# *Chapter 1*
# *Overview of forest products markets in 2000 and early 2001*

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*Highlights*

- *Consumption of forest products continued to climb to new records in 2000 in the region covered by the United Nations Economic Commission for Europe (UNECE), despite a slight downturn in North America.*
- *European forest products trade and production accelerated in 2000 in response to strong demand within the EU/EFTA subregion, growing consumption in central and eastern Europe and rising demand outside Europe.*
- *Strong housing construction in North America fostered growth in the panel sector; however, a mid-2000 peak in sawnwood production, combined with a downturn in the paper and pulp sector, may signal an end to the long-term rise in consumption of total forest products.*
- *December 1999 windstorms in western Europe felled almost 200 million $m^3$ of roundwood, the equivalent of two years' harvest in the most affected countries, causing chaos in forests and timber markets, especially for logs and pulpwood, but lesser effects on other downstream sectors.*
- *Excess roundwood supply in Europe depressed prices in 2000 and 2001 and despite strong domestic and export demand, sawnwood prices moved lower too.*
- *North American sawn softwood prices exhibited cyclical trends, rising from near record lows in mid-2000 to shoot up again in early 2001, in part due to the expiration of the United States – Canada Softwood Lumber Agreement (however, sawn softwood prices were falling again in mid-2001).*
- *Russian Federation forest products consumption showed the first signs of recovery in 2000, rising 7%, despite significantly higher exports of paper and wood products, boosted partly by a weaker rouble.*
- *Central and eastern European countries forest products markets generally outperformed other subregions of the UNECE, but on substantially smaller volumes.*
- *After the peak in mid-2000 of the global business cycle, North American and European economies slowed considerably, which, together with currency fluctuations, especially the strengthening dollar and weakening euro, negatively affected international trade in the second half of 2000 and 2001.*
- *Certified forest land area doubled from 2000 to 2001, to reach 80 million hectares in the UNECE region.*
- *In Europe, PEFC-labelled certified forest products became available in 2000 in addition to FSC-labelled products; SFI-labelled products are expected in North America later in 2001.*

## 1.1 Forest products market developments in the UNECE region

*Forest products markets escalated to new heights in 2000 in the UNECE region.[1] Wood-based panels consumption rose throughout the UNECE region, out distancing all other primary forest products sectors with a gain of over 5%, to a record 121 million $m^3$ (table 1.1.1). Consumption of sawnwood rose by 1.7% to an all-time high of 304 million $m^3$, with stronger European consumption outweighing a slight downturn in North American sawn softwood consumption (hardwood consumption rose universally in the UNECE region). Reflecting a mid-year downturn in demand as the United States economy slowed, paper and paperboard (and woodpulp) markets stalled in 2000, and were not showing any indications of rebounding in mid-2001. Commensurate with the developments above, roundwood consumption rose by 4.4% in 2000.*

*Three major factors affected the region's forest products markets in 2000: (a) the December 1999 windstorms in the Europe which felled almost 200 million $m^3$ of roundwood; (b) the slowdown in the European and the United States economies – but not housing construction – coupled with the strengthening of the dollar; and (c) the rebounding exports from central and eastern European and CIS countries. These factors above are all reflected throughout the Forest Products Annual Market Review, 2000-2001.*

*The catastrophic December 1999 windstorms in Europe left in their wake the equivalent of three year's harvest on the forest floor in France and Switzerland. One year's harvest volume was downed by the three storms in the eight most affected countries (in order of volume lost): France, Germany, Switzerland, Sweden, Denmark, Poland, Austria and Lithuania. Overall in Europe the windthrown volume was equivalent to a half-year's harvest. The storm clean-up began immediately where timber was accessible and continues today. The surplus supply of sawlogs, veneer logs and pulpwood drove prices down and resulted in heightened trade, both within Europe and offshore. Ramifications were not immediately apparent in the early statistics on which the special chapter analysis was based in last year's Review, but with full 2000 statistics the profound effects of the storm damage can be seen pervading primary forest products markets beyond roundwood, especially sawn softwood and hardwood. Fortunately the European and export markets for logs and sawnwood were strong in 2000 and about a third of the windthrow was used. Some volumes are still in storage and even greater volumes have been uneconomical to remove from forests, or have been left intentionally for ecological reasons.*

