Forest Products Markets, 2008-2010

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Topics

• Introduction to UNECE/FAO Timber Section
• Economic background and forecasts
• Forest products markets, 2008-2010
• Current and future market trends
• Conclusions
• Questions
Introduction to UNECE/FAO Timber Section

- UN Economic Commission for Europe / FAO Timber Section, Geneva, Switzerland
- Collect statistics from 56 country region
  - Europe (41 countries, not just EU 27)
  - North America (Canada + US)
  - Commonwealth Independent States (12 countries)
- UNECE Timber Committee
- FAO European Forestry Commission
- Teams of Specialists, e.g. Forest Products Marketing
Introduction to UNECE/FAO Timber Section

• Market analyses, forest products statistics, forest resource assessments, long-term sector outlook studies, UNECE/FAO databases

• Country forecasts and statements, notably at annual session

• Joint analytical effort by many experts

• Annual Timber Committee Market Discussions

• More information at www.unece.org/timber

- Wood raw materials
- Sawnwood (lumber)
- Panels
- Pulp & paper
- Certified forest products
- Wood energy
- Carbon
- Policies
- Economic situation
Highlights from UN *Forest Products Annual Market Review*

- The economic crisis escalated and spread globally in 2008
- Total consumption of forest products in the UNECE region fell by 8.5% overall in 2008
- Total consumption fell by 116.9 million m$^3$, of which 80.9 million m$^3$ in North America
- United States housing starts fell down from 2.2 million in 2006 to below half a million in 2009
- Construction in the CIS region continued to grow but on a slower pace
- Many regions suffered the worst decline in demand in decades
Highlights from UN *Forest Products Annual Market Review*

- Real prices in building materials pushed to lowest levels since the 1940s
- China’s forest sector continued on a strong note
- China has become the world’s largest exporter of wooden furniture, half of which goes to the US markets
- Uncertainty about the taxes caused a major decline in log exports from Russia
- Demand for sawn softwood fell dramatically, while decline for sawn hardwood less severe
- Paper industry was hit by the crisis at the worst possible time as the industry continued structural transition caused by the customer base change
Highlights from UN *Forest Products Annual Market Review*

- High expectations about UN Climate Change conference in Copenhagen and of Reduced Emissions from Deforestation and Forest Degradation (REDD) and its impact on the forest sector carbon markets
- Wood energy markets, driven by government policies, remained buoyant even in the midst of the crisis
- World wood fuel pellet markets expected to double by 2012
- Demand for certification and chain of custody verification rose as the US and the EU enacted legislation to prevent wood imports and use from illegal sources
Economic background and forecasts
The Great Recession 2007-2009

- Most severe financial shock since the 1930s
- Worse economic downturn since WWII
- Unprecedented, concerted policy response avoided second Great Depression
- But, significant long-term implications
  - living standards
  - design of institutions
World GDP through 2014

Real GDP Growth, PPP

Emerging market/developing countries
World
Advanced economies

6 percentage point drop 2009, then modest recovery
World GDP 2009

Much of the world negative in 2009
World GDP 2010

Growth returns to most of the world at end of 2009 or beginning of 2010
Regional GDP forecasts

<table>
<thead>
<tr>
<th>Region</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>-2.7</td>
<td>1.6</td>
<td>2.8</td>
</tr>
<tr>
<td>EU-15</td>
<td>-4.2</td>
<td>0.4</td>
<td>1.5</td>
</tr>
<tr>
<td>World</td>
<td>-1.1</td>
<td>3.1</td>
<td>4.2</td>
</tr>
</tbody>
</table>
Recovery slow

- US and western Europe
  - Unemployment may not reach pre-crisis levels until 2013 or 2014
  - Businesses facing credit and financing difficulties
  - Inflation remains low
  - Government deficits too high
- Eastern Europe especially hard hit
- Central Asia doing remarkably well
  - Fast recovery
  - Few long-term consequences
US housing starts

Source: APA – The Engineered Wood Association, 2009
Global rise in house prices

Rise in housing prices much higher in western Europe than in N. America, and even higher rise in eastern Europe.

Percentage growth 1997-2007

- Ireland
- Britain
- Spain
- U.S. 10 City
- France
- Sweden
- Denmark
- U.S.
- Italy
- Canada
- Switzerland
Housing in UNECE subregions

<table>
<thead>
<tr>
<th>Year</th>
<th>Europe</th>
<th>North America</th>
<th>CIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>2200</td>
<td>1800</td>
<td>600</td>
</tr>
<tr>
<td>2005</td>
<td>2500</td>
<td>2000</td>
<td>700</td>
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<tr>
<td>2006</td>
<td>2800</td>
<td>2100</td>
<td>800</td>
</tr>
<tr>
<td>2007</td>
<td>2600</td>
<td>2300</td>
<td>900</td>
</tr>
<tr>
<td>2008</td>
<td>2400</td>
<td>2100</td>
<td>1000</td>
</tr>
</tbody>
</table>
European construction spending

Source: Euroconstruct, 2009
Have housing markets stabilized?

