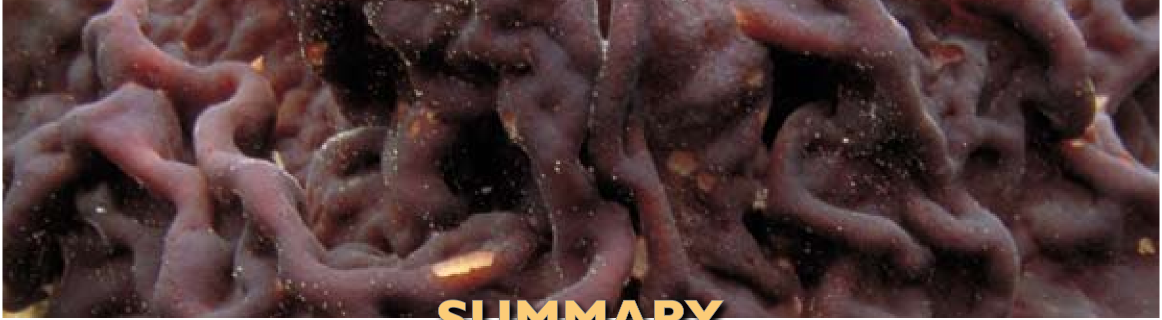

SUMMARY

For the list of figures and tables (Contents), see page 17

1 FOREST RESOURCES

Of the land area in Finland, 87% or 26.3 million ha is classified as forestry land. Based on site productivity, forestry land is divided into forest land (20.1 million ha), scrub land (2.8 million ha) and waste land (3.2 million ha of treeless or almost treeless land). In addition, forestry land also includes 0.2 million ha of forest roads, timber depots, etc. The national definitions of the forestry land categories are as follows:

- *Forest land*: the potential annual average increment of the growing stock is at least 1.0 m^3/ha.
- *Scrub land*: the potential annual average increment of the growing stock is less than 1.0 m^3/ha, but at least 0.1 m3/ha.
- *Waste land*: the potential annual average increment of the growing stock is less than 0.1 m^3/ha.

FAO's definition of forest differs from the Finnish national classification. According to FAO, all forest land and most of scrub land in Finland would be considered forest land.

Of total forestry land in Finland, 52% is under non-industrial, private ownership; the state owns 35% and forest industry companies own 8%. The remaining 5% represents forests under municipal, parish, shared or joint ownership. State-owned forests are mainly situated in northern Finland. The state also owns extensive nature conservation and wilderness areas, most of which are located in northern Finland. Almost all of Finland is within the boreal coniferous zone, and growth conditions deteriorate sharply from south to north.

The majority of the Finnish stands grows on areas classified as forest or scrub land. The volume of the growing stock is marginal on scrub land, so practically all forestry activities take place on forest land. The essential forestry statistics (growing stock volume, increment, etc.) are presented for forest and scrub land stands (or merely for forest land stands). The total area of forest and scrub land in Finland amounts to 22.9 million ha, of which 92% is available for wood supply. The remaining 8% is protected.

The growing stock volume in Finland amounts to 2 189 million m^3 (over bark). Since the late 1960s, the standing volume has continuously risen and is now 47% higher than four decades ago. Half of the growing stock volume consists of *Scots pine*, 30% *Norway spruce* and 20% broadleaves (mainly birch). The proportion of pine has increased and that of spruce has decreased. The proportion of growing stock on mires is 24%. Draining of mires has improved the growing conditions for trees on peatlands, and hence the importance of growing stocks on mires is rapidly increasing. Of the total growing stock volume, 94% grows in forests available for wood supply or under restricted forestry use.

The annual increment of the growing stock in Finland is 98.5 million m^3; this is an increase of 72% since the 1960s. The increment consists of 48% for pine, 29% for spruce and 23% for broadleaves. The main contribution to the increase in increment is from pine, due to the large amount of young stands at the stage of rapid growth. The increment of broadleaves has also clearly risen but that of spruce only slightly. Of the increment, 97% is in forests available for wood supply.