*Reflecting the windthrow volumes and high demand for primary forest products, production of roundwood in the UNECE area climbed 5% in 2000 to 1.3 billion $m^3$. These volumes are about half of the net annual increment on forests available for wood supply as published in the recent Temperate and Boreal Forest Resources Assessment 2000. Roundwood trade exploded in 2000 in the EU/EFTA subregion, expanding by 50% as 2.6 million $m^3$ more were exported than in 1999. Imports rose higher yet, by 6.8 million $m^3$, a 19% increase over 1999, reaching 62.6 million $m^3$, 8 to 10 times more than the other subregions. Much of these imports are intra-Europe, e.g. as pulpwood from the Baltic Countries to Sweden and Finland, but the imports from outside Europe are growing too, e.g. pulpwood from Russia and Brazil.*

*North American consumption of primary products fell overall by 1.0% in 2000, a drop of 7.6 million $m^3$ in roundwood equivalent. However, this total masks gains to record levels in consumption of wood-based panels, sawn hardwood and secondary processed wood products. The slight drop in consumption hides the fact that North America had the highest average unit value prices in the region for exports of industrial roundwood, sawnwood (hardwood and softwood), particle board and OSB, and newsprint. Commensurate with a decline in sawn softwood production, sawlog consumption fell accordingly.*

*This year's analysis of forest products markets in Europe investigates the differences in the magnitude of short-term trends between the EU/EFTA subregion and in the "Other Europe" subregion (principally the central and eastern European countries and Turkey). For all primary forest products combined, the consumption in "Other Europe" rose by 10.4% to reach almost 76 million $m^3$, while consumption in the EU/EFTA subregion rose less, by 3.8%, but on considerably higher volumes, achieving 492 million $m^3$. It is important to note that many central and eastern European countries (CEECs) have moved out of the economic transition period and have re-established their forest products production and trade capacities, often with foreign investments. These improvements are finally evidenced in rising domestic consumption. A special chapter in this Review focuses on the markets of one such country, Romania, which like other CEECs, is dependent on expanding export markets for development of the domestic forest products industry. Throughout different product sectors this same pattern is repeated, i.e. fast growth in consumption, production and trade in CEECs, but on considerably lower volumes and values than in the EU/EFTA countries.*

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*[1] Countries in the UNECE region and its subregions are listed in the annex.*

*TABLE 1.1.1*

*Apparent consumption of sawnwood [a], wood-based panels [b] and paper and paperboard in UNECE region, 1997-2000*

| | Thousand | 1997 | 1998 | 1999 | 2000 | Change 1999 to 2000: Volume | % |
|---|---|---|---|---|---|---|---|
| EU/EFTA | | | | | | | |
| Sawnwood | $m^3$ | 82,046 | 89,206 | 88,779 | 93,958 | 5,179 | 5.8 |
| Wood-based panels | $m^3$ | 37,770 | 40,744 | 42,373 | 45,213 | 2,839 | 6.7 |
| Paper and paperboard | m.t. | 72,023 | 73,266 | 77,930 | 79,390 | 1,460 | 1.9 |
| Total | $m^3$ EQ [c] | 435,866 | 456,295 | 474,028 | 491,808 | 17,780 | 3.8 |
| OTHER EUROPE | | | | | | | |
| Sawnwood | $m^3$ | 13,708 | 15,133 | 15,340 | 16,331 | 990 | 6.5 |
| Wood-based panels | $m^3$ | 8,960 | 9,235 | 9,005 | 10,104 | 1,099 | 12.2 |
| Paper and paperboard | m.t. | 8,275 | 8,595 | 8,775 | 9,900 | 1,124 | 12.8 |
| Total | $m^3$ EQ [c] | 64,323 | 68,127 | 68,702 | 75,859 | 7,156 | 10.4 |
| RUSSIAN FEDERATION | | | | | | | |
| Sawnwood | $m^3$ | 15,949 | 14,731 | 12,683 | 12,523 | -160 | -1.3 |
| Wood-based panels | $m^3$ | 3,310 | 2,603 | 3,030 | 3,615 | 584 | 19.3 |
| Paper and paperboard | m.t. | 2,122 | 2,128 | 2,848 | 3,382 | 534 | 18.8 |
| Total | $m^3$ EQ [c] | 38,007 | 34,948 | 34,796 | 37,285 | 2,489 | 7.2 |
| NORTH AMERICA | | | | | | | |
| Sawnwood | $m^3$ | 166,319 | 172,597 | 181,862 | 180,795 | -1,067 | -0.6 |
| Wood-based panels | $m^3$ | 50,749 | 54,528 | 60,207 | 61,707 | 1,500 | 2.5 |
| Paper and paperboard | m.t. | 95,718 | 98,587 | 104,089 | 101,641 | -2,448 | -2.4 |
| Total | $m^3$ EQ [c] | 671,795 | 697,612 | 740,176 | 732,569 | -7,607 | -1.0 |

a *Excluding sleepers.*

b *Excluding veneer sheets.*

c *Equivalent of wood in the rough. 1 $m^3$ of sawnwood and wood-based panels = 1.6 $m^3$, 1 m.t. paper = 3.39 $m^3$.*