- Prices stabilized in most advanced economies
- N. American prices consistent with historical relationships
  - Large subsidies in US supporting prices
  - Large new and used inventories keeping prices down
- European markets not stable yet
  - Not back to historical trend
  - Further price declines in Spain, Nordics, UK, France, Ireland
- Eastern Europe hard to predict
Wood raw material markets
Industrial roundwood harvests

- Rest of World: 36.1%
- Europe: 23.7%
- US: 21.1%
- Canada: 9.5%
- CIS: 9.5%
Of 3.5 billion m³, slightly more than half is used as woodfuel.
Wood costs in sawnwood vs pulp
Softwood sawlog costs
Issues impacting wood raw material markets

- Mountain pine beetle (extending its range and adapting to new species)
- Europe: Renewable energy policies push chips and pellets
- Russian log export taxes
Mountain pine beetle mortality in British Columbia
Roundwood harvest forecasts

![Graph showing roundwood harvest forecasts for Europe, CIS, and North America from 2001 to 2010. The graph indicates a decrease in harvest for Europe and a more stable increase for the CIS and North America.](image)
Woodfuel production forecasts

Note jump when France revised fuelwood stats in 2004.
European industrial roundwood forecasts

- Removals
- Consumption

Consumption in million m³ for the years 2001 to 2010.
N. American industrial roundwood forecasts

![Graph showing industrial roundwood forecasts for 2001 to 2010.](image)

- **Removals**
- **Consumption**

<table>
<thead>
<tr>
<th>Year</th>
<th>million m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>590</td>
</tr>
<tr>
<td>2002</td>
<td>570</td>
</tr>
<tr>
<td>2003</td>
<td>530</td>
</tr>
<tr>
<td>2004</td>
<td>510</td>
</tr>
<tr>
<td>2005</td>
<td>490</td>
</tr>
<tr>
<td>2006</td>
<td>470</td>
</tr>
<tr>
<td>2007</td>
<td>450</td>
</tr>
<tr>
<td>2008</td>
<td>430</td>
</tr>
<tr>
<td>2009</td>
<td>410</td>
</tr>
<tr>
<td>2010</td>
<td>390</td>
</tr>
</tbody>
</table>
CIS industrial roundwood forecasts

![Graph showing removals and consumption over years](chart.png)

- **Removals**
- **Consumption**

### Key Data Points
- **Million m³**
- **Years:** 1992 to 2010

- **1992: 180 million m³**
- **1993: 160 million m³**
- **2008: 130 million m³**
- **2010: 100 million m³**

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*Source: FAO*
Sawn softwood markets (softwood lumber markets)
Sawnwood highlights

- Against the background of the economic and financial crisis, demand for sawn softwood fell sharply.
- Sawmills trapped between weak market demand versus oversupply of finished goods and high log prices.
- Weak profitability for mills – devastating effect on the sawnwood industry.
- North American sawnwood output fell by 18.8% in 2008 exceeding the European production declines of 8.2%
- Global market collapse impacted logging and sawmilling workers as well as forest-industry-dependent communities.
N. American sawnwood forecasts

Production

Consumption

1000 m³

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
N. American sawnwood forecasts

![Graph showing imports and exports of sawnwood from 2001 to 2010. The graph indicates a decline in both imports and exports over the years.](image)

- **Y-axis**: 1000 m³
- **X-axis**: Year (2001-2010)
- **Legend**:
  - Green line: Imports
  - Blue line: Exports
US housing starts vs sawnwood prices
European sawnwood exports to US

2003 2004 2005 2006 2007 2008

Germany
Sweden
Austria
Czech Republic
Lithuania
Finland
European sawnwood forecasts

Production

Consumption

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

1000 m³

120 000

110 000

100 000

90 000

80 000

70 000

60 000
European sawnwood forecasts

![Graph showing European sawnwood forecasts](image-url)

The graph illustrates the trend in European sawnwood imports and exports from 2001 to 2010, measured in thousands of cubic meters. The data shows a steady increase in imports until around 2005, followed by a decline. Exports show a more varied trend, with peaks and troughs, but generally a decrease from 2008 onwards.
European sawmilling development

- Heavy investment boom has taken place in Central Europe since 2004/2005
- Capacity development exceeded the global market demand
- Consolidation
- 2009: poor demand and low prices
- Bottom out is expected during 2009/2010, followed by a slow recovery process
Russian sawnwood