Since the early 1970s, total drain (removals + natural drain) has continuously remained lower than the volume increment of the growing stock. The 2006 total drain was 65.4 million m^3, of which 41% was pine, 38% spruce and 20% broadleaves. A major part of the pine- and broadleaved-dominated stands are young stands with rapid growth, but the potential removal is less than the increment. Spruce drain has represented a markedly higher proportion of the total drain than the proportion of spruce in increment and volume of the growing stock, and mature spruce stands have been abundant amongst our spruce stands. Total drain has accounted for almost 70% of the increment of the growing stock in forests available for wood supply.

Statistics on forest resources in Finland are based on the national forest inventories (NFIs), which were started in the 1920s. The majority of the most recent forest resources data is based on the field measurements obtained during the 10th national forest inventory performed over 2004–2006.

Finland is a signatory to the Kyoto Protocol and is committed to limiting its greenhouse gas emissions. In 2005, the annual increase in carbon stocks sequestrated by forests was 38 million tons. This means that our forests act as carbon sinks.

2 FOREST BIODIVERSITY AND HEALTH

Protecting the biodiversity in forests is one of the main goals of the Finnish forest and environmental policies. It is the basis for the essential policies applied in controlling protection and use of forests and the related legislation and recommendations. They protect biodiversity through, for example, establishing protected areas, protecting valuable habitats to save threatened species, and taking into consideration the goals of biodiversity in forestry.

The total area of protected forests and forests under restricted forestry use in Finland is 2.9 million hectares. This amount represents 13% of the total forest area, i.e. forest land and scrub land. Most of these areas are located in northern Finland, where they account for 22% of forest area. Of the total forest area in Finland, 15% in northern Finland and 2% in southern Finland is strictly protected and not available for wood production. In 2006, the area of protection through nature conservation programmes grew by approximately 42 000 hectares.

The range of methods available for maintaining biodiversity has become more diverse over recent years. In selecting new areas for protection, one of the methods applied has been the voluntary participation of forest owners and protection agreements made for fixed-term periods. On previously established protected areas, some effects caused by human activities are being removed. For example, during 2006, various restoration procedures were carried out on 4 000 hectares of state-owned forest land, of which restoration on 3 900 hectares concerned protected areas. In total, the area of forest restoration in Finland amounts to over 25 000 hectares.

In commercial forests, biodiversity is promoted by maintaining valuable habitats, increasing the amount of dead wood and saving large broadleaves in cuttings. Approximately 80 000 hectares of especially valuable habitats, as defined in the Finnish Forest Act, have been found in private forests; the area corresponds to 0.6% of total forestry land. In 2006, about 95% of the valuable habitats on felling areas were preserved or almost preserved during fellings. In regeneration fellings, the average volume of retained trees was almost 6 m^3 of living and 1.5 m^3 of dead trees per hectare.

The latest assessment of threatened species in Finland was made over 1997–2000. Of the total of 43 000 species, 15 000 were known sufficiently to enable the assessment, and 1 505 of them were classified as threatened. Forests and mires were the primary habitat for 631 threatened species.

Over 2004–2006, damages reducing the silvicultural quality of stands were observed on 4.7 million hectares of forest land available for wood supply, representing 21% of the forest land in southern Finland and 30% of that in northern Finland. The most significant causes of damage were weather factors and fungal diseases. The increment rate of the growing stock and defoliation, i.e. premature loss of needles and leaves, have also been used as indicators of tree vitality. In 2006, 4% of pine, 22% of spruce and 10% of broadleaves were moderately or severely damaged (proportion of defoliation >25%). The condition of tree crowns has remained stable over recent years and the degree of defoliation is lower in Finland than in most European countries. Forest health in Finland can be regarded at least as satisfactory.

3 SILVICULTURE

Looking at the 2006 areas of silvicultural work, the area of regeneration preparation and that of artificial regeneration, as well as the total area of tending of seedling stands and improvement of young stands remained at the level of the previous year. In forest improvement, there was growth in basic improvement of forest roads, and the areas of forest fertilization and ditch-cleaning also increased. However, the annual targets set in the National Forest Programme 2010 for silvicultural and forest improvement works were, for the most part, not attained.

