more than 40% of global imports, mainly from CIS, "Other Europe", "non-UNECE" and as intra-trade from the EU/EFTA countries.

Significant exports of roundwood were going from "Other Europe" to the EU/EFTA subregion, corresponding to 8.5% of global industrial roundwood trade. As discussed below, this flow was dominated by exports from Czech Republic to Austria and from Estonia and Latvia to Sweden.

Also of note were the exports from the CIS (10.4%) and from North America (8.8%) to the "non-UNECE" subregion i.e. countries outside the UNECE region. The recipients of this roundwood trade were principally Japan, receiving the lion's share, and China. Around 5.3% of North American "exports" stayed in the same subregion, as intra-trade between Canada and the United States nearly doubled from 1996 to 2000 and now dominates Canadian imports. There are significant year-to-year changes in roundwood trade flows (graph 5.1.3).

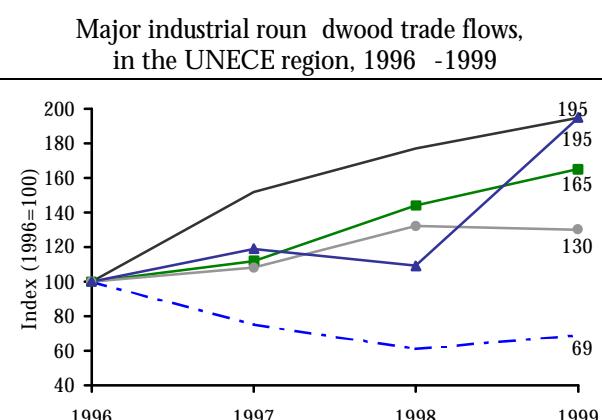
The industrial roundwood trade flow from "Other Europe" and from the CIS to the EU/EFTA countries rose steady over the last five years. This could continue over the medium-term, until domestic demand increases.

TABLE 5.1.6
Industrial roundwood trade flows in the UNECE region, average 1996 -1999
(% of global trade)

Major importing Countries, in subregions	Major exporting countries, by subregions							
	EU/EFTA	Other Europe	CIS	North America	Non-ECE	Other developed	Other developing	Total
EU/EFTA	9.3	8.5	11.7	0.4	1.1	8.3	3.8	43.2
Other Europe	0.1	0.0	0.8	0.0	0.0	0.5	0.3	1.8
CIS	0.0	-	-	-	-	0.2	-	0.2
North America	0.0	0.0	0.0	5.3	0.1	4.4	0.1	10.0
Non-ECE	0.2	0.0	10.4	8.1	13.6	0.4	7.8	40.4
Other developed	0.4	0.3	0.5	0.1	0.2	0.7	0.2	2.4
Other developing	0.1	0.1	0.1	0.3	0.2	0.3	0.9	2.1
TOTAL	10.1	9.0	23.5	14.2	15.1	14.9	13.2	100.0

Source: FAO Yearbook of Forest Products, 1997-2000.

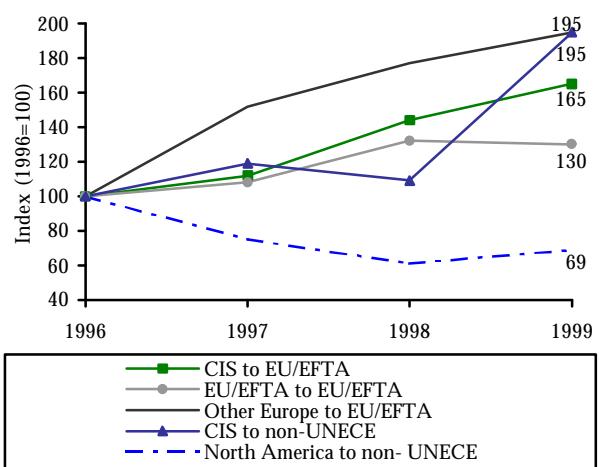
TABLE 5.1.7
Industrial roundwood trade flows, by major countries, average 1996 - 1999
 (% of global trade)



U = Germany, EST = Estonia, FIN = Finland, FRA = France, HUN = Hungary, LVA = Latvia, MAL = Malaysia, NA=North America, Sweden, URG = Uruguay, USA = United States