*Source: UNECE/FAO TIMBER database, 2001.*

*CIS countries, based mainly on statistics received from the Russian Federation, reported the first gains in forest products consumption as a whole since the beginning of the transition process in 1991. In Russia the consumption of panels and paper and paper board both increased by approximately 19%. Consumption of sawnwood continued falling; however, exports of sawnwood rose 20%. In fact, in 2000, boosted by the devalued rouble, exports of most other products also increased: plywood by 7%, paper and paperboard by 17% and woodpulp by 21%. Roundwood production, of which 20% was exported, rose by 11%. Russia's pulp and paper sector experienced a significant recovery in 1999 and 2000, along with growing domestic and export demands. Exports of some paper and paperboard grades were half of production. Even with the increases in domestic consumption, production and exports, Russia remains below the pre-transition levels.*

*For all of Europe, sawn softwood markets registered record production in part due to the storm-downed volumes of sawlogs, and mostly due to a rise in consumption. However supply, increased by imports from CIS and other supply regions, outstripped demand in Europe and prices generally fell from 2000 into 2001. A growing portion of the European production is being exported to Japan, other Asian markets including China, and the United States owing to favourable exchange rates in 2000 and 2001. Despite increasing exports out of Europe, the EU/EFTA subregion remains a net importer of sawnwood. When the rapidly expanding exports from "Other Europe" are added to those of the EU/EFTA subregion, Europe as a whole is a net exporter, with about*

*75% being traded within Europe and 25% being exported out of Europe.*

*North American sawn softwood markets were marked by the expiration of the United States – Canada Softwood Lumber Agreement in March 2001. The agreement, which had been in existence since 1996, had regulated Canada's exports to the United States and had influenced prices. North American sawn softwood prices were near record lows when the Review was written in summer 2000, but they rebounded in early 2001 as the end of the Agreement came closer. In the summer of 2001, Canadian exports, which are roughly one third of the United States consumption, have slowed as United States industry groups have initiated action to again control the Canadian imports. United States housing remains strong with 1.6 million houses built in 2000, of which over 90% are wood-framed, and the same levels are forecast in 2001 and 2002, despite the slowdown in the North American economies and the recession in the United States manufacturing sector in 2001.*

*Sawn hardwood consumption rose again throughout the UNECE region, to record levels in the United States and Europe, as demand for hardwood furniture, millwork and mouldings came from new housing construction and remodelling and repair. United States sawn hardwood consumption, for furniture, cabinets and flooring, rose over 2% to reach 33 million m*$^3$*, while the EU/EFTA subregion rose by almost 8% to reach 15 million m*$^3$*. Consumption in "Other Europe" rose less, by 3% to 4 million m*$^3$*. Demand softened in the United States, as reflected by prices near the end of 2000 and into 2001. Likewise in Europe, lower demand at the end of 2000 and early 2001, coupled with the increased production from windthrow losses, resulted in falling sawn hardwood prices. China and other Asian countries have increased imports of sawn hardwood from the UNECE region, although some of that wood is returned in the form of value-added products such as furniture. In North America in mid-2001 there were indications that the record levels of production, consumption and trade would not be repeated in 2001.*

*The panel market is divided into structural panels, e.g. OSB and softwood plywood, and non-structural panels, e.g. MDF and particle board. These two sectors exhibited divergent trends in the subregions of UNECE. MDF drew all panel markets up again in 2000, but a slowdown in capacity expansion is forecast in Europe in 2001 for the first time, and North America. MDF has found increasing acceptance in new uses, in addition to the preference it has earned in furniture manufacturing. The other main non-structural board, particle board, is truly a European product as production in 2000 rose by over 4% to a record 29 million m*$^3$*, in comparison to stable production in North America at 13 million m*$^3$ *(all statistics without OSB). Trade of particle board in Europe was active in 2000, especially in the CEECs, but subdued in North America. With the strong dollar the United States imported more furniture, cabinets and other secondary processed wood products, which was reflected in domestic furniture plant closings, and a weakened demand for non-structural panels.*