In 2006, the regeneration area amounted to 146 000 hectares, of which 89 000 hectares were planted, 30 000 were seeded and the remaining 27 000 hectares were left, after seed tree or shelterwood fellings, for natural regeneration. Of the planted area, 69% were for *Norway spruce*, 27% for *Scotch pine* and the remaining 4% for other tree species. Almost all seedings were performed with pine seed, and machine seeding represented 73% of all seedings. During the previous 10-year period the area of natural regeneration reached its peak in 1997 (65 000 ha), and since then the figure has steadily decreased. Finnish nurseries supplied 168 million seedlings for artificial regeneration. Additionally, 10 million seedlings imported from other EU countries were planted in Finland.

The tending of seedling stands and the improvement of young stands were continued as in previous years on approximately 218 000 hectares. Of this total, 80% was represented by non-industrial, private forests where there was growth amounting to 11 000 hectares, while in forests owned by the state and the forest industry the tending of seedling stands and the improvement of young stands decreased by approximately the same amount.

Of the 2006 figures for forest fertilization, the area of fertilization for growth (15 000 ha) exceeded that of remedial fertilization (11 000 ha). The area of ditch-cleaning and supplementary ditching amounted to 72 000 hectares, of which more than 80% was carried out in private forests. The ditch-cleaning area over the previous ten-year period has been 75 000 hectares on average. Construction of new forest roads amounted to 793 kilometres, of which more than half were constructed in private forests. Construction of new roads has been declining throughout the 2000s, while the basic improvement of existing forest roads has grown from 1 410 to almost 2 500 kilometres.

The 2006 area of fellings was 619 000 hectares, of which intermediate fellings represented 71%, regeneration fellings 28% and other fellings 2%. The total felling area increased by one fifth from the previous year and was 15% higher than the average for the previous ten-year period.

The costs of silvicultural and forest improvement works totalled EUR 235 million in 2006. At nominal value, this was EUR 13 million more than the corresponding figure for 2005 (+6%). Almost all additional investments were used for private forests, where EUR 179 million were spent on silvicultural and forest improvement. The corresponding cost allocations by the forest industries and the state were EUR 23 and 33 million, respectively.

In total, EUR 61 million of state grants were used to secure sustainable wood production, and of this amount EUR 53 million were spent on silvicultural and forest improvement works. Repelling root-rot disease was subsidized by EUR 3 million, and energywood harvesting and chipping by almost EUR 6 million. As in previous years, more than 75% of state grants were used on work implementation and less than 25% on work planning and supervising.

4 ROUNDWOOD MARKETS

Statistics are compiled in Finland on roundwood trade volumes, prices, removals and inventories. The statistics on roundwood purchases and prices refer to roundwood trade in non-industrial, private forests only. The statistics on roundwood removals contain, in addition to non-industrial, private forests, also removals from forests owned by forest industry companies and the state. Based on data gained from national forest inventories, estimates are also calculated for annual allowable removals.

In 2006, the forest industries purchased 32.4 million m^3 of wood from non-industrial, private forests. This figure was 11% higher than the dip of the previous year, but it was still 7% below the 10-year average. Roundwood trade was slow at the beginning of the year. This was mainly due to the termination of the transition period of two parallel forest taxation systems at the end of 2005, when even the remaining forest owners had to shift from area-based site productivity taxation to sales-revenue taxation. The increase in roundwood prices pushed roundwood onto the market, and towards the end of the year purchase volumes had reached the average level.

In 2006, nominal stumpage prices rose by 8% on average from the previous year. The highest increase occurred for softwood logs (8–10%). Prices for pulpwood assortments increased by 5–6 %.

In 2007, demand for roundwood was good and the increased prices speeded the January–September roundwood trade to an unprecedented level. The steep rise came to a stop in July, by which time the prices of pine and spruce logs had been historically high, having risen by 50% from the corresponding price in 2006.

The 2006 commercial roundwood removals were reduced by 3% to 50.8 million m^3 (over bark). This was the second year in succession in which roundwood removals declined. The reduction occurred in non-industrial, private forests, where removals (39.4 million m³) represented the minimum over a period of more than ten years. In the forest industries' own forests removals were exceptionally high, 6.4 million m^3. This corresponds to a 70% growth from the previous year. Removals from the state forests increased by 10% to 5.0 million m^3. In addition to removals for industrial use, approximately 5 million m^3 of fuelwood is annually harvested for domestic heating purposes in small-sized dwellings (private houses, farms and recreational dwellings).

