

## Chapter 8

# *Paper and pulp output continues to climb in Europe and Russia, but falls in North America:*

## *Markets for paper, paperboard and woodpulp, 2006-2007<sup>53</sup>*

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### Highlights

- Overall in the UNECE region in 2006, paper and paperboard consumption, production and trade continued growing, with gains in Europe and the CIS, but a downturn in North America.
- North American pulp and paper production and consumption decreased slightly in 2006 and early 2007, in part due to the slowdown in United States housing construction and its subsequent economic impacts.
- Russia's exports of paper, paperboard and woodpulp fell slightly in 2006, while **domestic** consumption accelerated by 11%.
- North American prices of many major pulp, paper and paperboard commodities were approaching ten-year highs by early 2007 due to a weaker US dollar and declining capacity; prices also rose in Europe.
- Projects to produce cellulosic fuel ethanol from biomass are underway in North America, and although wood energy use is low, paper companies are supporting efforts to develop integrated biorefineries to complement existing pulping facilities **and** produce bioenergy and biofuels.
- Fuel prices rocketed, raising concerns about energy security and climate change which resulted in widespread discussions on renewable energy sources, with **the** pulp and paper industry on **centre** stage, since it is the foremost industrial producer and user of renewable energy in Europe.
- Initiatives such as the Forest-based Sector Technology Platform play a key role in **helping** the European pulp and paper industry develop sustainable, effective bio-solutions to alleviate climate change and find solutions to **greater** wood **mobilization**.
- The new EU chemicals directive, REACH, with the objective of safe use of man-made products from the chemical industry, was essential in **ensuring** that both pulp and recovered paper were treated in a manner that did not constrain the paper industry's competitive wood procurement.

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## Secretariat introduction

The UNECE/FAO Timber Section expresses its appreciation once again to the four authors of this chapter (in alphabetical order): Professor Eduard Akim, PhD,<sup>54</sup> The St. Petersburg State Technological University of Plant Polymers and The All-Russian Research Institute of Pulp and Paper Industry, who analysed the Russian pulp and paper sector; Dr. Peter Ince,<sup>55</sup> Research Forester, USDA Forest Service, who produced the North American section; Mr. Bernard Lombard,<sup>56</sup> Trade and Competitiveness Director, Confederation of European Paper Industries (CEPI), who described trends in CEPI member countries in Europe; and Mr. Tomas Parik<sup>57</sup> Director, Wood and Paper, A.S., who analysed developments in central and eastern Europe.

Mr. Eric Kilby, Statistics Manager, and Ms. Ariane Crevecoeur, Statistics Assistant, once again provided the European data from CEPI member associations, which is the basis for the European analysis. Please note the different European country groupings: CEPI's group of 20 countries, the EU25 countries in 2006, and the UNECE European group of 41 countries. Due to some discrepancies between CEPI and UNECE/FAO definitions, the figures may vary slightly, but the trends remain the same. Thanks to these regular contributors, the *Review* has an overview of paper, paperboard and wood pulp market and policy developments across the UNECE region.

## 8.1 Introduction

The countries of the UNECE region consume over 55% of the world's paper and paperboard and consume over 70% of the world's pulp in order to make that paper. After its primary use, a growing percentage of this paper and paperboard is recovered and recycled. For example, CEPI raised its recycling target to 66% in 2010. Increasing volumes of the recovered paper are exported to China and other Asian countries - 5 million tons from Europe and over 9 million tons from North America to China in 2006.

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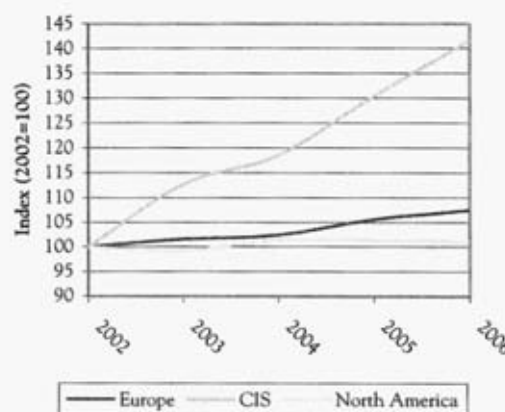
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In 2005, paper and paperboard production and consumption was rising throughout the UNECE region, but this trend changed in 2006 with a downturn in North America, which continued into 2007 (graph 8.1.1). European production and consumption improved by 2 to 3% in 2006, and Russian consumption increased by 11.1% per capita, but on lower volumes. However, for the first time since 2002, North America production and consumption dropped, and trade, both imports and exports, has continued decline since the recent peaks in 2004. The sharp drop in US housing construction in 2006 and 2007 is having multiple impacts on forest products markets and the overall economies of Canada and the US, which in turn constrains the paper and pulp sector.