*Structural panels showed opposite trends. OSB production in North America and Europe rose to new records by 2.3% to reach 18 million m*$^3$ *and by 54% to reach 1.4 million m*$^3$*. OSB continued substituting for softwood plywood for construction in North America, recording a 75% market share in sheathing. Meanwhile in Europe, the utilization for residential construction is less, although it is starting in some countries with the advent of wood-framed housing techniques. The increased production of OSB (and MDF) in 2000 led to a price collapse in North America.*

*Production of engineered wood products increased in 2000, especially for glulam beams, which increased worldwide by 19% over 1999, to a record 3.1 million m*$^3$*. For UNECE region producers the main export market is Japan, where approximately 55% of the market is imported, primarily from Europe, but also from North America and the Russian Federation, sometimes as glulam stock, i.e. sawnwood for manufacturing glulam*[2]*. Although wooden I-beams have gained a 33% market share of the North American new residential construction flooring, production fell by 3% in 2000, mainly because lower-priced sawnwood joists (beams) were substituted. As approximately 60% of North American LVL (laminated veneer lumber) production is used as flanges in the I-beams, production of LVL fell by 6% to 1.4 million m*$^3$*.*

*In 2000, European paper, paperboard and pulp manufacturers registered a record year, benefiting from the weak euro and the strong dollar on which these products are traded internationally. In contrast, North American producers faced a market reversal in mid-2000 and the record profits in the first half of 2000 eroded. This continued in light of weak global demand in 2001, producing the first protracted decline since 1996. Paper, paperboard and woodpulp markets showed some of the earliest signs of the forthcoming economic slowdown. This turn of events is reflected in paper, paperboard, recovered paper and woodpulp prices, which fell from peak levels in early 2001. Accordingly some capacity adjustments were taking place in the UNECE region, although some new capacity is being added in China and*

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[2] *This and other trends affecting UNECE region exports to Japan are the subject of a special chapter on Japan's market drivers.*

*other Asian countries, and some capacity is being restored or built in the Russian Federation.*

*In 2000 the tropical timber market continued to recover from the steep downturn of the 1997 and 1998 Asian crises. However, owing to softening economies in major tropical importing regions and countries (North America, EU/EFTA and Japan) in mid-2001, the full recovery may not be attained this year. Nevertheless, China is having greater influence on the tropical timber trade, currently importing the most roundwood, and later possibly the most primary processed products. The UNECE region increased its imports of tropical sawnwood in 2000. The tropical timber trade is orienting itself away from primary products and towards secondary processed wood products.*

*World trade of secondary processed wood products is expanding faster than trade of primary products, with five countries accounting for 60% of the imports: United States, Germany, France, United Kingdom and Japan. The initial effects of the shift of manufacturing of value-added wood products to low-cost labour regions are beginning to be seen in North America, as evidenced by furniture plant closures in 2001, as furniture imports increased.*

*Until now, markets for certified forest products (CFPs) have been constrained by supply, as well as final consumer demand. However in the last year, the area of forests certified for sustainable forest management doubled to 80 million hectares. Trade grew steeply too, especially in some environmentally-sensitive markets in the UNECE region. Demand continues to be driven by retailers and business-to-business markets, where advantages other than price premiums are currently important. Forest certification and certification of forest products is highly controversial, with strong opinions; however, positions are changing, and mutual recognition is established between some, but not all, schemes.*

## 1.2 Globalization of forest products markets

*A number of trends have been influencing forest products markets in the UNECE region in 2000 and 2001. Economic trends, the influence of the European storm's windthrow volumes and the emerging and re-emergence of central and eastern European and CIS markets were discussed above. However various globalization factors are continually affecting the UNECE region's forest products markets[3]:*

