“Promoting sustainable building materials and the implications on the use of wood in buildings: a review of leading public policies in the UNECE region”

72nd session of the UNECE Committee on Forest and the Forest Industry
18 - 21 November 2014, Kazan, Russia

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OUTLINE

○ Background
○ Purpose of the study
○ Method
○ Preliminary findings
○ Timeline
○ Next steps
PURPOSE OF THE STUDY

1. Develop a succinct overview of the current policy environment regarding the use of sustainable construction materials and wood in UNECE region
2. Provide commentary on the effectiveness of such regimes in driving the adoption of sustainable construction materials
3. Discuss the contribution of wood products in achieving sustainable building goals
4. Gauge level of activity across leading countries in ECE region
5. No full inventory
1. Online survey (July - September 2014)
2. Directly sent to 8000 contacts
   - Committee on Housing and Land Management
   - Committee on Forests and the Forest Industry
3. 38 questions (multiple choice and open questions)
1. 100 responses from 33 different countries;
2. Initial list of 27 policies and programmes identified through a comprehensive web search
3. Six policies selected for detailed study that highlight leading practices across the materials life cycle

Survey Results

What is the state of development of policies which promote the use of sustainable construction and/or wood products in buildings in your region?

<table>
<thead>
<tr>
<th>Response</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have at least one relevant policy in effect today</td>
<td>54.8%</td>
</tr>
<tr>
<td>We have a policy in development and we hope that it will be implemented in the next 2 years</td>
<td>17.8%</td>
</tr>
<tr>
<td>We are planning to start developing a policy within the next 2 years</td>
<td>6.8%</td>
</tr>
<tr>
<td>We have no plans to develop such a policy at this time</td>
<td>20.6%</td>
</tr>
</tbody>
</table>

Results for open-ended questions are not displayed.
Many countries have programmes and policies in place.

- 42% of survey respondents have at least one policy in effect today
- 15% have a policy in development which they expect to implement in the next two years.
The primary motivation for these policies are:

- Support GHG emission reduction and/or climate change policies,
- Reduce environmental impacts of construction materials (embodied energy, water, waste, etc.), and/or
- Promote a local wood economy and culture.
Prescriptive approach dominates *policies in place*

(use certain materials, impose bans on certain materials, stipulate quantities of certain materials types, or favour materials with particular properties)

BUT: there is a shift towards:

- Integrated, cross-cutting performance based policies that address more than one life cycle stage
- Adoption of life cycle assessment (LCA) as the tool of choice in evaluating the environmental impacts of materials
- Recognition of wood as a low carbon material
1. Information-based policies
2. Policies that advance environmental norms
3. Policies that focus on the proportion of wood in buildings
4. Policies that advance technical specifications and structural norms
5. Public procurement policies
6. Market-based instruments

Information on 28 policies selected to highlight leading practices
1. Information-based policies
   - WOODBOX public outreach programme
     - AUSTRIA & GERMANY

2. Policies that advance environmental norms
   - 2000-Watt Energy Vision
     - SWITZERLAND

3. Policies that focus on the proportion of wood in buildings
   - Wood Resource Policy
     - SWITZERLAND

4. Policies that advance technical specifications and structural norms
   - Wood First Initiative
     - CANADA

5. Public procurement policies
   - BES6001 Responsible Sourcing of Sustainable Construction Products
     - UK

6. Market-based instruments
   - Chain Oriented Waste Policy
     - THE NETHERLANDS
<table>
<thead>
<tr>
<th>Life cycle stage</th>
<th>Policy categories</th>
<th>Selected policy examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre selection</td>
<td>1. Information-based policies</td>
<td>WOODBOX public outreach programme AUSTRIA &amp; GERMANY</td>
</tr>
<tr>
<td></td>
<td>2. Policies that advance environmental norms</td>
<td>2000-Watt Energy Vision SWITZERLAND</td>
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<td></td>
<td>3. Policies that focus on the proportion of wood in buildings</td>
<td>Wood Resource Policy SWITZERLAND</td>
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<td></td>
<td>4. Policies that advance technical specifications and structural norms</td>
<td>Wood First Initiative CANADA</td>
</tr>
<tr>
<td></td>
<td>5. Public procurement policies</td>
<td>BES6001 Responsible Sourcing of Sustainable Construction Products UK</td>
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</tbody>
</table>
Policy 1. WOODBOX & WOODDAYS GERMANY & AUSTRIA

- An integrated public outreach programme
- Aims to build public awareness of the impacts of construction materials and the benefits of using wood
- Promotes modern methods of construction (pre-fab, etc.)
- 15,000 visitors in five locations (Milan, Brussels, Ljubljana, Bratislava, Klagenfurt)
- Plus full exhibition in Vienna
Policy 2. 2000-Watt Society

SWITZERLAND

- In-use and embodied energy/CO₂ impacts are regulated
- 2000 Watts & 1 tonne CO₂ per person by 2050
- Complex but rigorous, requires LCA
- Builds on extensive experience in low-carbon, design, construction and reporting
- Informs other materials and resources policies
- 70% Zurich residents voted in favour
Policy 3. Wood Resource Policy
SWITZERLAND

- Clear measurable standards and targets
- Cross-cutting mechanism promotes use of wood as a way to reduce embodied energy / CO₂ in buildings
- Supports 2000-Watt Society while increasing opportunities for local wood industry.
- At least 50% increase in the wood content from local forests in the entire Swiss building stock (new buildings) by 2020
Policy 4. Wood First Policy
CANADA (B.C. & QUEBEC)

- Facilitates the uptake of wood products in new and innovative situations
- Stimulates research into new techniques and technologies
- Market catalyst
- Develops small local markets as “shop-windows” of wood innovation for primary overseas markets.