GRAPH 8.1.1

Consumption of paper and paperboard in the UNECE region, 2002-2006



Source: UNECE/FAO TIMBER database, 2007.

European pulp and paper production were at record levels in 2006, driven by countries such as Finland, whose production level was also at record levels. Russia's production and consumption of pulp and paper continued to rise from the low point in 1996-1997, but is still not back to the late 1980s levels before the economic and political transition period. Exports within and from the UNECE region increased overall in 2006; however, again, the slight drop in North America was compensated by gains in the CIS and Europe. In 2006, CIS exports fell for the first time in ten years; the small drop in exports, plus the increase in production, went to higher domestic consumption.

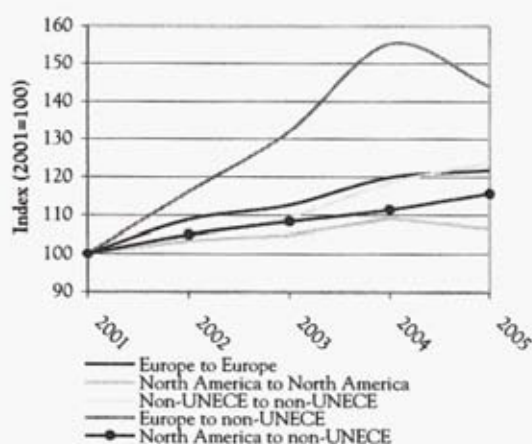
The paper and paperboard trade continued its previous trends of slight increases year after year, with the exception of exports from Europe to countries outside the UNECE region (graph 8.1.2). Previously in 2004, Europe had exported more paper products than in 2005, to destinations such as China, Hong Kong SAR, Japan,

Mexico, Australia, Malaysia and India. In 2005, there was a slight decline in the exports outside of the UNECE region, which were previously the fastest growing exports, primarily to China and India.

Woodpulp trade showed different trends than paper with the fastest growing trade from North America to China, Japan, Republic of Korea and Mexico (in descending order); however, the trend stopped rising in 2005 (graph 8.1.3).

GRAPH 8.1.2

Major paper and paperboard trade flows in the UNECE region, 2001-2005

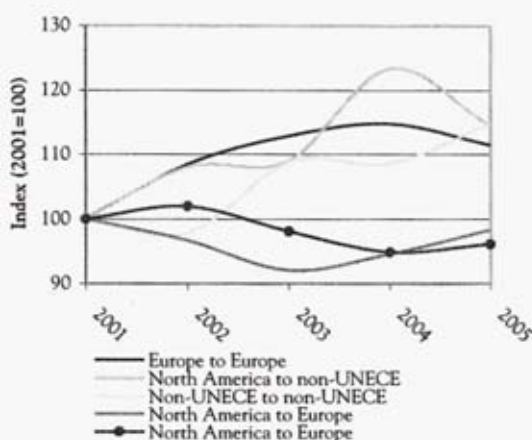


Note: Corresponding trade flow table in electronic annex.

Source: UN Comtrade/EFI, 2007.

GRAPH 8.1.3

Major woodpulp trade flows in the UNECE region, 2001-2005



Note: Corresponding trade flow table in electronic annex.

Source: UN Comtrade/DFI, 2007.

## 8.2 Europe subregion

### 8.2.1 Market developments

In 2006, the European paper industry's production increased by 3.0% over the previous year, and was 3.4% higher in the EU25<sup>58</sup> and 3.3% higher in the CEPI countries.<sup>59</sup> Consumption also rose in Europe, by 1.8% (table 8.2.1), and even a little higher, by 2.6% in the CEPI countries. Shipments of paper to countries outside of Europe increased by 6.8%, while imports from countries outside of Europe fell by 10.1%.

TABLE 8.2.1

Pulp, paper and paperboard balance in Europe 2005-2006 (1,000 m.t.)

	2005	2006	Change %
<b>Paper and paperboard</b>			
Production	104,516	107,634	3.0
Imports	56,119	58,490	4.2
Exports	66,043	69,852	5.8
Net trade	9,924	11,361	14.5
Apparent consumption	94,592	96,272	1.8
<b>of which: EU25</b>			
Production	97,096	100,400	3.4
Imports	50,547	52,920	4.7
Exports	62,058	66,027	6.4
Net trade	11,512	13,108	13.9
Apparent consumption	85,585	87,292	2.0
<b>Woodpulp</b>			
Production	41,919	43,788	4.5
Imports	19,940	19,194	-3.7
Exports	11,518	12,398	7.6
Net trade	-8,421	-6,796	...
Apparent consumption	50,340	50,584	0.5
<b>of which: EU25</b>			
Production	38,534	40,597	5.4
Imports	18,645	17,895	-4.0
Exports	10,617	11,548	8.8
Net trade	-8,028	-6,347	...
Apparent consumption	46,562	46,945	0.8

Source: UNECE/FAO TIMBER database, 2007.