- *The switch to lower cost fibre from forest plantation regimes. Sourcing of new material is shifting to newly-emerging forest producing regions.*
- *Emerging economies with commensurate rising consumer demand.*
- *The information-communication-technology revolution affecting all facets of the forest and forest industries sector.*
- *Interaction and interdependence between markets, and in the case of wood products, the threat of substitution by less environmentally friendly and non-renewable products.*
- *Increasingly uniform prices for globally-traded wood products similar to the current situation for the commodity grades of paper and woodpulp.*
- *Increased capital mobility, continued "dollarization" of the world economy and investor portfolios seeking more global diversification. Investor preference for companies that focus on fewer products on a bigger scale.*
- *Improving transportation logistics, from harvesting to ocean transport, leading to reduced transportation costs which supports greater international trade.*
- *Larger buying groups, especially big home centre chains and retailers, sourcing wood products (primary, secondary and finished goods) on a global scale.*
- *A movement towards trade in value-added wood products is evolving in many countries, simultaneously with growing constraints in the export of unprocessed goods.*
- *Higher costs of labour in developed economies favouring a shift to more abundant, lower cost labour in developing countries, especially with enlargement of free trade areas.*
- *Changing international trade framework.*
- *Increasingly strong pressures concerning environmental issues. Forest certification is a natural outcome of globalization.*
- *Marketing groups for wood products are increasingly concentrated and getting larger. Their purchasing imperatives are becoming global.*

[3] *Most of the ideas in this section come from a paper in production for the keynote presentation at the 2-3 October 2001 Timber Committee market discussions by the authors, Mr. Marc Boutin, Director, International Trade, and Mr. Nsimba Kinuani, Director, both with the Quebec Lumber Manufacturers' Association, 1175, avenue Lavigerie, Sainte-Foy, Quebec, Canada, G1V 4P1. telephone +1 418 657 7916, fax +1 418 657 7971, e-mail marc.boutin@sciage-lumber.qc.ca and nsimba.kinuani@pribec.com*

*Faced with these factors, some of which are advantages, others not, often depending upon who is looking at them, the response of the forest products industry is crucial. The Timber Committee believes in developing new products and growing markets. This is evidenced by its promotion of the environmentally friendly and renewable attributes of forest products.*

*Product development and integration is ongoing as commodity manufacturers seek to add value to their products. With a foreseeable sustained worldwide surplus in wood supply and potential additional wood products manufacturing, there will be increased competition for existing markets. In this context, stimulating demand will require a global effort not confined to already mature markets. Improved consumption levels of solid and reconstituted wood products in emerging markets are needed. The development of building systems which employ solid and reconstituted wood products is another. Finally, the use of wood products in non-residential construction is another avenue which could relieve the oncoming supply imbalance.*

## 1.3 Timber Committee forecasts for 2001

*At their joint session in October 2000 in Rome, the Timber Committee and European Forestry Commission forecast production, consumption and trade of forest products in 2000 and 2001. For European consumption of sawnwood they forecast a slight rise, 0.5%, in 2001 to reach 112 million m$^3$. Wood-based panels were forecast to grow faster, by 1.7%. The Committee's European consumption forecasts for 2000 were lower than the recorded volume. Export forecasts for 2000 were also low, perhaps underestimating the windstorm effects on forest products markets, and thus with the slowing market in mid-2001, the slight increase forecast for the year may be accurate.*

*North American forecasts for a downturn in sawn softwood consumption in 2000 were accurate. However, the weak economic signs in mid-2001 bring uncertainty for the 1% rebound forecast in 2001. Panel consumption was forecast to increase by 0.5% in 2001, which correlates with mid-year strength in housing construction. Roundwood production was forecast to rise similarly, by 0.6%.*

*The Committee and Commission forecast Russian Federation consumption, production and exports to improve for all product sectors in 2000, which in general came true. The forecasts for 2001 were again optimistic, i.e. for growth, although slower than in 2000.*

*Slowing economies in 2001 confirm the forecast trends. The Timber Committee will review these forecasts for 2001 and then forecast forest products markets in 2002 at its October 2001 session. Nevertheless, in mid-2001 it appears that the 2000 records in some subregions, especially in North America and EU/EFTA, will not be repeated, at least for some sectors in 2001.*

# *Chapter 2*
# *Economic factors affecting forest products markets in 2000 and early 2001*

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### *Highlights*

- *The global business cycle peaked in the first half of 2000, and growth rates in both North America and Europe were significantly lower in the second part of the year.*
- *The outlook for 2001 is for much slower growth, with considerably uncertainty.*
- *For the first time in a decade, all UNECE transition economies reported positive rates of economic growth in 2000, although so far only four countries have recovered pre-1989 levels.*
- *GDP growth in Russia was at 7.7% in 2000, but like other transition economies, it slowed in the second half of the year.*
- *Energy prices rose sharply in late 2000, but since then, the trend has been downward. This slowed growth in the region, but helped demand in energy exporters, notably Russia.*
- *Strength in the United States residential construction continued in 2001 and may have kept the country out of recession.*
- *While western European residential construction was declining slightly in 2000, central and eastern Europe was growing*
- *The December 1999 windstorms in Europe, which felled nearly 200 million $m^3$ of roundwood, elevated repair and remodelling expenditures in affected countries.*