GRAPH 5.1.3

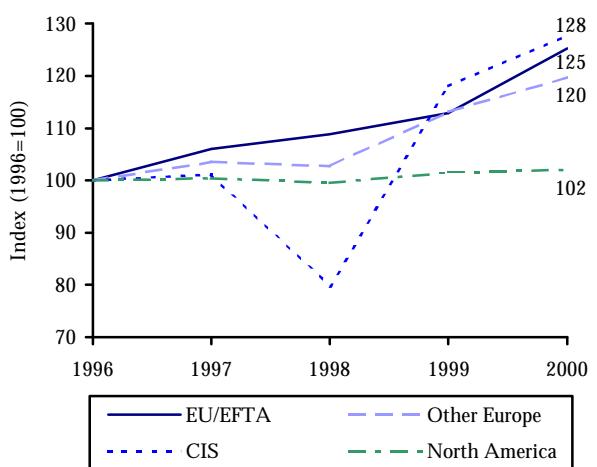
Major industrial roundwood trade flows
in the UNECE region, 1996 -1999



Source: FAO Yearbooks of Forest Products, 1997-2000

GRAPH 5.1.4

Apparent consumption of roundwood
in the UNECE region, 1996 -2000



Source: UNECE/FAO TIMBER database, 2001.

The most rapid increase is in the flow from CIS to the “non-UNECE” subregion. Between 1998 and 1999 the traded roundwood volumes nearly doubled. These developments are certainly related to the decrease in exports from North America to the “non-UNECE” countries, losing market share to “Other Europe” and CIS exporters.

5.1.3 Apparent consumption

Apparent consumption of roundwood in the UNECE region increased by 4.4% between 1999 and 2000 and reached a volume of 1.27 billion m³ (graph 5.1.4). Consumption increased 60% from 1998 through 2000 in the CIS. However, consumption fell more than 20% from 1996 to 1998, because of weak domestic demand and management problems in harvesting and transport of roundwood. In the past, little roundwood export revenue was reinvested into the development of domestic production capacities. Since 1998 the picture has changed radically.

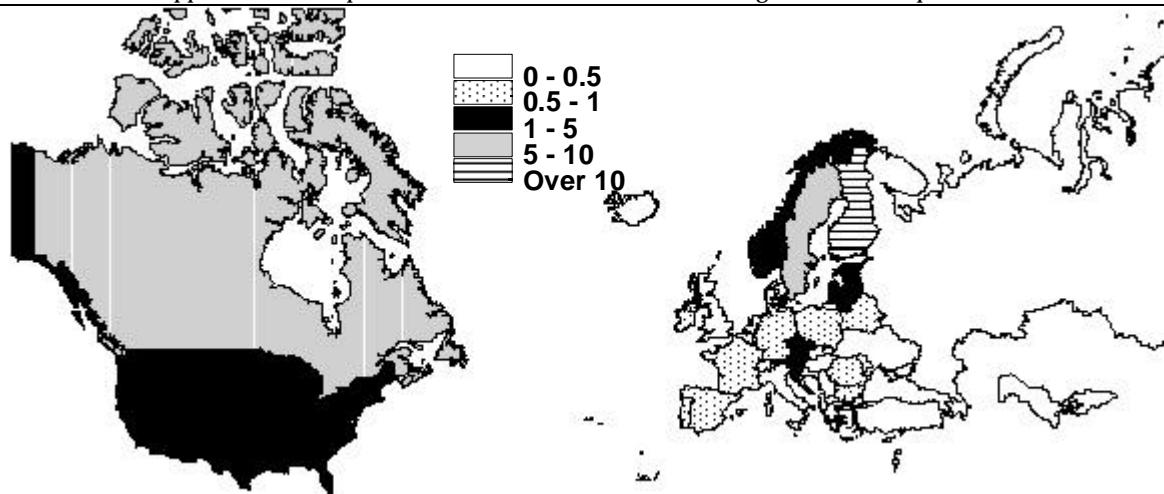
In “Other Europe” and EU/EFTA subregions, increasing production, exports and imports have led also to a steady increase in consumption. Between 1999 and 2000 roundwood consumption increased in the “Other Europe” subregions by 5.8% and in the EU/EFTA subregion by 11.0% respectively. Among all the subregions, the greatest increase in 2000 was in EU/EFTA. The huge volumes of roundwood, arising from the 1999 storm damages led to a better use of sawmilling capacities, leading in some cases to stocking of roundwood and sawnwood at mills.

The highest increase in absolute terms was also for the EU/EFTA subregion, where the average growth of roundwood consumption from 1996 to 2000 corresponded to 15.8 million m³ annually, whereas in the CIS the same figure amounted to 7.7 million m³, in “Other Europe” to 4.6 million m³ and in North America to 3.4 million m³.