Imported roundwood (20.0 million m^3 in 2006) is discussed in Chapter 10 and wood-based fuels in Chapter 8.

According to the results gained from the 10th national forest inventory, published in 2007, and the calculations on maximum potential removals based on them, wood resources in Finland are not a restricting factor on the consumption of domestic wood. The results indicate that the annual increment of the growing stock is 98.5 million m^3 (over bark), and the maximum sustainable removal for 2006–2015 is 72 million m^3 per year. The statistics accumulated over 2002–2006 show an average annual removal of 56 million m^3, i.e. 16 million m^3 less than the maximum sustainable removal. Annual allowable removals are calculated for the forest and scrub land available for wood supply. Restricting factors affecting wood production due to other forms of forest use have been taken into account.

5 HARVESTING AND TRANSPORTATION OF ROUNDWOOD

The statistics on roundwood harvesting and transportation mainly cover the roundwood fellings and forest haulage conducted by the forest industries and Metsähallitus. The statistics cover 86% (43.9 million m^3 in 2006) of the commercial roundwood production in Finland. Timber fellings performed by the forest industries and Metsähallitus are almost completely mechanized: in 2006, the mechanization degree was 98%. The mechanization degree was much lower concerning delivery sales in non-industrial, private forests. The 2006 volumes and costs of roundwood harvesting by the forest industries and Metsähallitus remained approximately at the same level as in 2005, although there was a minor decrease in unit costs to EUR 9.07/m^3. The average number of forestry machines used by the forest industries and Metsähallitus was reduced by 50 from the previous year figure to 1 550 machines. In contrast, the number of forwarders increased by 60, the 2006 total being 1 670.

The long-distance statistics include the commercial roundwood for which transportation is handled by the shareholding companies of Metsäteho. There was a 9% increase in this roundwood volume, which increased the 2006 volume to 45 million m^3. The main long-distance chain in Finland is direct road transportation to the mill, although in 2006 its proportion was reduced to 77% of the long-distance hauled roundwood. Also in the rail and water transportation chains, the initial transportation is usually by road, so 99% of roundwood for transportation is loaded onto timber lorries at some point of the transportation chain. On average, 1 250 timber lorries were involved with domestic roundwood transportation. The mean transportation distance of domestic roundwood increased to 151 km. In road transportation the mean distance of transportation was 107 km, but in rail and water transportation it was about 300 km. Compared with 2005, transportation distances in road and rail transportation were increased, whereas in water transportation they were shortened.

There was a slight increase in the cost of long-distance transportation of domestic roundwood to the mill; the 2006 average cost was EUR 6.36/m^3. On the other hand, the average unit cost for total transport volume (transported volume x number of km) decreased. In domestic road transportation, forest sector products comprised 17% of the total freight by road, while in rail transportation their proportion was 63%.

The volume of imports transportation was approximately the same as in 2005, almost 20 million m^3. Of this amount, 44% was imported by rail, 31% by water and 24% by road. Exports of roundwood and forest industry products accounted for 51% of freight exported from Finland. The exports of roundwood and forest industry products (altogether 22.4 million tons) increased by 13% from the corresponding amount in 2005. The increase was mainly due to a volume increase in pulp and paper industry products.

6 MULTIPLE-USE FORESTRY

In Finland, forests represent a major material, recreational, spiritual and cultural resource. Financially, the most important forest-based products are commercial wood and energywood. In 2006, the commercial roundwood production amounted to 51 million m^3, which corresponds to approximately EUR 1.6 billion in stumpage price earnings. The value of fuelwood used for domestic purposes was approximately EUR 60 million, and that of forest chips transported to heating and power plants was EUR 80 million.

Forests are also important as an outdoor environment for sports and hiking, as well as a landscape factor supporting both mental and socio-economic wellbeing. The recreational use of forests in Finland is mainly based on the public right of access, which makes it possible to wander in the forests and pick wild berries and mushrooms almost anywhere. Almost all Finns enjoy nature by, for example, hiking, picking wild berries or mushrooms, or by hunting. Adult Finns make approximately 600 million recreational visits per year to enjoy nature. The number of overnight visits to nature tourism destinations per year is about 14 million, and together these figures account for 40 million travel days. It is estimated that actual nature tourism accounts for a quarter of all value added in Finnish tourism.