<sup>58</sup> See map in annex. The main differences from CEPI countries are that the EU25 includes Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, Slovenia and excludes Norway and Switzerland. In 2006, the year of the most recent statistics, the EU included 25 countries, i.e. without Bulgaria and Romania, which became members in May 2007.

<sup>59</sup> CEPI countries include: Austria, Belgium, Czech Republic, Finland, France, Germany, Hungary, Italy, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Netherlands and UK.



Source: Finnish Forest Industries, 2007

The paper and paperboard final output for 2006 was 107.6 million tons for all of Europe (1022 million tons for CEPI countries, a rise of 3.3 million tons). This represents another record level of annual production by CEPI countries and is the first time that their final annual total has exceeded 100 million tons. The paper production capacity in CEPI countries standing at 110 million tons, indicates that the calculated operating rate for 2006 was 93.0%, 3.2 points higher than in 2005, which was affected by the paper and pulp mill labour dispute in Finland.

Production across the grades in 2006 generally showed an increase over the previous year. Overall output of graphic grades rose by approximately 2.8%. The output of coated graphics increased by 1.4% and the output of uncoated graphic grades increased by 4.8% over 2005. For the packaging sector, production increased by 3.5 to 4.0%. Most of this increase was in case material grades, where production rose by 4.3%. Output of paperboard rose by 4.7%, while production of wrapping paper increased by 5.7%. Hygienic paper manufacturers increased their output by 1.5%. In addition, production of industrial and speciality grades rose by 5.0%.

The overall consumption of paper and board rose in Europe in 2006 in line with the real growth in GDP of 2.8%. For CEPI countries, consumption of graphic grades increased by 2.6%. Imports of graphic grades from outside CEPI countries fell by 16.1%. Exports to countries outside

CEPI increased by 6.2%, Exports of newsprint fell slightly for the second consecutive year and imports from outside the CEPI area fell by 4.5%.

Corresponding to the increase in paper production, the output of pulp also increased, by 4.5% in all of Europe and by 5.9% in CEPI countries. In 2006, market pulp production, i.e. the pulp produced for sale on the open market as opposed to that used for companies' paper production, rose by 5.9% over 2005. Pulp production capacity decreased slightly, resulting in an operating rate of 93.0%, 4.6 points higher than in 2005, which was also affected by the paper and pulp mill labour dispute in Finland.

Overall consumption of pulp progressed by 2.1% in CEPI countries, although consumption remained steady in all of Europe. For CEPI countries, consumption of mechanical and semi-chemical pulp increased by 2.4% and consumption of chemical pulp increased by 1.6%.

In 2006 exports to non-CEPI countries accounted for 17.3% of total paper deliveries by CEPI countries and recovered after the decline in 2005. Exports to outside the CEPI area increased by 6.8%. Shipments to Asian markets accounted for 26.5% of exports. Imports into the CEPI countries contributed 5.2% of total European paper consumption in 2006. Total imports from non-CEPI countries fell by 10.1%. Imports from North America accounted for 34.3% of all imports and decreased by 17.8%. CEPI countries had an overall positive trade balance (exports exceeding imports) in paper of 13.3 million tons.

In 2006 consumption of recovered paper continued to increase. Utilization was up by 3.9%, reaching 48.9 million tons. Apparent collection increased by 3.8%, reaching 55.6 million tons. Exports of recovered paper to countries outside Europe reached 8.2 million tons, of which 93.4% was sent to Asian markets. Woodpulp and recovered paper both represent 42% of the fibre used in papermaking in CEPI countries. CEPI launched a new target for the recycling rate to be achieved by 2010: 66% of the paper volumes put on the market, including traded volumes.

## 8.22 Policy issues

Energy and climate change proved to be some of the hottest topics on Europe's political agenda in 2006. Fuel prices rocketed, concerns were raised about energy security in the region, and the debate on climate change gained momentum. This prompted widespread discussions on renewable energy sources (RES), where the pulp and paper industry was placed on centre stage, being the foremost industrial generator and user of RES in Europe. With the increasing competition in Europe for wood fibre from the paper and pulp sector, the panel

sector and the energy sector, CEPI is concerned about market distortions caused by subsidies and the need for greater wood mobilization.