Apparent consumption of roundwood reached 681 million m³ in 2000 in North America. While North America consumed more roundwood than other subregions, its growth at 0.5% in 2000 was the slowest of the four regions.

Consumption per capita is highest in Finland and Sweden in the UNECE region. This is related to the high development of the wood processing industry compared to some other branches of the national economy. Among the analysed subregions, North America has the highest consumption per capita, with 6.2 m³ in Canada and 1.8 m³ in the United States. For the EU/EFTA subregion, roundwood consumption per capita amounts to 0.87 m³, followed by “Other Europe” with 0.55 m³ and the CIS with 0.48 m³ per capita. Figure 5.1.1 shows the consumption per capita for the UNECE countries in a map.

FIGURE 5.1.1

Apparent consumption of roundwood in the UNECE region, m^3 /capita in 2000

Source: UNECE/FAO TIMBER database, 2001.

5.2 Developments in EU/EFTA

Roundwood production in the EU/EFTA subregion increased between 1999 and 2000 by nearly 12% and reached a level of 307 million m^3 . The main reason for this increase was the windthrow in December 1999, which affected mainly France, Switzerland, Denmark and also Germany (listed in order of magnitude of loss as a percentage of annual removals). The volumes of windthrow in these four countries were significant compared with their average level of removals. Statistics showed a huge increase of roundwood production for these countries. While the reported volume of windthrow for France was 140 million m^3 , which would correspond to more than three times the average removals, roundwood production statistics for 2000 were for 50 million m^3 , only 17% higher than removals in 1999.

As a result of concerted action by Governments and private industry, huge volumes of roundwood as well as sawnwood have been stored in order to stabilize the roundwood markets. For example, in Germany, government support for storm-hit forests included investment aids for the installation of long-term storage. The total volume of the subsidy programme was calculated at \$110 million, mainly financed by the state Governments.

Despite the problem of reduced quality of wood from damaged forest after the windthrow, log production in 2000 was notably higher (15.4%) than that for pulpwood (10.2%). Certainly as a result of roundwood oversupply in 2000, unit prices dropped for exports by about 30% and for imports by 20% (table 5.2.1).

The EU/EFTA subregion, with 62.6 million m^3 of roundwood imports in 2000, remains the largest importer and at the same time, with 38.3 million m^3 of roundwood, the only net importer of UNECE subregions. The most important importers of industrial roundwood were Finland and Sweden in 2000, importing about 11.9 and 10.0 million m^3 respectively, and getting most of these volumes from Russia and the Baltic countries.

Expanding exports from "Other Europe" and CIS countries, mainly going to western Europe, changed traditional trade flows. Over the last six years, Germany's net exports to other EU/EFTA countries steadily declined, while its net imports from the CIS increased rapidly, replacing net imports from the "Other Europe" subregion. In 2000 Germany was even a small net exporter to the "Other Europe" subregion (table 5.2.2).

The huge oversupply of roundwood from the storms led to lower prices. Although Germany, France and Sweden are the traditional roundwood exporting countries, after the storm they enlarged their exports. Spain, Austria, Italy and Belgium augmented their normal roundwood imports by huge volumes, but not Finland. As a consequence the subregion as whole increased net imports between 1999 and 2000 by 5.6%.

Because of the increasing production and net imports, roundwood apparent consumption in the EU/EFTA region increased by 11.0% and reached 345 million m^3 in 2000. Consumption is increasing constantly with an average growth of 15.8 million m^3 annually.

TABLE 5.2.1
Export and import roundwood unit prices in the UNECE region, 1996 - 2000
(\$/ m³)

	1996	1997	1998	1999	2000	Average growth rate	% change 1999 to 2000
EXPORTS							
EU/EFTA	52	44	75	74	52	3.0	-29.6
Other Europe	45	38	47	48	42	0.3	-13.7
CIS	53	50	44	41	40	-3.4	-3.3
North America	169	144	105	115	119	-13.0	3.4
TOTAL	80	65	65	63	57	-4.9	-10.5
IMPORTS							
EU/EFTA	78	73	70	66	53	-5.7	-20.1
Other Europe	94	73	81	62	56	-8.6	-9.8
CIS	26	26	33	25	29	0.5	14.1
North America	50	54	59	67	76	6.5	13.8
TOTAL	74	70	69	66	56	-4.1	-15.6

Source : UNECE/FAO TIMBER database, 2001.

