Overview of the European Wood-Based Panels market with a focus on wood availability & recycling

European Recycling Workshop
LIGNA, Hannover, 13 May 2015

Kris Wijnendaele
Technical Director
CONTENT

• EPF
• Economic context in the EU
• Preliminary statistics 2014 for
  • Particleboard
  • MDF
  • OSB
  • Hard&Softboard
• Wood availability & costs
  ➢ Problems & Solutions
European Panel Federation

Members in 25 countries

- Particleboard
- MDF
- OSB
- Hard & Softboard
- NEW: Plywood

EPF
MOST RECENT ECONOMIC DEVELOPMENTS AFFECTING CONSUMPTION OF WOOD-BASED PANELS
Economic Sentiment Indicator in EU

Source: European Commission services
Consumer Confidence

Source: European Commission
Slow but steady improvement

• For 2014 as a whole, GDP grew by almost 1% in the EU
• The ESI is rising thanks mainly to more optimistic consumers
• The labour market is also showing some positive signs, in February, overall employment expectations improved significantly

Source: European Commission
PROVISIONAL RESULTS 2014
PARTICLEBOARD
PARTICLEBOARD PRODUCTION IN EUROPE

(million m$^3$)

In 2014: 29 million m$^3$

*estimation
5.3 millions dry tonnes roundwood
7.2 millions dry tonnes industry by-products (54% chips & 46% sawdust)
6.0 millions dry tonnes recycled wood

Estimated PB production 2014: +2.5%
1 m³ PB = 0.65 dry tonnes wood
Particleboard – Wood demand 2014

Recovered wood

By-Products

Roundwood
MDF
MDF PRODUCTION IN EUROPE

In 2014: 11.5 million m³

*estimation
MDF Wood demand 2014

4.8 millions dry tonnes roundwood
4.1 millions dry tonnes industrial by-products

Estimated MDF production 2014: +2%
1 m³ MDF = 0.78 dry tonnes wood
OSB PRODUCTION IN EUROPE

(million m³)

In 2014: 4.8 million m³

*estimation

+2%*
OSB Wood demand 2014

Estimated OSB production 2014: +3%

1 m³ OSB = 0.85 dry tonnes wood

4.1 million dry tonnes roundwood

Roundwood 100%

2014
HARDBOARD
Hardboard – Production regions

Total EU28+EFTA countries installed capacity: 818,000 m³

Estimated HB production 2014: -1%

- Scandinavia & Baltic states
- South Europe
- Poland & Ukraine
SOFTBOARD
Softboard - Production regions

Total installed capacity
EU28+EFTA countries in 2013: 3.6 million m³ rigid + 2 million m³ flex

Estimated SB production 2014: +6%
## Wood Purchasing distance

<table>
<thead>
<tr>
<th>Material</th>
<th>Average</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particleboard</td>
<td>129 km</td>
<td>250 km</td>
</tr>
<tr>
<td>MDF</td>
<td>110 km</td>
<td>150 km</td>
</tr>
<tr>
<td>OSB</td>
<td>178 km</td>
<td>300 km</td>
</tr>
<tr>
<td>Hard&amp;Softboard</td>
<td>70 km</td>
<td>150 km</td>
</tr>
</tbody>
</table>
WOOD AVAILABILITY & COSTS
PROBLEMS & SOLUTIONS
Wood availability indicator – end 2014

- Blue: sufficient
- Orange: Just in time
- Red: critical
Wood costs evolution
estimated by EPF Members (1994=100)
Structure of the European Panel Federation

EPF Managing Board
Chairman: Mr Ladislaus Döry

Working Groups

Task Forces

WG Economic Affairs
Chairman: Dr. Paolo Fantoni

WG Hardboards
Chairman: Mr Ernestas Urnevicius

WG Softboards
Chairman: Mr Heiko Seibert

WG Technical Affairs
Acting Chairman: Mr Kris Wijnendaele
Vice-Chairman: Mr Ian Rochester

WG Environment
Chairman: Mr Carlos Tavares Ferreira
Vice-Chairman: Mr Piet Vanthournout

WG Communications
Chair: Vacant

Formaldehyde Strategy Group
Chairman: Mr Michael Wolff

Industrial Emissions Task Force
Chairman: Dr. Axel Knörr

Formaldehyde &VOC Task Force
Chairman: Mr Jörg Wenzel

Raw materials Task Force
Chairman: Mr Alastair Kerr

EPD Task Force
Chair: Dr. Genoveva Canals Revilla

Wood Purchasing Task Force
Chairman: Mr Bernard vanden Avenne

Vacant
Mobilising more wood – Advocacy actions

• European Innovation Partnership on Raw Materials
• Cascade use of wood (ECAMOB)
• Recovering, recycling & reusing
• EPF standards (see next slides)
• EU Circular economy & Waste Package(s)???
• Club du Bois
• ...
EPF Standard on the use of recycled wood for WBP (2000)

- EPF took up this challenge long ago
- Sustainable industrial development, more value with less environmental impact
- A “responsible care” attitude: the use of recycled wood does not create problems with the safety of the panels and end uses
- CEN report CR 13387 “Child use and care articles – General and common safety guidelines” and EN 71-3 “Safety of toys”
- Sampling and frequency of analyses
Limit values for contaminants that may be present in recycled wood
Based on EN 71-3

<table>
<thead>
<tr>
<th>Elements / Compounds</th>
<th>Limit values (g/kg dry panel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic (As)</td>
<td>0.025</td>
</tr>
<tr>
<td>Cadmium (Cd)</td>
<td>0.050</td>
</tr>
<tr>
<td>Chromium (Cr)</td>
<td>0.025</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>0.04</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>0.09</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>0.025</td>
</tr>
<tr>
<td>Fluorine (F)</td>
<td>0.1</td>
</tr>
<tr>
<td>Chlorine (Cl)</td>
<td>1</td>
</tr>
<tr>
<td>Pentachlorophenol (PCP)</td>
<td>0.005</td>
</tr>
<tr>
<td>Creosote (Benzo(a)pyrene)</td>
<td>0.0005</td>
</tr>
</tbody>
</table>
EPF standard for delivery conditions of recycled wood (2002)

- Quality criteria to ensure environmental sustainability, health & safety and technical workability for:
  - By-products from processing and manufacturing sites
  - Post-consumer reclaimed and recycled wood

- Requirements for types, origins, chemical, physical and other contamination limits, cleanliness and delivery conditions of these materials
Material specifications

- **Quality** - clean, free from rot and without degradation, free from chemical or other non-natural odour

- **Cleanliness** - free from general contaminants such as soil, concrete, slate, stones, textile, plastic, rubber, waste paper, cardboard or metal. Excessive contaminant content (>2% of the total dry weight) shall entitle the buyer to a loss adjustment.
Material specifications

• **Moisture content** <20%, subject to a tolerance of +/- 5%, relative to the dry weight

• **Size** - wood material in line with the manufacturer’s specification

• **Limit values for contaminants** acc. to EPF Standard on the use of recycled wood for WBP
Wood: the fuel for the future?
The reality of the story is:

You can use, reuse and recycle wood many times...

Thereby prolonging the carbon cycle
But...

You can burn it only ONCE!
The woodworking industry gives value to the forest...

...and respects the carbon cycle!

EPF
ReGaP

EPF and its members are eager to learn about the state of affairs of the project and the projected final results in order to allow an evaluation of the potential benefits at European level
Thank you for your attention!

kris.wijnendaele@europanels.org