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# Chapter 3
# Romania's forest products markets [1]

## Highlights

- *Romania's forest products industry is recovering from a serious downturn following political and economic changes in 1989 and is poised to make considerable improvements in production and trade.*
- *Roundwood removals have risen slightly in the past few years, and for many important species, removals are half of their unsustainable levels in the 1980s.*
- *Sawnwood production increased strongly in 2000, by roughly 20% over the levels in 1999, and now production approaches levels in 1988 (before transition to the market economy started), but remains 27% below the peak in 1985.*
- *Production of many other wood products increased in 2000 although only sawnwood and furniture have exceeded 1990 levels.*
- *Owing to low, but growing domestic demand, development of the Romanian wood industry is contingent on increasing exports.*
- *After climbing by 75% in value since 1990, wood products exports are almost 10% of all of the country's exports combined.*
- *The wood-based panels industry has had recent capacity increases, partly through foreign investment, and although MDF exports have been initiated, higher particle board imports result in a negative trade balance for the panels sector.*
- *Romania's rich forest resources, predominantly hardwoods, supply the country's current needs as well as for roundwood exports which have increased sharply since their liberalization in 1998.*
- *Exports of sawnwood, combined with higher production of wood products, were the causes of unsustainable harvest levels before 1990.*
- *Initiation of certification of sustainable forest management is planned for 2001; however, there are no certified forest products sold in Romania at present.*

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# *Chapter 4*
# *Influences on Japanese demand for wood products* [1]

### *Highlights*

- *Wood use in Japan stems mostly from residential construction, which rivals the United States market in terms of number of housing starts, and presents tremendous market opportunities for overseas producers of structural wood products.*
- *Post & beam type of construction dominates, but markets for North American-style platform-frame construction are steadily growing.*
- *Several trends related to wood use are driving the demand for structural wood products in Japan, including the growing importance of high-performance, aesthetically pleasing wood products, the adoption of platform-frame building technologies and engineered wood products, and the emergence of a pre-cut component manufacturing sector.*
- *Changes are under way in the markets for non-structural wood products for interior applications as Japanese consumer tastes shift towards the use of lighter coloured softwoods and western styles.*
- *Changing demographics (population stability and an increasing proportion of elderly persons) are having an impact on the use of wood in Japan.*
- *Changes in regulatory requirements regarding housing in Japan, including the Government Housing and Loan Corporation, the Building Standard Law and the Housing Quality Assurance Law, will have a considerable impact on wood products imports and business relations.*
- *The future of wood product imports to Japan will be characterized by further global competition, the potential for increased trade protectionism, the need for high performance wood products and systems, and growth in the repair and remodelling market.*

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# *Chapter 5*
# *Wood raw material – production, trade and consumption*

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*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 m$^3$ 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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# *Chapter 6*
# *Sawn softwood – consumption, production and trade* [1]

## *Highlights*

- *In 2000 in the UNECE region, production of sawn softwood reached a new high of 264 million $m^3$, a 1.6% increase over 1999.*
- *Nordic countries' production and exports were at record highs in 2000, and shipments of further processed sawn softwood products are increasing.*
- *Nordic countries' and Austria continue to see growth in exports of sawn softwood outside of the EU/EFTA region, especially to Japan.*
- *Growth in exports from central and eastern Europe, 13% from 1999 to 2000, is considerably higher than the export growth rate in the EU/EFTA subregion of Europe of 4%.*
- *Sawn softwood exports from Canada to the United States made record highs in 1999 and 2000, representing roughly 35% of total United States consumption.*
- *Canadian exports of further processed sawnwood products, including wood furniture, reached record levels in 2000.*
- *United States exports of sawn softwood continue near their decade lows of 1998, at less than 3 million $m^3$, due to increased domestic consumption and reduced production.*
- *United States imports from South America and Europe are at record levels.*
- *Expiration of the Canada – United States Softwood Lumber Agreement in March 2001 has created much apprehension for Canadian producers, leading to a drop in shipments and higher prices.*
- *While Japanese import volumes of sawn softwood remain considerably below the 1997 peak of over 10 million $m^3$, Japan remains an important market for supplier regions around the globe. Canada has maintained market share in Japan, while the United States lost market share, and Sweden, Finland and Austria enjoyed spectacular gains.*
- *Sawn softwood production and trade increased sharply to record levels in France, Germany and Switzerland following the December 1999 windstorms and sawnwood prices weakened.*