TABLE 5.2.2
German roundwood net trade, 1995 - 2000
(1,000 m³)

	1995	1996	1997	1998	1999	2000
EU/EFTA	2,926	1,701	2,131	2,074	1,582	1,142
Other Europe	-282	-336	-245	-101	-216	74
CIS	-14	-39	-63	-136	-522	-623
Non-UNECE	39	44	41	14	-4	15
TOTAL	2,669	1,369	1,863	1,850	840	609

Note: The figures from ZMP do not exactly match those in the UNECE/FAO TIMBER and FAO databases.

Source : Zentrale Markt - und Preisberichtsstelle für Erzeugnisse der Land-, Forst - und Ernährungswirtschaft GmbH, 2001.

The EU/EFTA subregion also imported about 12.3 million m³ of wood residues, chips and particles and exported 8.3 million m³. Thus, unlike the other UNECE subregions, the EU/EFTA subregion is also a net importer of residues, chips and particles (table 5.1.5).

5.3 Developments in “Other Europe”

Most of the countries in central and eastern Europe are on their way to a market-oriented policy framework. In some countries the transition process includes the privatization or restitution of forests. For example in the Baltic region it is expected that about 50-60% of the future roundwood supply will come from private forest owners. These new “competitors” are offering lower prices (Lithuanian Centre of Forest Economic Information Bulletin, 2001).

Roundwood production in “Other Europe” countries has been steadily increasing at a rapid rate during the last five years with an average of about 5.6 million m³ per

year. In 2000 removals increased by 6.2 million m³, which corresponds to a growth of 5.3%. Most of this current growth was from Poland, Latvia and Estonia (in order of magnitude). Roundwood production also increased rapidly in Bulgaria (9.5%) and the former Yugoslav Republic of Macedonia (28.2%).

Since 1996 Poland has been the biggest supplier in this subregion with about 25.6 million m³ in 2000. The Directorate of State Forests owns 70% of the total resources of Poland and dominates the market by its price policy. At the same time the sawmilling industry consists of small, not well-organized enterprises (USDA Foreign Agricultural Service, 2001).

Log production in the “Other Europe” subregion is increasing faster than the UNECE region average, especially in Latvia, where the growth between 1999 and 2000 amounted to 1.6 million m³ and 23.6%.

With 11.2 million m³ of roundwood in 2000, this subregion is the second net exporter of the UNECE region, after the CIS subregion. Expanding production is

the background for a fast increase in exports, by 8.1% between 1999 and 2000, leading to a volume of 17.3 million m³. In 1999 large volumes of industrial roundwood went from Estonia (1.9 million m³) and Latvia (2.6 million m³) to Sweden and from the Czech Republic to Austria (1.9 million m³).

Total roundwood imports by countries of the "Other Europe" subregion also increased sharply by 23.1% in 2000, reaching more than 6 million m³.

Exports of wood residues, chips and particles increased by 3.4% between 1999 and 2000, reaching 2.6 million m³. After North America the "Other Europe" subregion is the second important net exporter of these products, with about 2.0 million m³.

Taking the above into consideration, the "Other Europe" subregion is still the weakest roundwood consumer in UNECE region with a 5.8% growth in consumption between 1999 and 2000, higher than the average in the UNECE region.

5.4 Developments in the CIS

In comparison to the "Other Europe" subregion, most of the CIS countries are only in the beginning of a stabilization of the policy framework, so the development of roundwood markets has been characterized by high volatility. The totals for the CIS subregion were dominated by those of the Russian Federation, by far the largest producer and consumer.

Roundwood production in the subregion as a whole decreased through 1998, to approximately 100 million m³. However, from 1998, removals increased by nearly 60% to 2000, and even more in Russia by 66%, reaching 170 million m³ roundwood in the subregion as a whole.

The future potential in the CIS region is huge. Timber harvest volume in the Russian Federation in the late 1980s was more than 300 million m³, whereas the potential for sustainable forest use was even higher at about 400 million m³ roundwood annually. In 2000, Russia reached 158.1 million m³ removals, which was only about half of the volumes cut during the 1980s. However, most of Russia's timber resources are located in remote areas with weak infrastructure and would need investments before increasing production significantly (reported by Professor Eduard L. Akim, 2001). 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 (Worldwidewood.Com, 2001).

