New European Wood Market: Shortage or Surplus?

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Topics

I. Wood markets in the UNECE region
II. UNECE region's markets fit into the global situation
III. Forest resources
IV. Rise in demand for wood for energy in Europe
V. Availability of wood to meet elevated demands
VI. Shortage or surplus?
Info sources

- UNECE/FAO workshop proceedings
- UNECE/FAO European Forest Sector Outlook Study
- UNECE/FAO Forest Resources Assessment
- UNECE/FAO TIMBER Database
- *Forest Products Annual Market Review*
- FAOStat
I. Wood markets in the UNECE region
Consumption in UNECE region


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Consumption in UNECE region

Demand for wood and wood products at record high levels in 2005 & based on UNECE Timber Committee forecasts higher again in 2006 and 2007.


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Exports of primary products

Index (2001=100)

2001 2002 2003 2004 2005

C.I.S.: $9 billion in 2005
Europe: $86 billion in 2005
UNECE-region: $139 billion in 2005
North America: $44 billion in 2005


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UNECE Timber Committee forecasts for 2007

- Forest products markets forecast at record levels in the UNECE region in 2006 and 2007
- Chinese forest industry rapidly reshaping marketplace
- Continuing concern about illegal logging, climate change
- Record high energy prices and energy policies driving wood energy markets
- Despite forest growth outstripping removals, increased competition for timber
II. UNECE region's markets fit into the global situation
UNECE region’s share of world consumption of primary forest products, 2005

Paper and paperboard
Wood-based panels
Sawnwood
Wood pulp
Industrial roundwood

0% 20% 40% 60% 80% 100%


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UNECE region’s share of world production of primary forest products


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UNECE region’s share of world exports of primary forest products


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Top-5 importers of builders joinery and carpentry

Demand for joinery, millwork, profiled wood, is mostly within the UNECE region - same as flooring.

Sources: Eurostat, Trade Statistics of Japan by Ministry of Trade and Customs, USDA Foreign Agricultural Service

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III. Forest resources
Where are the forests?

European forests, including Russia

Source: UNECE/FAO Forest Resources Assessment

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Industrial roundwood exports

Softwood and temperate hardwood exports increasing through 2007, especially from Russia - but new Russian export taxes could cut exports.

Tropical exports generally falling:
1. Countries banning log exports
2. Promotion of value-added

Source: FAO Stat

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Where’s the wood?

Wood volume per hectare

- S. America: 125 m³ per hectare
- N & C America: 123 m³ per hectare
- Europe: 112 m³ per hectare
- Africa: 72 m³ per hectare
- Asia: 63 m³ per hectare
- Oceania: 55 m³ per hectare
UNECE region's forests fit into the global situation

World forests vs. UNECE region forests

Annual change in forest area, 2000–2005

### Annual change in forest area, 1990–2000, (million hectares)

<table>
<thead>
<tr>
<th></th>
<th>Deforestation</th>
<th>Increase in forest area</th>
<th>Net change in forest area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tropics</td>
<td>-14.2</td>
<td>+1.9</td>
<td>-12.3</td>
</tr>
<tr>
<td>Non-tropics</td>
<td>-0.4</td>
<td>+3.3</td>
<td>+2.9</td>
</tr>
<tr>
<td>World</td>
<td>-14.6</td>
<td>+5.2</td>
<td>-9.4</td>
</tr>
</tbody>
</table>

Source: FAO Global Forest Resources Assessment 2000

Note: Annual change in forest area recalculated as –7.3 million Ha per year from 2000-2005 by FAO Global Forest Resources Assessment 2005
Reasons for deforestation

- Conversion to other land uses
  - Agricultural, including
    - Grazing
    - Conversion to palm oil
  - Urbanization
- Unsustainable silvicultural practices
  - Unmanaged harvesting
  - Poor regeneration
  - Fire, insects and diseases
  - Over harvesting fuelwood
- Poverty and overpopulation
Forest resources in Europe

• Only 60% of wood grown is harvested
• Forest volume increases ~2 million m³ daily
• Forestland increases by 500,000 hectares per year
State of Europe’s Forests

- Resources and area increasing
- Forest health and vitality are critical
- Productive functions maintained
- Biodiversity is a focus
- Plantations are only 3%
- Protective forests are 12%
- Socio-economic functions important
Forest resources in Russia

- Only 16% of wood grown is harvested
- Forest volume increases ~3 million m³ daily
- Forest area 1990 to 2000: no significant change
Forest resources in N. America

- 80% of net annual increment harvested
- Forest volume increases ~3 million m³ daily
- Forest area 1990 to 2000
  - USA +0.2%
  - Canada, no significant change
Forest resources: growing stock