Central and eastern European countries are fully integrated with the EU in tackling key issues. For example, they participate with the EU's clear commitment to increased production of energy from renewable sources. Their forest and forest industry sector produce wood and paper products, as well as biofuels for domestic use. These rapidly developing economies must find their own way to increase their sustainability and decrease their ecological footprint.

The EU has shown some progress in its energy market liberalization. More transparency and efficient price-setting mechanisms in the sector should benefit energy-intensive sectors in the long term, such as the pulp and paper industry. The energy question is clearly an area where continued efforts and investment in R&D are vital if the industry is to fulfil its potential as part of the bio-solution to climate change. Initiatives such as the Forest-based Sector Technology Platform will play an important role in helping the European pulp and paper industry to develop increasingly interesting solutions in the future. New concepts would help exploit the full potential of bio-energy, especially for wood mobilization, and contribute to create a sustainable, effective bio-solution that would help alleviate the effects of CO<sub>2</sub> emissions on climate change. A 2007 CEPI study, *The European Paper Industry. A Bio-Solution to Climate Change*, showed that conversion of forest resources to wood and paper products creates four times the added value of simply burning wood fibre for energy, in addition to six times more jobs.

These results support the theory that using renewable raw materials first for wood and paper products, then recycling them into new products, and only afterwards burning them for energy, optimizes added economic value and environmental benefits such as CO<sub>2</sub> capture and storage, and helps to preserve employment in EU manufacturing industries.

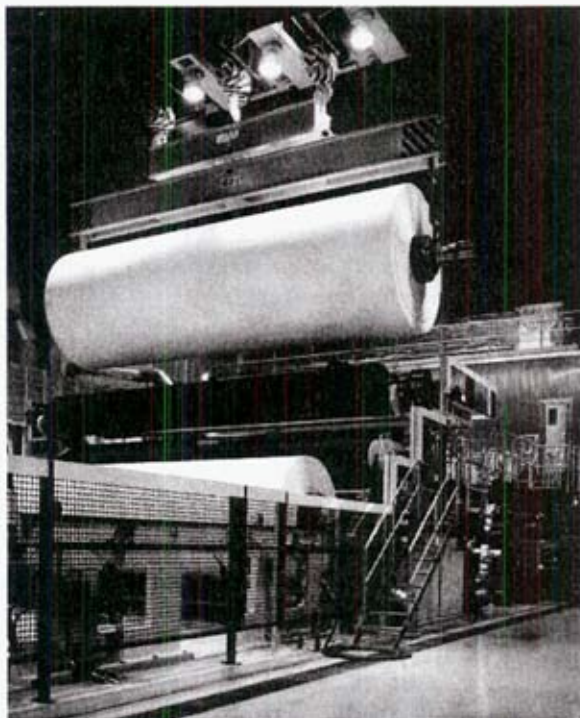
Close cooperation between all subregions, as well as good coordination of all supportive measures in developing policy on the local or global level are absolutely necessary to support the belief in highest value use. In 2006, coordination started at the EU level with the main goal of supporting bioenergy production efficiently while avoiding major market disturbances. Stakeholder associations play a key role in this process.

One of the most important issues is wood mobilization with respect to the growing wood industry and the role of wood in bioenergy in connection with climate change. One of the consequences of climate change on European forests is increased damage by windstorms, drought, insect outbreaks, and various combinations thereof. In central

Europe, softwood timber volumes are growing on non-native sites, and have sustained storm damage. The issue of how to sustainably produce wood when confronted with the risk of devastating windstorms, e.g. Lothar (2005) and Kyrill and Per (2007), must therefore be tackled.

Transportation limitations were mentioned in the past *Reviews* in relation to salvaging storm-damaged timber. In many countries, transport capacities are becoming a limiting condition for wood utilization for a number of reasons: local situation, infrastructure, public policy and capacity availability, etc. R&D activity must be focused on this area as on many others.

The new EU chemicals directive for Registration, Evaluation and Authorisation and Restrictions of Chemicals (REACH) was one of the most important issues of the year. REACH concerns producers and importers of chemical substances, and its requirements also affect downstream users. The pulp and paper industry will be affected in several ways: as a user, an importer and a producer. REACH has been developed with the main objective of guaranteeing the safe use of man-made products from the chemical industry. It was essential in ensuring that both pulp and recovered paper were treated in a manner that did not constrain the paper industry's competitive raw material procurement. CEPI estimates that REACH could: (a) increase chemical prices from 2 to 5%; (b) result in processing changes if some chemicals are withdrawn from market; and (c) require greater reporting.



Source: Finnish Forest Industries, 2007.