Large-scale leasing of forestland and the auctioning of timber stands are currently increasing output. The Russian Forestry Service reported that in 2000, over 2,500 plots with a total area of 70 million hectares were

leased. In addition, some 30 million m³ of standing timber was sold at auctions during 2000. Rates differ by districts within provinces, as well as by wood quality and the distance to the markets. (USDA Foreign Agricultural Service, 2001).

About one third of removals are logs, whose production only between 1999 and 2000 increased by 3.2 million m³. Pulpwood production increased extremely fast, 18.2% between 1999 and 2000, reaching 46.4 million m³.

The current data may be underestimated because of unrecorded removals (e.g. from illegal fellings). The volumes for such cuttings range, according to various publications, from 2 to 20 million m³ roundwood, which would correspond to up to 15% of the reported removals.

CIS roundwood exports were increasing rapidly and reached 33.8 million m³ in 2000. Between 1999 and 2000 the exports grew by 12.7% or roughly 3.8 million m³. Russia accounted for this increase mainly, with exports growing by 11.1%. Exports of wood residues, chips and particles grew considerably, by 8.5% between 1999 and 2000.

In 1999 more than the half of the exports of industrial roundwood from the Russian Federation went to the EU/EFTA subregion, including about 8.7 million m³ to Finland and 2.1 million m³ to Sweden. Huge volumes of industrial roundwood were exported from the UNECE region, for example to Japan (7.0 million m³) and to China (5.0 million m³). The areas closest to export markets, i.e. northwestern and far eastern areas of Russia, have greater export market opportunities. In comparison to EU/EFTA and "Other Europe" the imports of the CIS subregion, with about 0.5 million m³, were still minor. Between 1996 and 1999 significant volumes of industrial roundwood were traded from Russia to Turkey.

Consumption of roundwood decreased through 1998, owing to the transition process and the mid-1998 economic crises. Since 1998 consumption has grown by 51.4 million m³ or 60%. In other countries of this subregion, for example Belarus and Ukraine, consumption is still decreasing, whereas at the same time net exports of roundwood are increasing. One of the main needs is to return revenues from exports of resources back to the general economy and for renovation of obsolete machinery in the forest sector.

5.5 Developments in North America

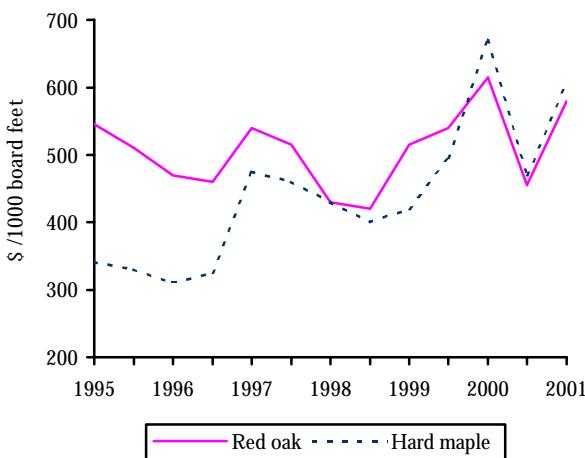
As in the EU/EFTA subregion, roundwood production in North America is relatively stable. In 2000, 688 million m³ of roundwood was produced, of which nearly 400 million m³ was logs and 200 million m³ was pulpwood. The rest was other industrial roundwood.

Roughly 500 million m³ of total removals were from the United States.

As reported last year, the management in United States National Forests in the Pacific Northwest is changing in the direction of ecosystem management, leading to a decrease in roundwood supply from these forests. Despite the fact that during 2000 the Forest Service timber sales went down, total cuttings in the United States are still increasing, between 1999 and 2000 by 2.8 million m³ or 0.6%. The roundwood supply is shifting to private forests, mainly in the southeastern region of the country. This could be a reason for temporarily fast-rising United States sawlog prices (graph 5.5.1).

GRAPH 5.5.1

United States hardwood log prices, 1995 -2001



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

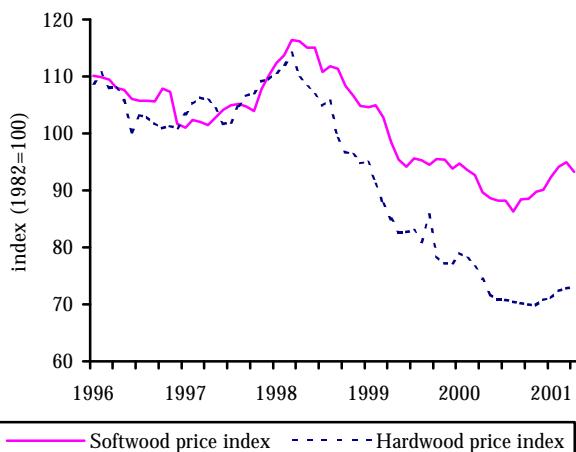
Source: Ohio Timber Prices, Ohio Division of Forestry, 2001.