There are almost 40 edible species of wild berries in Finland, 16 of which are picked for food. The annual estimated harvest of berries is 500–1 000 million kg, of which 30–40% are acceptable for picking. In good years, the harvest of lingonberries and bilberries amounts to approximately 40 million kg and the total of other wild berries accounts for 10 million kg. The majority of these are picked for private domestic use. In 2006, about 6 million kg of wild berries were marketed; this accounted for only half of the amount in 2005. The volume of purchased wild mushrooms, 0.4 million kg, remained at the same level as in 2005. The earnings of pickers on wild berries and mushrooms were the same as in 2005, amounting to more than EUR 12 million.

There are approximately 300 000 hunters in Finland, and two of every three of them went hunting at least once during the year. In 2006, 76 000 moose and 22 000 white-tailed deer were bagged by hunters. The over-winter moose population was reduced to about 90 000. Of all cervids, the total amount of meat obtained was 11 million kg, representing 90% of the total amount of game. The estimated value of this 12.4 million kg of game totalled EUR 74 million.

Reindeer husbandry is a traditional and unique means of livelihood in northern Scandinavia. In Finland, the area of reindeer husbandry is more than a third of the total area of Finland. In 2006, the number of reindeer owners was approximately 5 000. During autumn and winter 2006, 117 000 reindeer were culled, which produced 2.7 million kg of venison. The size of the winter herd after culling was about 200 000 reindeer.

7 FOREST SECTOR'S LABOUR FORCE

In 2006, the forest sector (i.e. forestry and the forest industries together) employed 89 400 persons in Finland, amounting to 4% of the total employment. There has been a steady decline in the proportion, and even in the early 1970s it was still more than 9%. The most important factor affecting employment has been the rapid mechanization in harvesting of roundwood. In 2006, 75% of the forest sector employees worked within the forest industries and the rest were employed in various forestry activities. The number of employed persons in the total forest sector dropped by 3% from the 2005 figure; the reduction was focused on the forest industries. In contrast, the employment in forestry during recent years has stabilized around 23 000 persons. Hence, the long decline in the forestry labour force seems to have come to an end.

Approximately 67 000 persons worked in the forest industries in 2006. Although several branches of the forest industries achieved production records, the number of employees dropped by almost 3 000 from the corresponding figure in 2005. Part of the downward trend is due to closed production plants and outsourced operations. During recent years, a major growing branch has been the carpentry industry, mainly supplying to domestic markets. It represented a quarter of the entire employment of the forest industries in 2006. Almost 35 000 employees worked within the pulp and paper industries. The average unemployment rate in the forest industries reduced to 4.1%, which is the lowest since the beginning of the 1990s.

In 2007, the average earnings of felling workers at the nominal value were increased by 3% to EUR 12/h. The corresponding statistics in the forest industries concern 2006. Earnings in the forest industries at the nominal value grew slightly more than in industrial work in Finland on average. In the wood products industries the average hourly earnings were EUR 14

(4% increase from 2005), and in the pulp and paper industries they were EUR 19 (+3%).

The number of accidents at work in the forest sector has decreased by approximately a quarter over the past 10 years. In 2005, 3 700 accidents at work were registered in the forest sector, and half of these occurred in the wood products industries. In fact, measured as accident frequency, it is the fourth most dangerous branch.

8 WOOD CONSUMPTION

In 2006, roundwood consumption in Finland totalled 81.5 million m^3, which is more than ever before. Of this amount over 90%, or 75.5 million m^3, was used in the forest industries. Around 6 million m^3 of roundwood was used for energy generation.

Industrial consumption of roundwood was the largest ever recorded, showing 11% of growth, 7.7 million m^3, over the previous year. The exceptional increase is explained by the fact that in 2005 the consumption by the forest industries was reduced from the normal level due to the production interruptions caused by labour market disputes in the pulp and paper industries. Compared with the 'normal' year 2004, consumption was up by one per cent.