The third CEO Roundtable of the International Council of Forest and Paper Associations (ICFPA)<sup>60</sup> was held in Shanghai, China in June 2007. CEOs and association leaders addressed issues of sustainability, climate change and energy. The wood and paper sector affirmed its vital and constructive role in combating climate change and confirmed its intention to further reduce its greenhouse gas emissions and thereby mitigate climate change by:

- Committing to sustainable forest management.
- Recycling paper and wood.
- Committing to innovative energy solutions that increase efficiency, reduce reliance on fossil fuels and expand the use of renewable energy sources.

On the occasion of the G8 Summit in Berlin in June 2007, ICFPA launched its first *Sustainability Progress Update*.<sup>61</sup> According to the *Update*, the industry has:

- Continuously improved its sustainability performance.
- Invested in certification systems ensuring that sustainable forest management standards are met.
- Participated in initiatives to protect forests from illegal logging.
- Adopted paper recovery goals.

### 8.3 CIS subregion, focusing on Russia

In 2006 and the first part of 2007, Russia continued to experience robust economic growth, reflected by continued growth in Russian pulp and paper output (graph 8.3.1). The growth in Russia's paper and paperboard output was 2.8% in 2006, compared with 1.7% in 2005 and 6.8% in 2004.

The important forest-sector policy developments of 2004-2007 in Russia were:

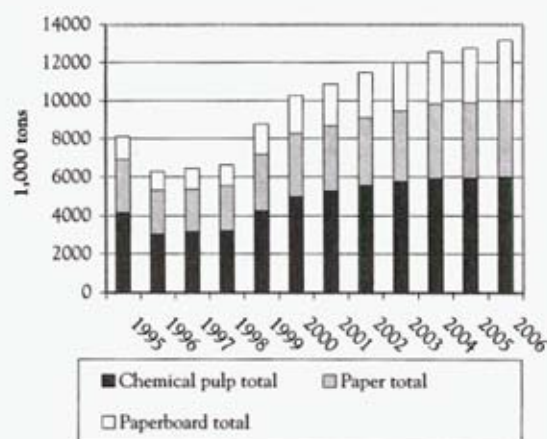
- The Kyoto Protocol ratification by Russia (and its coming into effect in the spring of 2005 with new efforts to monitor carbon emissions).
- A new alliance formed between International Paper and Ilim Pulp Enterprise.
- A new Forest Code adopted.
- The use of space satellites to monitor and prevent illegal timber harvests.
- Increased export taxes on roundwood in 2007 and beyond.
- Investment in Giprobum-Engineering (the major Russian design and engineering company) by Pöyry Forest Industries Consulting, Finland.

<sup>60</sup> www.icfpa.org

<sup>61</sup> www.icfpa.org/media\_center/publications/index.php

GRAPH 8.3.1

#### Production of pulp, paper and paperboard in the Russian Federation, 1995-2006



Sources: Goscomstat of the Russian Federation, PPB-express, and author's data interpretation, 2007.

From 2005 to 2006, both demand and output of pulp and paper products in the CIS increased and rose again in the first half of 2007 (table 8.3.1). In Russia, owing to relative economic and political stability established in the country since the major currency revaluation of 1998 and more expansionary macro-economic policy under President Vladimir Putin since 1999, there has been a continuous increase in output of pulp, paper and paperboard more than doubling since 1996. Despite this, output has yet to reach previous record levels of the 1988-1989 pre-transition period (i.e. the late Soviet era).

TABLE 8.3.1

#### Paper and paperboard and woodpulp balance in the CIS, 2005-2006 (1,000 m.t.)

	2005	2006	Change %
<b>Paper and paperboard</b>			
Production	8,281	8,630	4.2
Imports	2,157	2,429	12.6
Exports	2,994	2,984	-0.3
Net trade	837	555	-33.7
<b>Apparent consumption</b>	<b>7,444</b>	<b>8,075</b>	<b>8.5</b>
<b>Woodpulp</b>			
Production	7,114	7,117	0.0
Imports	158	158	-0.1
Exports	1,947	1,909	-2.0
Net trade	1,789	1,751	-2.1
<b>Apparent consumption</b>	<b>5,325</b>	<b>5,366</b>	<b>0.8</b>

Note: Updated paper and pulp statistics were received only from two of the 12 CIS countries, Russia and Ukraine.

Source: UNECE/FAO TIMBER database, 2007.