Pulpwood production in United States was increasing rapidly through 1998, by an average annual growth rate of 5.9 million m³, whereas the production of wood fuel decreased by 4.9 million m³ per year. Pulpwood prices in North America are influenced by global pulp and paper markets, but are more directly a function of local supply conditions (USDA Forest Products Laboratory, 2001). Pulpwood prices were falling through mid-2000, but then rose again into 2001 (graph 5.5.2).

The average pulpwood price index trends for the United States are largely determined by trends in pulpwood supply conditions in the southern United States, where the largest share of pulpwood is produced and consumed in the United States. Available supplies of pulpwood have generally continued to improve with slower than anticipated growth in woodpulp capacity and

GRAPH 5.5.2

United States average price indexes for delivered pulpwood, 1996 -2001



Source: United States Bureau of Labor Statistics, 2001.

expansion of softwood pulpwood supply from pine plantations in the South.

The recent downward price trends for pulpwood and recovered paper raw materials in the United States reflect in part the weakness of recent years in United States exports of pulp, paper and paperboard products, owing in part to the exceptionally strong United States dollar value. Should the dollar value decline in the near future, United States producers will be positioned competitively with relatively low fibre raw material input prices (reported by Dr. Peter Ince, 2001)

Logs exports to Japan from North America decreased significantly from 7.3 million m³ in 1995 to 4.8 million m³ in 2000 (Japan Wood-Products Information and Research Center, 2001). Nonetheless, total roundwood exports increased by 6.9% for North America as a whole. Roundwood exports are increasing, especially in Canada, where the growth rate between 1999 and 2000 corresponded to 32.8%. Imports have increased in the United States by an average growth rate of 232,000 m³ annually since 1996. The position of North America as a roundwood net exporter was decreasing through 1997 to a level of 4.3 million m³. But since that time net exports increased and amounted to 6.9 million m³ in 2000, which was still below the levels of the 1980s and 1990s when Canada and United States dominated trade to Japan.

The main source of Canadian imports are exports from the United States with 5.7 million m³. In 1999 the United States exported 4.6 million m³ of industrial roundwood to Japan. More than the half of North American industrial roundwood imports and about one third of the exports were intra-trade between the United States and Canada. Therefore, apparent consumption is

slightly increasing by 3.3 million m³ during 1996 to 2000 and by 0.5% between 1999 and 2000.

North America is a net exporter of wood residues, chips and particles, with about 4.8 million m³ in 2000. While chips and particles trade is decreasing for the United States, Canadian imports rose in 2000, but not back to 1998 levels.

5.6 Conclusions

Production and consumption of roundwood in the UNECE region reached 1.3 billion m³ in 2000, increasing by 4.6%, mainly because of the storm damage in Europe. These levels are still well below the supply potential of the forests in some countries. Between 1999 and 2000, exports and imports increased by roughly 18%, reaching 90 million m³ and 77 million m³ respectively.

The extensive windthrow from the December 1999 storms led to a roundwood oversupply in Europe in 2000. France, Switzerland, Denmark and Germany were mainly affected. Roundwood production and exports accelerated in Europe, leading to a decrease in prices. Export unit

values dropped in the EU/EFTA subregion from \$72/m³ in 1999 to \$52/m³ in 2000.

Since 1996 exports of wood raw material from CIS as well as from central and eastern European countries to western Europe have increased rapidly, whereas the total exports climbed from 1999 to 2000 by 12.7% and 8.1% respectively. These exports influence the traditional roundwood trade flows in other parts of the UNECE region and outside of it. Roundwood production and consumption in the CIS decreased from the beginning of market reforms through 1998. Since that time there has been a significant increase through 2000, by roughly 60%. Incomes from expansion of roundwood exports in CIS and other European countries are increasingly used to improve obsolete technical equipment, which leads to increasing productivity and medium-term domestic purchasing power.

While the United States lost some market share in Japan, industrial roundwood trade between the United States and Canada is increasing. Production and consumption of industrial roundwood in North America slightly increased.