Amongst the branches of the forest industries, the chemical pulp industry used the largest volume of roundwood, 32.4 million m^3. The chemical pulp industry also showed the highest growth from the previous year, 20%. The second largest roundwood user was the sawmilling industry, increasing its use from 2005 by one per cent, reaching a total of 27.3 million m^3. The most important assortments consumed were spruce logs, as well as pine and hardwood pulpwood, more than 15 million m^3 of each.

Of the total roundwood used in the forest industries, 56.3 million m^3 were domestic and 19.2 million m^3 were imported. The 2006 consumption of imported roundwood was higher than ever before, a quarter of all wood used by the forest industries. The use of imported roundwood has continuously grown during the past ten years. The consumption increased by 1.2 million m^3, i.e. 7% from the previous year. The most important assortment was hardwood pulpwood, the consumption of which amounted to 8.4 million m^3.

In addition to roundwood, the forest industries used 11.4 million m^3 of sawmill chips and dust originating from the sawmilling and plywood industries.

Finland is one of the leading EU countries when it comes to utilizing wood for energy purposes. Wood-based fuels currently cover one fifth of the total energy consumption in Finland, and they are the second most important source of energy after oil products. Wood-based fuels are divided into industrial waste liquours (black liquour) and solid wood fuels that consist of wood fuels used by heating and power plants and fuelwood consumed by small-sized dwellings (private houses, farms and recreational dwellings).

During 2006, heating and power plants used 14.8 million m^3 of solid wood fuels, which is 8% more than in 2005. The combustion of bark, with a volume of 8.4 million m^3, exceeded that of other wood fuels. Sawdust amounted to 1.7 million m^3 and industrial chips to 1 million m^3. Heating and power plants burned 3.1 million m^3 of forest chips. When the consumption by small-sized dwellings is added to this, the total consumption of forest chips was as high as 3.4 million m^3. Finland aims to increase the annual consumption of forest chips to 8 million m^3 by the year 2015. Small-sized dwellings currently use a total of 6.1 million m^3 of wood for heating.

9 FOREST INDUSTRIES

The year 2006 was a period of economic boom for the Finnish forest industries. Several branches of the forest industries achieved production records, thus contributing to an upturn in turnover and profitability as well. Forest industry production grew by an average of 11% compared with 2005, when volumes were exceptionally low due to the forest industrial labour dispute that lasted for almost two months. Volumes in the pulp and paper industries increased by 15%, and also the wood products industries reached a 3% annual growth mainly boosted by the production record in the plywood industry (1.4 million m^3). In contrast, production of sawn goods remained at the previous year's level, slightly exceeding 12 million m^3. Sawmilling capacity has been reduced in Finland over the past few years and instead, forest companies have acquired sawmills from, for example, Russia and the Baltic countries. Approximately 60% of Finnish sawn goods is exported. Domestic consumption per capita (0.99 m^3 in 2006) in Finland is the highest in the world.

Finnish pulp and paper industries set new production records in 2006. A total of 14.1 million tons of paper and paperboard was produced last year; this is

14% more than in 2005. Almost half of the production consisted of magazine paper and newsprint. In 2006, their production amounted to about 6.7 tons or 10% more than in the previous year. However, the strongest growth appeared for fine paper (+21%) and paperboard (+17%) production. Production in wood pulp industries increased 17% from the year before.

Approximately half of the Finnish forest companies' turnover is generated in their foreign production units, most of which are located within the European Union. Domestic turnover of the Finnish forest industries increased by 21% from 2005, to EUR 23 billion, of which two thirds came from the pulp and paper industries. The forest industries currently represent 16% of the total manufacturing turnover, while in the mid-1990s the proportion was a quarter. The profitability of forest industry companies in Finland has declined almost throughout the 2000s. In 2006, however, profitability started to improve, which is mainly explained by the growth in turnover. Total operating margin was EUR 2.2 billion or 10% of the turnover of the forest industries. However, the profitability for forest industry companies was less than the average profitability of Finnish manufacturing industries.

Approximately two thirds of the investments by the Finnish forest industries were made in foreign targets. Domestic investments dropped to EUR 0.7 billion, which is the smallest figure in twenty years. Around 70% of the investments were made in the pulp and paper industries. The proportion of forest industries was almost a quarter of the total value of investments in the manufacturing industries.