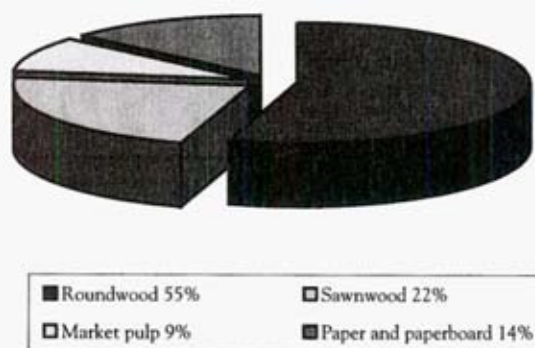
In 2005-2006, the Russian pulp and paper sector continued to expand production of pulp paper and paperboard, particularly output of paperboard for packaging. During 2006, Russia's total output of pulp (both pulp for paper and paperboard and market pulp) increased by 0.1%; the output of market pulp increased by 0.4%; and the output of paper and paperboard increased by 2.7%, including a 4.2% increase in output of paperboard

An important development is increasing consumption of paper and paperboard in Russia. In 2006, the per capita consumption jumped by 11.1% from 41.3 kg per person in 2005 to 46.0 kg in 2006. Although production increased in the country by 4.6% in 2006, this greater domestic demand resulted in lower exports of pulp and paper.

Exports of pulp and paper products hold a dominant position in the total Russian exports of forest-based products, and the overall structure of forest product exports still has a pronounced raw material character. In 2005, in terms of roundwood equivalents, roundwood timber exports and sawnwood exports accounted for 82% of Russia's exports, which is up from 77% in 2000 (graph 8.3.2). Pulp and paper accounted for only 19% of exports in 2006, down from 23% in 2000 (graph 8.3.3).

GRAPH 8.3.2

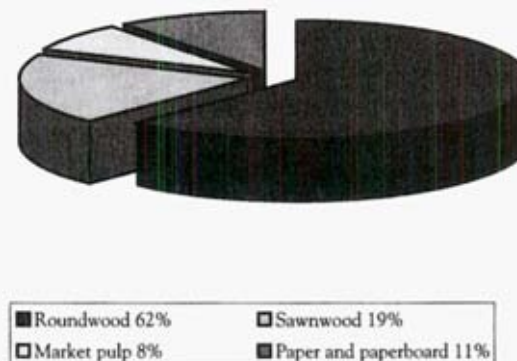
Export share of Russian forest products, 2000



Sources: Goscomstat of the Russian Federation, PPB-express and author's data interpretation, 2007.

GRAPH 8.3.3

Export share of Russian forest products, 2006

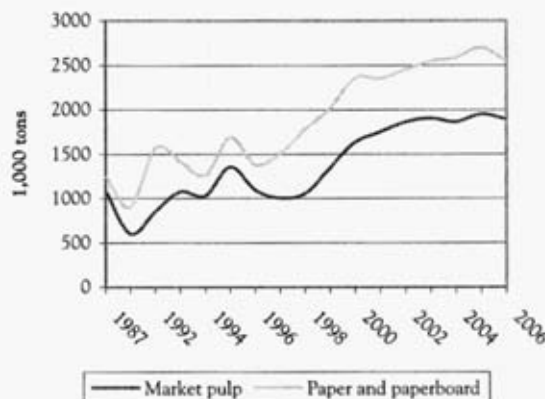


Sources: Goscomstat of the Russian Federation, PPB-express, UNECE/FAO TIMBER database, and author's data interpretation, 2007.

Exports of pulp and paper products have been increasing since 1990 and peaked in 2005 (graph 8.3.4). In 2006, the increased production was consumed domestically. However, since 1996, Russian exports have remained largely unchanged as a percentage of production, with exports comprising about 80% of output for market pulp and around 40% for paper and paperboard (graph 8.3.4). Major export destinations for these Russian products are China (market pulp, kraft linerboard), Ireland (market pulp, kraft linerboard), India (newsprint) and Turkey (newsprint).

GRAPH 8.3.4

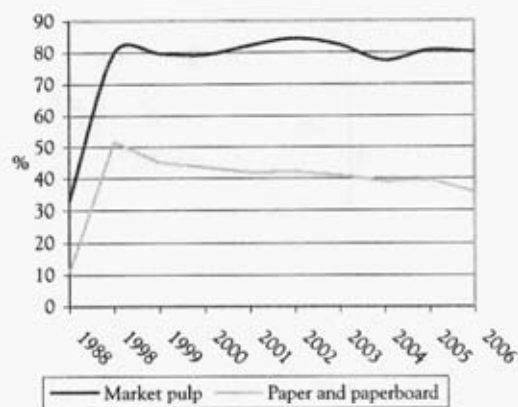
Exports of market pulp, paper and paperboard from the USSR (1987-1990) and from Russia (1992-2006)



Source: Goscomstat of the Russian Federation, PPB-express, and author's data interpretation, 2007.

GRAPH 8.3.5

Share exported of paper, paperboard and woodpulp from Russia and the USSR, 1988-2006



Source: Goscomstat of the Russian Federation, PPB-express, and author's data interpretation, 2007.