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>Change %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>29,178</td>
<td>28,385</td>
<td>-2.7</td>
</tr>
<tr>
<td>Imports</td>
<td>1,988</td>
<td>2,000</td>
<td>0.6</td>
</tr>
<tr>
<td>Exports</td>
<td>19,127</td>
<td>17,236</td>
<td>-9.9</td>
</tr>
<tr>
<td>Net trade</td>
<td>17,138</td>
<td>15,236</td>
<td>-11.1</td>
</tr>
<tr>
<td>Apparent consumption</td>
<td>12,040</td>
<td>13,149</td>
<td>9.2</td>
</tr>
</tbody>
</table>

- Production collapsed in the fourth quarter of 2008.
- Apparent consumption rose by 9.2% per year based on secretariat estimates.
- Oversupply has been pushing the prices down and making production unprofitable for several companies – latest price increases can mainly be attributed to this decrease in production.
Sawn hardwood markets (hardwood lumber markets)
Sawn hardwood consumption – Europe (41 countries)

- 2008 total of 15.4 million m³, a -14% from 2007
- Of which 12.0 million m³ in EU-27, -18%
Sawn hardwood production – Europe

- In line with consumption, in 2008 fell by 6.8% to 14.3 million m³
- Of which 10.5 million m³ in EU-27, -8.6% from 2007
Major European hardwood producers

![Graph showing the production of sawn hardwood in Europe from 2004 to 2008 for different countries. The countries listed are Turkey, France, Romania, Germany, Spain, and Slovakia. The x-axis represents the years 2004 to 2008, and the y-axis represents the production in million m³. The graph uses different colors for each country to distinguish their production trends.](image-url)
Major European sawn hardwood producers, 2008

Turkey
France
Romania
Germany
Spain
Slovakia
Others
Sawn hardwood trade in Europe

-23% Exports
-9% Exports

2004 2005 2006 2007 2008

Million m$^3$

Exports Imports
Sawn hardwood forecasts – Consumption

US consumption
2009, -5, 21 million m³
2010, -1, 21 million m³

Europe consumption
2009, -7%, 13 million m³
2010, +4, 14 million m³

Source: UNECE Timber Committee, October 2009
Sawn hardwood forecasts -- Exports

**US exports**
- 2009, -6%, 2 million m³
- 2010, +5%, 2 million m³

**Europe exports**
- 2009, -14, 5 million m³
- 2010, +3%, 5 million m³

Source: UNECE Timber Committee, October 2009
Hardwood market trends

- Europe sawn hardwood sector affected by the economic crises to a lesser extend than North America and CIS
- Sawn hardwood becoming more important to the European building sector
Hardwood market trends

- “Cash is king” – Lack of credit insurance making things even more difficult for the producers
- Turkey remains Europe’s largest producer of sawn hardwood
- China’s influence over the UNECE region sawn hardwood markets increases but is also affected by the crises
  - As both consumer and producer
  - Log exports to China reducing available raw materials & raising costs
Hardwood market trends

Steep decline in prices on both sides of the Atlantic
Market trends – European flooring production

Hardwood flooring sector especially affected
First downturn since 1991
Main European flooring species

- Oak
- Tropical
- Ash
- Beech
- Pine
- Maple
- Red oak
- Other

Percentage

- 2007
- 2008

[Bar chart showing the percentage of each species of flooring in 2007 and 2008.]
Panels consumption (index)
N. American panels forecasts

![Graph showing production and consumption of panels over years from 2001 to 2010. Production is shown as blue line, consumption as orange line. Production peaks around 2006 and consumption peaks around 2005. There is a sharp decline in production and consumption from 2008 onwards.](image-url)
N. American panel markets

- Poor demand due to housing crash
- Prices extremely low – may come up sharply due to reduced supply
- Reduced raw material because sawmill closures
- Resin costs up
- California CARB requirements may help N. American manufacturers temporarily from overseas imports that contain formaldehyde
N. American panel capacity reductions

- Plywood: -690,000 m³
- OSB: -490,000 m³
- Particle board: -250,000 m³
- MDF: -350,000 m³
- Hardboard: -550,000 m³
Pulp & paper markets
Paper and pulp markets

- Production and consumption in both Europe and North America declined in 2008 and 2009
- In early 2009, year-over-year declines of 17% reported in total paper and paperboard production in both Europe and the United States, considerably more than the 2008 drop.
- Capacity-utilization rates deteriorated in Europe and North America, leading to a wave of capacity withdrawals (downtime and shutdowns)
- By mid-2009, pulp and paper commodity prices were beginning to stabilize or increase slightly, although prices remained generally well below peak levels of the preceding year.
European paper and paperboard forecasts

Production vs Consumption

- 100,000 mt (2001)
- 95,000 mt (2002)
- 90,000 mt (2003)
- 85,000 mt (2004)
- 80,000 mt (2005)
- 75,000 mt (2006)
- 70,000 mt (2007)