Source: Temperate and Boreal Forest Resources Assessment 2000

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Net annual growth vs. fellings

Source: Temperate and Boreal Forest Resources Assessment 2000

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### Forests increasing

<table>
<thead>
<tr>
<th>Region</th>
<th>Fellings as % of annual growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Europe</td>
<td>61%</td>
</tr>
<tr>
<td>Nordics &amp; Baltics</td>
<td>72%</td>
</tr>
<tr>
<td>Northwest Europe</td>
<td>53%</td>
</tr>
<tr>
<td>Southeast Europe</td>
<td>45%</td>
</tr>
<tr>
<td>EU 27</td>
<td>60%</td>
</tr>
<tr>
<td>Russia</td>
<td>34%</td>
</tr>
<tr>
<td>North America</td>
<td>80%</td>
</tr>
</tbody>
</table>

Sources: *State of the World’s Forests*, 2007 and UNECE/FAO Forest Resources Assessment
Deforestation & the wood processing industry

- Consumers confused about deforestation
- Middlemen asking for assurance of source
  - Sustainable forest management
  - Legality
- Retailers want to sell legal, sustainable
- Industry, governments, organizations want
  - Sustainable economic development
  - Sustainable forest management
Deforestation & the wood processing industry

- Manufacturers’ info, including labels
- Retailers’ labels, e.g. IKEA
- Promotional campaigns’ labels
- Certification systems’ labels, including chain-of-custody certificates

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Global distribution of certified forest area as a percentage of total forest area by countries, 2007

Sources: Individual certification systems, Forest Certification Watch, the Canadian Sustainable Forestry Certification Coalition, and FAO

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Geographical distribution of total certified forest area, 2007

Sources: Individual certification systems, Forest Certification Watch and the Canadian Sustainable Forestry Certification Coalition, 2007.

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Certification summary

• ~300 million hectares, 8% world’s forests
• Mostly temperate, only ~6% tropic
• Equivalent of industrial roundwood
  - ~400 million m³
  - ~25% of world production
  - Mostly North America, 13%, then
  - Europe, 11%
• New driver: public procurement policies
Certification summary

• UNECE Timber Committee: “Channel of communication”. But communication without labels?
• Expanding more slowly
• Conflict between schemes
  - Consumer confusion
  - Multiple certification of same forests and products (especially Sweden)
Forest resources summary

- Removals considerably below growth in temperate forests
- Wide variance in utilization rates of NAI
- Growing stock increasing in Europe
- Southern hemisphere plantations expanding
- Statistical oversupply compared to demand for wood
- Increasing alternative demands on forests, including for energy
**X factor for resources: Climate change**

- Growth, species … long term
- Storms … sudden
Swiss storm damage

Source: Swiss Federal Research Institute
IV. Rise in demand for wood for energy in Europe

- Climate change awareness has increased political and public interest in wood energy
- EU launched ambitious energy policies
- Wood pellet markets are growing throughout Europe
Background issues

- Increasing fossil fuel prices
- Energy security
- Policies to reduce climate change
- Wood industries’ wood needs
Background issues

- Increasing fossil fuel prices

Background issues

• Increasing fossil fuel prices
• Energy security
  - Middle East instability
  - Russian supply interruptions
  - Growing consumption, e.g. China
  - Nuclear safety
Background issues

- Increasing fossil fuel prices
- Energy security
- Policies to reduce climate change
  - UNECE region
  - Kyoto Protocol
  - European Union & member countries
    - 20% renewable energy in 2020
  - G8
  - United States’ government lagging behind

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Background issues

- Increasing fossil fuel prices
- Energy security
- Policies to reduce climate change
- Wood industries’ wood needs
  - Increasing demand
  - Increasing raw material prices
  - Competition
    - Local can be intense
    - Short-term can be intense
Wood energy in 12 European countries, 2005

EU biomass use, 1990–2004

Wood & wood waste in households & services

Other wood & wood waste

Biogas

Municipal waste

Wood now +80%

Liquid biofuels

Source: Eurostat, 2007

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Pellet production and consumption

Source: Canadian Wood Pellet Association, 2007
Sweden’s woodfuel imports

Sweden’s woodfuel imports, 2005

<table>
<thead>
<tr>
<th>Country</th>
<th>Volume, Gwh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latvia</td>
<td>1200</td>
</tr>
<tr>
<td>Canada</td>
<td>460</td>
</tr>
<tr>
<td>Belarus</td>
<td>410</td>
</tr>
<tr>
<td>Holland</td>
<td>390</td>
</tr>
<tr>
<td>Estonia</td>
<td>325</td>
</tr>
<tr>
<td>Spain</td>
<td>115</td>
</tr>
<tr>
<td>Norway</td>
<td>48</td>
</tr>
<tr>
<td>Finland</td>
<td>39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,032</strong></td>
</tr>
</tbody>
</table>