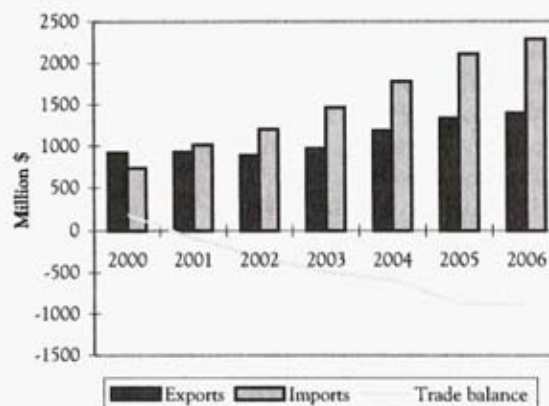
In February 2007, the Russian Government signed into law Resolution 75 with a new level of export tax on roundwood in 2007-2011. The export tariff on sawlogs is expected to rise from from €4 (\$5.40) per m<sup>3</sup> in 2006 to the prohibitive level of €50 (\$68) per m<sup>3</sup> in 2009. In 2011 this level of export taxes, i.e. €50 per m<sup>3</sup>, is also expected to be applied to birch pulpwood. Significant quantities of birch pulpwood are currently exported to Finland, and these future export tariffs, if enacted, will undoubtedly disrupt the trade.

Although the tonnage of Russian paper and paperboard exports exceeds that of imports, the trade balance in value has continued to deteriorate as Russia has expanded imports of higher-value paper products. Since 2001, the annual trade deficit in paper and paperboard has been negative, amounting to over \$870 million in 2005 (graph 8.3.6). The higher value of imports of paper and paperboard compared with exports is mainly due to the fact that Russia is importing expensive products such as high quality materials for container and packaging, coated paper and tissue, whereas less expensive commodity products such as newsprint and kraft linerboard are being exported.

Currently, the largest Russian enterprise produced 75% of market pulp, 80% of paper and 50% of paperboard. A new alliance was announced in October 2006 between International Paper and Ilim Pulp Enterprise, which constitutes 40% of the national capacity of pulp, paper and paperboard combined.

GRAPH 8.3.6

Russian trade balance of paper and paperboard, 2000-2006



Sources: state Customs Committee, Pulp. Paper. Board Magazine, PPB-express, PPB Exports, PPB Imports, author's data handling, 2007.

Reconstruction and restructuring of the Russian pulp and paper industry is continuing, with some progress being made towards higher value products with better processing of wood raw material. As an example, International Paper Company recently announced plans to add capacity to an uncoated free-sheet machine and add 50,000 tons per year of production capacity at the paper mill in Svetogorsk (about 140 km from St. Petersburg). The mill is also reportedly installing a coater on a liquid packaging machine to add 15,000 tons per year of capacity. More than \$200 million have been put into reconstruction of the mill in recent years. office paper produced by the mill currently supplies more than 60% of the Russian market demand. In addition, a new 200,000 tons per year aspen-based BCTMP pulp line is planned in 2007, according to International Paper, which will supply pulp to paper mills in Europe and elsewhere.

The future development of Russia's pulp and paper sector is linked to expanded production of more technologically advanced products (such as coated printing and writing paper rather than newsprint), and also more integrated utilization of forest resources.

Implementation of important environmental projects provides examples of steps being taken towards applying the new Russian environmental laws adopted in late 2002 (based on a comparison of environmental indices of individual mills and those of "best available technology" BAT). Furthermore, in connection with ratification of the Kyoto Protocol, a number of mills (e.g. the Arkhangelsky Pulp and Paper Mill) initiated inventory work on greenhouse gas emissions. This inventorying of

carbon and greenhouse gas emissions is being carried out at the Arkhangelsky and other mills to prepare for limits on emissions and perhaps trading in carbon emissions.

## 8.4 North America subregion

In North America, output of paper and paperboard decreased by 0.7% in 2006 to 102.5 million m.t, while apparent consumption of paper and paperboard decreased by 0.3% to 98.3 million m.t. (table 8.4.1). Canadian production and exports declined, but US production and consumption increased modestly. Slower overall economic growth in 2007, partly attributable to a slowdown in the US housing market, appears to be resulting in lower consumption and production of paper and paperboard (based on US data for the first quarter 2007).

TABLE 8.4.1

Paper and paperboard and woodpulp balance in North America, 2005-2006  
(1,000 m.t.)