10 FOREIGN TRADE BY FOREST INDUSTRIES

In 2006, the total volume of wood imported into Finland was 20 million solid cubic metres (over bark). The amount was the second largest ever imported and corresponds to 40% of commercial roundwood removals. During recent years, Finland has been the third largest wood importer in the world.

Although 15.6 million m^3 of wood imports originated from Russia, its share has constantly decreased over the 2000s. Latvia and Estonia were the second and third most important suppliers with imported wood volumes of 1.5 million m^3 and 1.1 million m^3, respectively. During the last five years, wood imports from Latvia have increased, whereas from Estonia they have decreased. Russia has announced that there will be gradual increases to its customs tariffs on wood exports, and the first of these increases was enforced in July, 2007. If the last planned increase in 2011 is implemented, it has been predicted that wood imports from Russia to Finland will cease. The minimum customs duty (EUR 50/m^3) would then exceed the price paid in 2006 at the Finnish border for imported wood from Russia.

The most important assortment was birch pulpwood, representing one third (6.8 million m^3) of the total imports of roundwood. More than half of the birch pulpwood used by the forest industries was imported. Imports of logs amounted to 4.5 million m^3 and that of pulpwood (incl. chips) 15.0 million m^3. Roundwood is mainly imported to meet the needs of the pulp industries in eastern Finland. The real prices of imported wood have clearly risen during the first part of 2007. Contrary to imported volumes, exports of roundwood from Finland are of minor importance.

In 2006, the value of exports of Finnish forest industry products totalled EUR 12.5 billion, accounting for 20% of Finland's total exports (EUR 61.5 billion). On international comparison, the proportion of Finnish forest industry exports was high but it was the lowest ever in Finland. The share of forest industry products of the total exports from Finland has decreased by almost 6 %-units over the last five years.

In the value of exports of forest industry products, 77% represented pulp and paper industries and the remaining 23% was wood products industries. The most important export products were magazine paper (EUR 3.3 billion) and fine paper (EUR 2.0 billion). A large majority of the Finnish forest industry production is exported. In 2006, the exports accounted for 93% of paper production, 86% of paperboard, 63% of sawn goods and 88% of plywood.

Finnish exports, especially exports of forest industry products were in the hands of just a few companies. Looking at product groups, this centralization was most intensive for pulp, paper and printed products where five companies accounted for 74% of the total corresponding exports.

The European Union (EU25) is the main market area for Finnish forest industry products, accounting for 64% of the exports in 2006. Asia's share was 12%, and it has been growing in recent years. Germany was the most important customer, receiving EUR 2.2 billion worth of Finnish forest industry products. As previously, Germany's share of the total exports of forest industry products was 18%. The United Kingdom was Finland's second most important trade partner with a value of EUR 1.4 billion, though its share continued to decrease, with a final value of 11%. The exports to the United States amounted to EUR 0.9 billion. The US share has in recent years remained close to 7%.

The total value of imports to Finland increased by 17% from the previous year's value, the 2006 value being EUR 55.3 billion. However, the imports of forest industry products were slight, for they amounted to only EUR 1.4 billion. The most important product group was converted paper and paperboard products (EUR 0.3 billion). More than one fourth of forest industry imports originated from Sweden.

The Finnish foreign trade statistics on forestry products are based on data compiled by the National Board of Customs.

11 FOREST SECTOR IN FINLAND'S NATIONAL ECONOMY

In 2006, the Finnish national economy grew rapidly, though this was partially due to the forest industrial labour dispute that reduced production in 2005. The gross national product (GDP) at market prices rose more than 6%, to EUR 167 billion. The labour dispute in 2005 naturally was the main contributor to the increase of value added in the forest sector. The pulp and paper industries grew by as much as 14%, wood products industries by 8% and forestry by almost 7%.

