Global demand and supply drivers for wood products

Miikka Pesonen
Stora Enso Oyj
## Stora Enso Group and Wood Products

### In brief

<table>
<thead>
<tr>
<th></th>
<th>Stora Enso</th>
<th>Wood Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>employees</td>
<td>26,000</td>
<td>3,800</td>
</tr>
<tr>
<td>operating countries</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>sales</td>
<td>10</td>
<td>1.6</td>
</tr>
</tbody>
</table>

- **North America**: 1%
- **Northern Europe**: 19%
- **Western Europe**: 13%
- **Central Europe**: 26%
- **Middle East & North Africa**: 11%
- **Asia & Pacific**: 31%

% share of Wood Products sales
Stora Enso
In the business since the 8th century

Falun copper mine from 8th century
#1 joint stock company (16.6.1288)
2/3 European copper in 17th century
Global demand and supply drivers for wood products

Demand
- Population
- Construction

Supply
- Resources
- Industry
Demand
Population

Aging… ... and growing

Urbanizing… ... and focused on Asia

- Strong drivers for housing and construction outlook globally
- A huge strain on global resources (energy, non-renewables)
- Focus from maturing Europe and North America to dynamic East and South Asia
### Demand

**In numbers**

<table>
<thead>
<tr>
<th></th>
<th>Now</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, bn</td>
<td>7.0</td>
<td>9.3</td>
</tr>
<tr>
<td>Urban, bn / %</td>
<td>3.6 (50)</td>
<td>6.0 (65)</td>
</tr>
</tbody>
</table>

**Economy**
- $\times 4$

**Energy use**
- $\times 2$

**Cement use**
- $\times 2$

**Cars**
- $\times 2$

---

**Top 5 economies**

(in 2010 PPP USD)

<table>
<thead>
<tr>
<th></th>
<th>Now</th>
<th>2030</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>![China Flag]</td>
<td>![China Flag]</td>
<td>![China Flag]</td>
</tr>
<tr>
<td>United States</td>
<td>![United States Flag]</td>
<td>![United States Flag]</td>
<td>![United States Flag]</td>
</tr>
<tr>
<td>Japan</td>
<td>![Japan Flag]</td>
<td>![Japan Flag]</td>
<td>![Japan Flag]</td>
</tr>
<tr>
<td>India</td>
<td>![India Flag]</td>
<td>![India Flag]</td>
<td>![India Flag]</td>
</tr>
<tr>
<td>Brazil</td>
<td>![Brazil Flag]</td>
<td>![Brazil Flag]</td>
<td>![Brazil Flag]</td>
</tr>
</tbody>
</table>

Source: CEMBUREAU, United Nations, EFPL

Source: Citi Investment Research and Analysis
Demand
Shift has already happened

Construction growth globally
(USD bn in constant prices)

Source: Oxford Economics, Global Construction Perspectives

Housing starts
(million units)

Source: Stora Enso
* Europe, USA, Japan

Use of concrete,
(China 60%)
(gigatons)

Source: Forbes

Other*

China

~ 0%

44%

0
2
4
6
8
10
12

Wood-frame
Non-wood

4,5
6,6

US 1901-2000
China 2011-13
Construction sector is the key

- up to 50% of natural resources, mostly non-renewables
  - 40% of all energy
  - contributes 30% of global greenhouse gas emissions

Source: UNEP
With the current level of consumption, we need another globe to fulfill our needs.
Supply
Resource and substitution drivers

Reduced availability (bark beetle, conservation)

Expanding plantations

Competing uses for land

High quality, sustainable export source

Access, sustainability

Plantations for pulp, EWP

Access, cost

Sustainability, land use

Cost

Numbers: millions of people
- Demand centres
- Supply centres

400 m
1,700 m
1,400 m
600 m
200 m

400 m

no own wood
Wood Products industry

Wood is a solution

- Sustainable, renewable
- Low energy & capital needs of manufacturing
- Light weight – saves in transportation, foundations, assembly

To capitalize on these requires…
- offering solutions, not only raw materials
- bringing wood into building systems with other materials
- rebuilding the competence of how to use wood in construction industry
"Everything that’s made with fossil-based materials today can be made from a tree tomorrow"
Thank you!