18 storey wood residential tower proposed for University of B.C, Canada
Policy 5. BES6001 Sustainable Sourcing of Construction Products

UNITED KINGDOM

- Developed by BRE
- Requires range of life-cycle criteria to be met
- EPDs needed
- Potential to influence entire life-cycle of materials
- Steel reinforcing pilot - can be applied across all major materials
- Major project offers immediate economy of scale
Policy 6. Chain-Oriented Waste Policy
THE NETHERLANDS

- Highest landfill taxes in Europe @ €107.49 per tonne
- Achieved 95% recycling and recovery rate for C&D waste - what’s next?
- Considers entire material chain, including all stages in product’s life cycle from raw material mining, production and use, to waste and possible recycling, as opposed to concentrating on “end-of-pipe” solution
- Focus is on reducing overall environmental pressures
- Actively working towards a “circular economy”
1. Project initiation
2. Literature review and questionnaire
3. Analysis
4. Report (50% complete)
5. Document production

TIMELINE

<table>
<thead>
<tr>
<th>Name</th>
<th>Begin date</th>
<th>End date</th>
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</thead>
<tbody>
<tr>
<td><strong>Phase 1: Project initiation</strong></td>
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<tr>
<td>Project launch meeting</td>
<td>19/05/14</td>
<td>19/05/14</td>
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<tr>
<td>Finalize terms of reference</td>
<td>20/05/14</td>
<td>30/05/14</td>
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<tr>
<td><strong>Phase 2: Literature Review &amp; Questionnaire</strong></td>
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<tr>
<td>Preliminary data collection &amp; web research</td>
<td>26/05/14</td>
<td>25/07/14</td>
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<tr>
<td>Prepare questionnaire</td>
<td>26/05/14</td>
<td>06/06/14</td>
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<tr>
<td>Client review of questionnaire</td>
<td>08/06/14</td>
<td>13/06/14</td>
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<tr>
<td>Field questionnaire</td>
<td>18/06/14</td>
<td>04/07/14</td>
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<tr>
<td>Gather findings from questionnaire</td>
<td>23/06/14</td>
<td>11/07/14</td>
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<tr>
<td>Create contact list of key informants</td>
<td>07/07/14</td>
<td>18/07/14</td>
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<tr>
<td>Assemble raw data for analysis</td>
<td>14/07/14</td>
<td>25/07/14</td>
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<tr>
<td>Submit progress report to client</td>
<td>28/07/14</td>
<td>01/08/14</td>
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<tr>
<td>Client review period</td>
<td>04/08/14</td>
<td>15/08/14</td>
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<td><strong>Phase 3: Analysis</strong></td>
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<tr>
<td>Research synthesis and analysis</td>
<td>11/08/14</td>
<td>05/09/14</td>
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<tr>
<td>Conduct key informant interviews to fill gaps</td>
<td>25/08/14</td>
<td>12/09/14</td>
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<tr>
<td>Prepare report outline</td>
<td>08/09/14</td>
<td>12/09/14</td>
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<tr>
<td>Summary package of findings</td>
<td>15/09/14</td>
<td>19/09/14</td>
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<tr>
<td>Prepare presentation of findings</td>
<td>22/09/14</td>
<td>26/09/14</td>
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<tr>
<td>Client review period</td>
<td>22/09/14</td>
<td>03/10/14</td>
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<tr>
<td>UNECE Housing conference</td>
<td>06/10/14</td>
<td>06/10/14</td>
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<td><strong>Phase 4: Report</strong></td>
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<tr>
<td>Prepare and submit 1st draft report (50%)</td>
<td>07/10/14</td>
<td>07/11/14</td>
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<tr>
<td>Client review period</td>
<td>10/11/14</td>
<td>14/11/14</td>
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<tr>
<td>Prepare presentation for Kazan meeting</td>
<td>10/11/14</td>
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<td>Client meeting in Kazan, Russia</td>
<td>17/11/14</td>
<td>17/11/14</td>
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<tr>
<td>Prepare and submit 2nd draft report (50%)</td>
<td>17/11/14</td>
<td>18/12/14</td>
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<tr>
<td>Client review period</td>
<td>22/12/14</td>
<td>09/01/15</td>
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<td><strong>Phase 5: Document production</strong></td>
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<tr>
<td>Prepare and submit final report</td>
<td>05/01/15</td>
<td>04/05/15</td>
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<tr>
<td>UNECE production &amp; printing</td>
<td>02/02/15</td>
<td>01/05/15</td>
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<tr>
<td>Client meeting &amp; presentation in Vancouver</td>
<td>04/05/15</td>
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NEXT STEPS

80% complete draft will be submitted mid December 2014
Consultation with member states
Final document will be ready for printing in January 2015.
Publication will be in March 2015
Thank you for your attention.

Contact: 
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