At the end of the 1970s, the total value added in forestry, wood products industries, and pulp and paper industries represented more than 10% of the total value added in GDP. Although in 2006 the value added in the forest sector (EUR 8.1 billion at current prices) was in real terms approximately 1.5 times the value added 30 years ago, its proportion of the value added in all industries had dropped to 5.6%. The major reason for the decline has been the diversification in the industrial structure and especially the growth in electronics and metal industries, but during the 2000s the weak price development for paper products has made the decline even steeper. The forest sector was still an essential exporter in Finnish foreign trade. In total exports of goods and services in 2004, the forest sector accounted for 21% of gross and 24% of net exports.

In non-industrial, private forestry, stumpage earnings remained less than EUR 1.4 billion in 2006. However, at nominal prices there was a 5% increase in the gross stumpage earnings across all ownership categories, totalling more than EUR 1.7 billion. This was mainly due to forest companies' doubled stumpage earnings and a growth of one quarter for Metsähallitus that manages state-owned forests. A total of EUR 235 million was invested in silvicultural and forest improvement works, of which EUR 179 million was spent on private forests. The operating profit for non-industrial, private forests remained at EUR 85 per hectare, which is EUR 20 less than the average for the preceding 20-year period. The increase in stumpage prices that started towards the end of 2006 raised the return on timber production to almost 10%.

12 INTERNATIONAL FOREST STATISTICS

In 2006, the Food and Agriculture Organization of the United Nations (FAO) published the most recent data on global forest resources (*Global Forest Resources Assessment 2005 – FRA-2005*). According to the FRA-2005, there are 4 billion hectares of forests in the world, which represent 30% of the total land area. The countries with the largest forest cover are Russia, Brazil and Canada, which together make up almost 40% of the total forest area.

The FRA-2005 reveals that the reduction in the global forest land area has slowed down. The net loss in forest land area in the period 2000–2005 was 7.3 million ha per year, having been 8.9 million ha during the 1990s. The slowing of the reduction was mainly due to increased forest planting, landscape restoration and natural expansion of forests. Over the period 2000–2005, the largest net loss of forest land area occurred in Latin America and the Caribbean (4.7 million ha/year) and Africa (4 million ha/year). In contrast, the forest land area in Asia increased at an annual rate of approximately one million ha, while as late as in the 1990s there was still an annual reduction of 0.8 million ha. The main reason for the growth is the large-scale afforestation implemented in China.

In 2005, the world's growing stock volume (over bark) was 434 billion m^3 (110 m^3/ha), of which one third is located in Latin America and the Caribbean. Brazil and Russia have the largest growing stock volumes, with approximately 81 billion m^3 in each.

The 2005 global roundwood removals amounted to 3.5 billion m^3, production of sawn goods was 428 million m^3, and paper and paperboard 354 million tons. The production of roundwood and sawn goods exceeded the volumes of the previous year, whereas paper and paperboard decreased slightly.

Only 4% of the world's forests are located within the European Union (EU25) area. These forests are being effectively utilized and sustainably managed. In 2005 the EU countries accounted for 24% of the world's sawn goods, 26% of the plywood and veneer and 27% of the paper production. The forest area in the European Union has grown about 0.5% per year over the 2000s.

The USA was the leading country in the production of roundwood and forest industry products in all major product groups in 2005. In addition, the USA was a significant exporter and importer of forest products.

On international comparison, Finland is a significant importer of wood and exporter of paper products. Finland's share of total global imports (roundwood and wood chips, particles and residues) was 10%, which ranks it third after China and Japan. Of all paper and paperboard products, 3% was manufactured in Finland, whereas Finland's 16% market share of the global exports of printing and writing paper made Finland the number one exporter in this category. Finland's share of the 2005 global total value for the exports of forest products was 7%, which makes Finland the fifth on international comparison, after Canada, the USA, Germany and Sweden. The share of forest products of Finland's total exports was 19%, making Finland the second largest after Latvia's 21%.

Approximately 5% or 47 million ha of Europe's forests are currently protected. Protected forests are categorized according to the MCPFE (*Ministerial Conference on the Protection of Forests in Europe*) - classification into four different classes. Two thirds of these forests are protected with the main management objective of biodiversity (Classes 1.1–1.3), one third with the main management objective of "protection of landscapes and specific natural elements" (Class 2). Of the total area of protected forests, one third is located in the Russian Federation. Almost half of the strictly protected forest within the EU region are situated in Finland.