V. Availability of wood to meet elevated demands
Western European wood and fibre requirements, 1960–2020

Growing demand without energy

Gap is residues

Source: UNECE/FAO European Forest Sector Outlook Study, 2005

WRME = Wood raw material equivalent
Supply and demand dilemma in western Europe in 2010

- Wood and paper industry - 312 million m³ (wood raw material equivalent)
- Energy sector - 210 million m³ (based on EU targets)
- Forests’ annual growth - 505 million m³ (net annual increment on forests available for wood supply)
International Seminar on Energy and the Forest Products Industry

October 2006, Rome

FAO, IEA, ICFPA, UNECE, ITTO, WBCSD
Energy and the Forest Products Industry Seminar

• Themes
  - Energy policies and trends
  - Role of wood as an energy source
  - Energy and material efficiency in the forest products industry
Energy & industry seminar conclusions from Rome, 2006

- Integrated and balanced energy and forest policies mitigate climate change
- Local actions with global vision
- Stable, sustainable regulatory frameworks needed for level playing field
Leveling the playing field

- Policies, legislation
- Environmental regulations
- Duties, tariffs, taxes
- Raw material costs
- Labor costs, benefits
- Manufacturing costs
- Rise in standard of living → consumption or wood products

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Energy & industry seminar conclusions from Rome, 2006

• Forest products industry combats climate change by
  - Optimizing raw material usage
  - Increasing efficiency
  - Producing bioenergy
  - Expanding into biofuel production
  - Improving sector competitiveness

• Forest products industry could be a net supplier of energy

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Energy & industry seminar
conclusions from Rome, 2006

- Forest products industry suffers an image problem - must be proactive
- Developing countries need assistance to use forest and mill residues for energy
- International organizations can
  - collect, analyze and distribute data and information
  - Develop partnerships, provide forums
  - Coordinate research
Mobilizing Wood Resources Workshop

January 2007, Geneva

UNECE/FAO, FAO, CEPI, MCPFE, EFI

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Mobilizing Wood Resources Workshop, Geneva 2007

- Can Europe’s forests satisfy the increasing demand for raw material and energy under SFM?
- Stakeholders, over 100, represented industry, government, international organizations, NGOs,
Mobilizing Wood Resources Workshop, Geneva 2007

• Potential for increased wood supply?
• Opportunities for increased mobilization?
Mobilizing Wood Resources Workshop, Geneva 2007

- Limits of sustainability
- Energy and resource efficiency
- Equal treatment (agriculture vs. forestry, imported vs. domestic)
- Respect regional variations
Mobilizing Wood Resources
Workshop, Geneva 2007

- Coherence between different sector policies
- Integrate whole supply chain in biomass strategies
- Need for comprehensive reliable data
- Empower forest owners to form “clusters”
- Improve infrastructure and logistics
- Qualified workforce
- Capacity building and training
Mobilizing Wood Resources Implementation of findings

- MCPFE resolution on wood energy and mobilization
- UNECE/FAO activity
  - Wood energy data and information
  - Mobilization
  - Policy forum October 2007
- Opportunities for technical, policy assistance to developing countries, e.g. wood energy workshop in Balkan region
Mobilizing Wood Resources

Workshop, Conclusions

• Remember importance of climate change and energy security
• Increase in wood supply possible
• Realistic policy targets
• Requirement for reliable statistics and forecasts
• Consider impacts on other sectors
• Overall, an opportunity for the forest sector
VI. New European Wood Market: Shortage or Surplus?
Shortage or Surplus?

- Short term
  - Competition for wood raw materials
    - Roundwood
    - Byproducts
    - Recovered wood
  - Reduced Russian roundwood, or higher cost
  - Oversupply in North America
  - Rising costs
Latvian pulpwood prices

Source: Latvian Forest Industry Federation
Panel manufacturers’ wood costs

Shortage or Surplus?

• Medium term
  - Increasing demand for wood raw materials for wood processing industry
  - Increasing demand for wood energy
  - Development of infrastructure
  - Additional imports
  - Price stability?
Shortage or Surplus?

- Long term
  - Increased harvests
  - Increased alternative wood sources
    - Wood outside forests
    - More recovered wood
    - Energy plantations
  - Greater trade
Shortage or Surplus?

• Studies underway
  - UNECE/FAO with partners
  - CEPI—commissioned study
• UNECE/FAO Policy Forum
  - 10 October 2007, Geneva
  - After joint Timber Committee and International Softwood Conference Market Discussions
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