GLOBAL WOOD SUPPLY

Sten Nilsson

Biomass and Resource Efficiency: the need for a supply led approach to forest productivity

European Parliament, Brussels, 10 November 2011
MEGATREND WOOD SUPPLY – 2020

- Increasing demand for wood through population and economic growth
- More expensive wood
- Where should the wood come from?

<table>
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<tr>
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RUSSIA
Advantages: Raw Materials

Source: Boichenko (2006)
HIGHWAY CONDITIONS BETWEEN MOSCOW AND NOVOSIBIRSK, 2006
LACK OF ROAD INFRASTRUCTURE
JAPAN

Source: http://www.trekearth.com/gallery/photo77800.htm
JAPAN

Source: http://www.trekearth.com/gallery/photo463813.htm
CHINA: Example of Inherent Variability

The trees on the left stand are no more than 20 meters away from the trees on the right

BAMBOO FOREST

Source: http://cmcdesignstudio.files.wordpress.com/2009/03/bamboo-forest.jpg
NEW ZEALAND and AUSTRALIA

NEW ZEALAND Plantations

Source: http://www.southernwoodcouncil.co.nz/images/Guy-in-forest.jpg
SOUTH EAST ASIA

Source: http://2.bp.blogspot.com/_rku6deQBORg/SwGkWH3uE9I/AAAAAAAAlYY/CJxii5vYPN0/s1600/Forest+Indonesia.jpg
INDONESIAN TROPICAL FOREST

Source: http://forests.org/shared/alerts/img/indonesia_dipforest/lg.jpg
PALM OIL PLANTATION

Source: Karl Folke, Stockholm Resilience Center, 2008 (Presentation at IIASA, Laxenburg, Austria)
INDIA

Source: http://3.bp.blogspot.com/_S2LH4c6kJn8/SZAq9syy8MI/AAAAAAAADAw/rS92ln7vWq8/S660/sal.JPG
AFRICA

Source: http://www.nationaalherbarium.nl/taskforcebiodi/ivoorkust.jpg
AFRICA

LATIN AMERICA AND CARIBBEAN

Source: http://travel.webshots.com/photo/1010603567025458587tylGirNtNS
AMAZONAS
Transport Infrastructure and Deforestation

Source: Roberto S. Waack, 2010 (roberto@amatabrasil.com.br)
BRAZILIAN PLANTATIONS

Source: http://www.sbs.org.br/secure/ApresentacaoCorusinglesdownload.pdf
UNITED STATES OF AMERICA

CANADA

MOUNTAIN PINE BEETLE

Source: Spatial Pattern Analysis & Research Laboratory, University of Victoria, BC, Canada, 2011.
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INDUSTRIAL WOOD DEMAND INCREASE TO 2030 IS SIZEABLE

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<th>Product Area</th>
<th>RWE Increase 2010-2030&lt;sup&gt;A&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulp &amp; Paper&lt;sup&gt;B&lt;/sup&gt;</td>
<td>150 million m³ sub</td>
</tr>
<tr>
<td>Sawnwood&lt;sup&gt;C&lt;/sup&gt;</td>
<td>250 million m³ sub</td>
</tr>
<tr>
<td>Wood-based panels</td>
<td>400 million m³ sub</td>
</tr>
<tr>
<td>TOTAL (gross)</td>
<td>800 million m³ sub</td>
</tr>
<tr>
<td>TOTAL (net)&lt;sup&gt;D&lt;/sup&gt;</td>
<td>700 million m³ sub</td>
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<sup>A</sup> Increase according to Pöyry scenario in KSLA presentation
<sup>B</sup> Virgin pulp based demand increase
<sup>C</sup> Softwood & hardwood sawnwood including demand recovery 2020
<sup>D</sup> Including utilization of sawnwood residues in pulp and panels

Source: Jan Wintzell, Pöyry, Sept. 2011
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<th>Category</th>
<th>2020</th>
<th>2030</th>
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<tr>
<td>Heat &amp; Power (primary solid biomass)</td>
<td>3.0</td>
<td>3.25</td>
</tr>
<tr>
<td>Traditional solid biomass</td>
<td>5.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Coal replacement</td>
<td>1.5</td>
<td>2.95</td>
</tr>
<tr>
<td>Biofuels</td>
<td>0.9-1.25</td>
<td>1.25-1.75</td>
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Thank you for your attention!

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Cell: +46 70 381 02 14; Skype: stenbnilsson
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