Source: FAO
European paper and paperboard forecasts

- Imports
- Exports

1000 mt

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
N. American paper and paperboard forecasts

Production

Consumption

1000 mt

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
N. American paper and paperboard forecasts

![Graph showing imports and exports of N. American paper and paperboard from 2001 to 2010. The graph indicates that exports generally exceed imports, with a slight increase in both categories towards 2010.](image)
Certified forest area growing slower

Million hectares

PEFC  FSC  CSA  SFI  ATFS

Certification and increased concern about illegal trade

- Public and private green procurement policies
- Corporate social responsibility

Certified forest area as a percentage of total forest area by region
Main market trends – certification

Number of CoC certificates

- FSC
- PEFC

Year: 2000 to 2009

Q2 2009
Main market trends – certification

- Low price premiums for certified temperate hardwood
- Low end-user interest for certified wood – indifference
- Business-to-business currently the key driver

Number of CoC certificates

- FSC
- PEFC

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009

Q2 Q2
Certification + and -

- Major obstacles to market development
  - fragmentation in timber trade & consuming sectors
  - low level of awareness & willingness to pay among end-users.

- Major drivers are large northwestern European merchants, manufacturers & retailers
  - Urge to protect brands, internal CSR commitments and desire to maintain access to public sector contracts
  - Easy decision to make in the softwood and panels sector where certified wood is readily available
  - Part of a wider process of restructuring overall procurement practices in favour of a limited number of key suppliers providing full range of quality services

- Recession widens gap between "green operators" and non-certified traders
Main market trends – Lacey Act

- Prohibits all trade in plant and plant products such as sawnwood, furniture and paper that are illegally sourced from any country
- Requires importers to declare the country of origin of harvest and species name of all plants and plant derived materials contained in their products
- Establishing penalties, including forfeiture of goods and vessels, fines, and imprisonment for those who knowingly violate the declaration requirements.
- Places burden of proof on prosecutor
Main market trends – EU FLEGT

- Action Plan for Forest Law Enforcement Governance and Trade
- Due diligence system
- Companies must ensure legality of the source
- Wood has to be harvested according to country’s laws
  - Properly documented
  - Audited
  - Within and outside of Europe
- Not yet approved by the EU Agricultural Council
  - Thus not yet law
Future trends
Future trends

• Decline in demand could continue well into 2010
• Economic recovery not fast, not easy
• Continuing shift towards manufacturing in low cost countries
  – Labor
  – Manufacturing
  – Government subsidies
• European furniture manufacturers countering competition by focusing on high-end, high quality and high value products
Future trends

- Corporate social responsibility increasingly important for corporations and trade associations
- Wood energy pushed by renewable energy policies creates competition for small diameter logs, but new market for previously uneconomical thinnings
Future trends – China

Chinese forest products output

<table>
<thead>
<tr>
<th>Year</th>
<th>Billion $</th>
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</thead>
<tbody>
<tr>
<td>2002</td>
<td>60</td>
</tr>
<tr>
<td>2003</td>
<td>80</td>
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<tr>
<td>2004</td>
<td>100</td>
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<td>120</td>
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<td>2006</td>
<td>140</td>
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<tr>
<td>2007</td>
<td>160</td>
</tr>
<tr>
<td>2008</td>
<td>180</td>
</tr>
</tbody>
</table>
Future trends – China

China is world’s largest exporter of wooden furniture

[Graph showing the growth of Chinese furniture exports from 1997 to 2008. The graph indicates a significant increase in both total furniture and wooden furniture exports over the years.]
Future trends

• Environmental issues becoming increasingly important
  – New timber procurement policies and the impact on the raw material supply

• Greenbuilding and issues of climate change, energy security and energy cost
  – LEED
  – BREEAM
UNECE Timber Committee forecasts
UNECE Timber Committee forecasts (from October 2009)

- North America the production of sawn hardwood continued falling in 2008 and 2009, by 9.1% and 6.4% respectively – no change is expected in 2010.
- Although US domestic demand is weak, sawnwood exports are forecast to improve, rising by 7.2% in 2010.
- The European hardwood consumption and production to rise by 4.2% and 3.2% respectively.
UNECE Timber Committee forecasts (from October 2009)

- Trade restrictions on tropical timber, both from producer countries policies to manufacture greater value-added products, and importers’ controls for sustainability and legality, are constraining the tropical timber trade.
Current market trends
Conclusions

- Most markets forecast to improve in 2010, but not recover to previous levels
- US exports increasing at expense of domestic consumption
- Green building important driver – could get boost if carbon sequestration counted in “harvested wood products”
- Economic recovery precarious
- China and other southeast Asian countries impacting traditional hardwood markets
Questions?
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