	2005	2006	Change %
<b>Paper and paperboard</b>			
Production	103 195	102 493	-0.7
Imports	20 501	19 710	-3.9
Exports	25 094	23 904	-4.7
Net trade	4 593	4 195	-8.7
Apparent consumption	98 603	98 298	-0.3
<b>Woodpulp</b>			
Production	80 259	79 226	-1.3
Imports	6 454	6 608	2.4
Exports	16 428	16 842	2.5
Net trade	9 975	10 234	2.6
Apparent consumption	70 284	68 993	-1.8

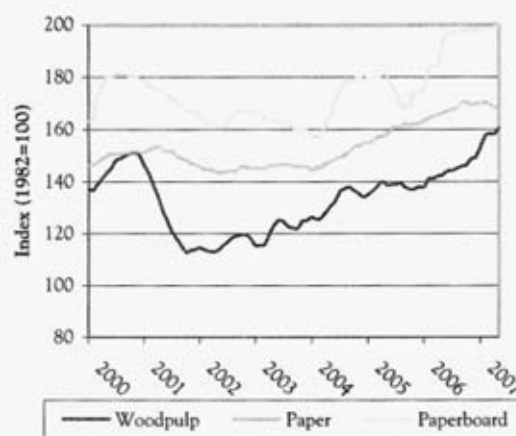
Source: UNECE/FAO TIMBER database, 2007.

Despite lacklustre growth in overall product demand, North American prices of many major pulp, paper and paperboard commodities were approaching ten-year highs by early 2007 (graph 8.4.1). The market situation with relatively high prices resulted from the influence of a weaker US dollar (generally declining in value since 2002) and negative industry capacity growth. Producers also generally experienced high prices for chemicals and energy inputs in 2006.

Canadian producers had to cope with a strong Canadian dollar in 2006, which weakened their competitiveness in North American and global markets, and resulted in a downturn in Canadian industry profitability and output. The Canadian dollar remained historically high compared with the US dollar into early 2007.

GRAPH 8.4.1

US monthly price indexes for woodpulp, paper, and paperboard, 2000-2007



Source: US Department of Labor, Bureau of Labor Statistics, Producer Price Indexes, 2007.

Commercial biofuel production in North America consists primarily of fuel ethanol made from corn, and to a lesser extent, biodiesel made primarily from soybeans, but interest is expanding in use of cellulosic biomass. The US Department of Energy (DOE) recently made a commitment to provide partial funding for the construction of six biorefinery projects over the next four years. When fully operational, the six plants are expected to produce more than 490 million litres of cellulosic ethanol per year (DOE, 2007). At expected yields, this amount of ethanol output would correspond to biomass inputs of 1.5 to 2 million dry m.t. per year (or the equivalent of a little more than 1% of current North American pulpwood consumption). Only three of the plants are expected to use wood as input, however, and most are expected to use other cellulosic materials such as agricultural residues. Potential market implications are obvious, including the possibility of competition for wood between bioenergy and conventional products. Nevertheless, it remains to be seen how successful the cellulose ethanol technology will be and whether it will have noticeable impacts on pulpwood supply and demand in North America.

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# FOREST PRODUCTS ANNUAL MARKET REVIEW



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ECE/TIM/SP/22

**Timber Section, Geneva, Switzerland**

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## ABSTRACT

The UNECE/FAO *Forest Products Annual Market Review, 2006-2007* provides general and statistical information on forest products **markets** and related policies in the UN Economic **Commission** for Europe region (Europe, North America and the Commonwealth of Independent States). The *Review* begins with an overview chapter, followed by a description of government **and** industry **policies affecting** forest products markets. After a description of the economic situation and construction-related demand in the region, five chapters based on annual country-supplied statistics, describe: wood raw materials, sawn softwood, sawn hardwood, wood-based **panels**, and paper **and** paperboard. Additional chapters discuss markets for wood energy, certified forest products, value-added wood products and tropical timber. In each chapter, production, trade and consumption are analysed and relevant material on specific markets is included. Tables and graphs provided throughout the text present summary information. Supplementary statistical tables may be found on the Market Information Service website within the UNECE Timber Committee and FAO European Forestry Commission website.

## KEYWORDS

Forest products markets, wood markets, market analysis, forest policy, consumption, production, imports, exports forestry industry, forestry trade, forestry statistics, Europe, North America, Commonwealth of Independent States, China, corporate social responsibility, climate change, housing market, construction, timber, wood industry, pulp and paper industry, wood fuels, certification, wood products, tropical timber, forestry trade, sustainable forestry, sawnwood, sawn softwood, hardwood, lumber, wood-based panels, particle board, fibreboard, OSB, MDF, plywood, paperboard, cardboard, woodpulp, pulpwood, sawlogs, pulplogs, roundwood, industrial roundwood, value-added, wood energy, fuelwood, certified forest products

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