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# *Chapter 7*
# *Sawn hardwood – consumption, supply and trade*[1]

## *Highlights*

- *Consumption of sawn hardwood in the UNECE region continued to rise to an all-time record through 2000, driven by improved economic conditions, particularly in the United States.*
- *Sawn hardwood production in the UNECE region increased by 4.1%.*
- *Sawn hardwood production in the United States reached an all-time record level in 2000 but, based on early reports, may have fallen by up to 25% in the early part of 2001.*
- *Trade in hardwoods was at record levels in 1999 and continued to accelerate during most of 2000 throughout the UNECE region.*
- *Prices of logs and sawnwood produced in the region advanced, although much more so in North America where the domestic and export demand was exceptionally strong and only towards the end of 2000 showed any sign of easing.*
- *European production of sawn hardwood in 2000 responded to increased demand and improved prices and swelled with the recovery of storm-blown timber at the beginning of the year and demand from Asia.*
- *Eastern Europe emerged as a more significant supplier of sawn hardwoods greatly assisted by the continued strength of the dollar and weakness of the euro currency.*
- *Globalization of hardwood markets continued to play an increasingly important role, well demonstrated by the influence of such countries as China in the global supply and demand equation.*
- *Rationalization in the furniture industry within and outside the UNECE region is changing the supply and demand profile for sawn hardwood.*
- *The first half of the 2001 market saw a sharp downturn in demand levels and prices in North America and Europe.*

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# Chapter 8
# Wood-based panels – supply, trade and consumption[1]

## Highlights

- Panel markets in the UNECE region out-performed all other forest products market sectors in 2000.
- A price collapse hit the structural panel markets in North America and Europe in 2000.
- In the EU/EFTA countries, total consumption of wood-based panels increased 6.7% to a record high of 45.2 million $m^3$, confirming the recovery of the sector.
- In the Russian Federation, consumption of wood-based panels was up by 19.3% and reached 3.6 million $m^3$, confirming the recovery of the sector.
- Although North American structural panel prices staged a rebound in the spring of 2001, the economic recovery of the sector is overshadowed by sluggish demand and further capacity additions.
- In 2000 and 2001, a strong dollar disadvantaged North American structural panel exporters vis-à-vis European and South American suppliers.
- High profits in oriented strand board (OSB) in the past and predictions of further gains in market share vis-à-vis plywood have induced North American and European interests to build more capacity, fostering conditions of oversupply.
- OSB market share in North American commodity sheathing (for roofs, floors, and walls in homes) passed the 75% level at the expense of softwood plywood.
- Future market growth of OSB in North America is increasingly predicated on gains in residential remodelling, do-it-yourself purchases and other non-housing applications.
- European OSB production rose about 20% from 1999 and four more plants are being built.
- Turnover in capacity is occurring in all branches as newer, high-capacity plants drive out older, smaller operations with higher unit costs.
- European particle board markets are recovering as new capacity is absorbed and several older plants are phased out.
- European production of MDF rose by 15% in 2000, but capacity growth will ease in 2001 following major expansions.

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# Chapter 9
# Paper, paperboard and woodpulp – production, consumption and trade[1]

## Highlights

- Economic recovery was the hallmark of pulp and paper market trends in 1999 and 2000, but a slowdown in global economic growth led to a more recent market reversal.
- European producers sustained record levels of paper and paperboard output in 2000, benefiting from regional GDP growth, a strong United States dollar and weak euro.
- Although prices had been climbing from early 1999 into 2000 for paper, paperboard, market pulp and recovered paper, they fell from peak levels during the first half of 2001.
- Market and profitability peaks attained earlier in the year 2000 gradually eroded, at first in North America and subsequently in Europe as well.
- The North American market reversal reflects impacts of a record United States trade deficit, a recession in the United States manufacturing sector, and weak economic growth in Asia.
- Monthly paper and paperboard purchases declined in the United States from early 2000 into the first quarter of 2001, the first protracted decline since the early 1990s.
- United States paper industry profits fell from the first quarter of 2000 to the first quarter of 2001, with weak exports, declining domestic purchases, and higher energy costs.
- Globally, net capacity growth remains subdued, well below historical growth rates, particularly in North America where many mills have been shut down in the past several years.
- A weakening of growth in Asian economies reduced pressures on global fibre supplies, further contributing to weakness in pricing for market pulp and recovered paper.
- Russia's pulp and paper sector experienced a significant recovery in 1999 and 2000, boosted by the devalued ruble along with growing domestic and export demands.

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# *Chapter 10*
# *Markets for certified forest products* [1]

## *Highlights*

- *Markets for certified forest products (CFPs) continue to be mainly located in western Europe, especially the United Kingdom, Netherlands and Germany, and in the United States.*
- *The CFP market continues to grow exponentially in some markets. Market share of CFPs is claimed by proponents of certification schemes to be over 25% in the United Kingdom, around 4% in the Netherlands and less than 1% in Germany.*
- *Awareness by final consumers of CFPs continues to be low and there are few signs that private consumers actively ask for CFPs or are actually paying premiums. However, several large retail chains are actively promoting CFPs.*
- *Public procurement plays an important role as a driver of demand in several countries.*
- *In the business-to-business markets most of the CFP marketing has been based on its potential competitive advantage, market access, image building and environmental pressure.*
- *On the supply side the area of certified forests has also grown exponentially, reaching about 80 million hectares by mid-2001, due to several new certification systems now operational, notably Pan European Forest Certification (PEFC) in Europe and Sustainable Forestry Initiative (SFI) in North America, in addition to the existing Forest Stewardship Council (FSC).*
- *In Europe around 28.5% of the forest area is already certified, compared with about 6.7% in the United States.*
- *Today, a wide range of CFPs are available mostly with a FSC label as in the past, but also increasingly with a PEFC label.*
- *Forest certification remains highly controversial, with conflicting stakeholder interests, divergent views on certification as well as differences of opinion on the issue of mutual recognition between major schemes.*
- *The coming year will see further growth of CFP markets and further intense discussions.*

> *Note: the basis of information in this chapter is not the UNECE TIMBER database built on country-supplied statistics as in the previous chapters. As no official statistics exist on certified forest products, it is based on the author's experience, claims by certification organizations and a partial survey of a new network of UNECE country-nominated certification experts.*

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# *Chapter 11*
# *Secondary processed wood products markets[1], including engineered wood products[2]*

### *Highlights*

- *World trade of secondary processed wood products is expanding at a faster rate than trade in primary wood products.*
- *United States, Germany, France, United Kingdom and Japan account for 60% of world imports of secondary processed wood products.*
- *Changing import supply patterns to these markets differ by product and by country.*
- *Imports of secondary processed wood products from tropical producers are replacing primary product imports from these producers.*
- *Comparative advantage in the manufacture of secondary processed wood products is likely to shift increasingly to regions with low production costs.*
- *Engineered wood product markets are gaining market share in North America; for example, 33% of wood floor area is now built with wooden I-beams.*
- *North American glulam production increased by 14% in 2000.*
- *Laminated veneer lumber (LVL) production in North America declined by 6% in 2000.*
- *The value of world trade in wooden furniture ($29 billion) exceeds that of sawnwood ($25 billion) and wood-based panels ($16 billion).*

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# *Chapter 12*

# *Tropical timber market developments* [1]

### *Highlights*

- *In 2000, the global tropical timber sector continued to recover from the sharp downturn due to the 1997 and 1998 Asian crises.*
- *China is driving the tropical log trade and will likely soon become the largest importer of primary topical timber products.*
- *With increased orientation towards value-added processing, the value of the trade of secondary processed tropical wood products is approaching that of the declining value of primary product trade.*
- *The United States is the single largest importing country of secondary processed wood products, and imports the greatest value of tropical secondary products. The EU 15-country bloc imports the largest value of secondary products, mostly furniture.*
- *Tropical log production and exports continued to decline in 2000, while sawnwood, veneer and plywood production and trade expanded.*
- *Reconstituted panels, such as MDF, will become increasingly important for tropical countries in utilizing tropical raw materials efficiently and as substitutes for plywood and sawnwood.*
- *Tropical sawnwood imports by EU countries fell by 3% in 1999 but rose by 7% in 2000. Imports of other primary tropical timber commodities by the EU fell during 1999 and 2000.*
- *Certification of sustainable forest management is a hot topic and tropical countries are producing some certified forest products, either under a national label or under an international scheme's label.*
- *Tropical timber prices have recovered generally from the 1997 and 1998 crises, and in the case of mahogany sawnwood, have reached record levels.*
- *Several major discrepancies between exporters' and importers' reports of trade flows indicate significant volumes of undocumented trade in logs and sawnwood.*

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