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Building codes and standards: Influence on material use and construction practices: a joint Policy Forum of the United Nations Economic Commission for Europe and Society of Wood Science and Technology

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Note by the secretariat

Summary

This document provides background information for the joint UNECE Timber Committee and Society of Wood Science and Technology, a Joint Policy Forum on “Building codes and standards: Influence on material use and construction practices”, to be held on 13 October 2010.

Building codes and standards can either promote wood use in construction, or discriminate against it. As buildings are the greatest uses of energy, for space and water heating and cooling, mitigation of climate change necessitates energy-efficient, cost-effective construction. Evaluated on a life-cycle basis, wood often is a preferred building material. The objective of the Forum is also to discuss the impacts of codes and regulations on wood in construction. The Forum will focus on current and near-term opportunities and threats for wood.

UNECE Timber Committee and Society of Wood Science and Technology delegates are invited to consider the questions set out in this document, and to prepare for an active discussion during the Forum.

I. Introduction

1. The United Nations Economic Commission for Europe (UNECE) Timber Committee (TC) and the Society of Wood Science and Technology (SWST) are organizing a Policy Forum devoted to the topic “Building codes and standards: Influence on material use and construction practices”. Expert presentations and discussions will take place on Wednesday, 13 October 2010 as a one-day, in-session event during the 68th TC session. This document is a background document for the Forum.

2. In conjunction with the two prior TC sessions, workshops were held on different aspects of green building, i.e. energy efficient, wood-based structures. At each workshop the TC identified the importance of building codes and standards in conjunction with wood use. Some codes facilitate the use of wood, others restrict its use and others prohibit wood. As noted in the 2008 and 2009 workshops, wood has advantages for various aspects of buildings, while for other applications, wood’s competitors may be more suitable. The TC recommended that any evaluation of building materials be on a life cycle assessment (LCA) basis.

3. Green building rating systems approach the use of wood differently. Systems based on LCA-carbon-centric are “material neutral”, but many of the existing systems underestimate the carbon intensity issues. The TC recommended promoting life cycle analysis in green building rating systems, as separate from local credits.

4. The TC realizes the need to establish strategic alliances to promote greater use of wood in buildings with the forest industry, environment community, scientific community and governments. When LCA frameworks are fully developed, the next step is to develop tools to transfer and communicate them plainly and simply to industry, to builders, and to the general public.

5. Following the 2009 workshop the TC also recommended:

(a) Supporting innovation in technology platforms to improve wood products and building systems.

(b) That forest products industries should support the R&D in developing life cycle inventory datasets for their products to support green building and green design.

(c) Continuously update the knowledge on the contribution of wood in LCA of buildings in order to keep up with evolution in other construction materials and in an energy consumption context.

6. The successful green building workshops in 2008 and 2009 conducted in conjunction with the annual TC session were organized by the UNECE/FAO Team of Specialists on Forest Products Markets and Marketing. The Team has again assisted in organizing and conduction this Forum. It is assisting in organizing a larger conference on “green building, from science to policy” which is currently planned for 2011 in Canada.

II. Purpose, topics and target audience of Policy Forum

7. The purpose of the Policy Forum is to:

(a) Review the current state of national building codes and standards in relation to wood-based construction, and the trend towards global standards. Examine their influence on material choice and use, and construction practices, especially in light of energy efficient, green building;

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- (b) Assess the development of LCA techniques and their application in building codes and standards;
 - (c) Discuss the role of wood products in mitigating climate change, especially their link to sustainable building assessment schemes;
 - (d) Investigate users' demands for more eco-friendly materials in construction;
 - (e) Assess the impact of building codes, regulations and users' demands on the forest sector;
 - (f) Discuss opportunities and strategies for the forest sector in light of current building codes and regulations, and in light of life cycle based-codes and regulations.
8. The Forum will have four sessions:
- (a) Codes and standards: State of the art and prospects
 - (b) Role of LCA in developing building codes and standards
 - (c) Role of wood products in mitigating climate change
 - (d) Users' demands: Their impact on the forest-based sector.
9. Expert speakers will address the following topics:
- (a) Building codes and standards: Influence on material use and construction practices;
 - (b) Review of international building environmental assessment systems and standards and the trend towards global standards;
 - (c) Investing in mitigation and adaptation to climate change and proactive risk management;
 - (d) Comparison of European codes, standards and practices, including with other global regions;
 - (e) Recent developments in LCA parameters;
 - (f) Environmental evaluation of timber buildings using LCA methodology;
 - (g) Towards a sustainable building sector: Life cycle primary energy use and carbon emission of a wood-framed apartment building with biomass-based energy supply;
 - (h) Wood products in climate policies and linkage to sustainable building assessment schemes;
 - (i) Why wood is not used to a greater extent in the construction of multi-story buildings;
 - (j) Designers views of green structural materials: Implications for wood science research
 - (k) Marketing certified wood for building construction in Italy and the United Kingdom: What is missing?
 - (l) Future impact of users' demands on the forest sector.
10. The target audience includes representatives from governments, industry, research, non-governmental organizations, international organizations and other stakeholders from all parts of the forest sector. Experts from other sectors are invited to provide the vital cross-sectoral perspective. Considerable discussion time is included in the programme.

III. Questions for discussion

11. The Policy Forum aims at discussing and providing answers to the following questions:

(a) How can wood products compete on an equal basis with other construction materials for energy-efficient and environmentally friendly buildings?

(b) What is needed to get building codes and standards to be based on LCA? What specific tools could the TC develop, e.g. guidelines or standards, to promote more use of wood construction and the application of LCA?

(c) How does your country or organization overcome barriers to using wood in construction?

(d) What is the role of the TC in overcoming the barriers to using wood in construction?

(e) What is the role of the SWST in overcoming the barriers to using wood in construction?

(f) What should be the focus of, and what topics should be included in the 2011 green building meeting to be held in Canada?

12. Delegates to the Timber Committee and participants in the Forum are requested to consider these questions in the light of their national situation in advance of the Forum, and to actively engage in the discussion during the meeting.

IV. Outcomes

13. Outcomes of the meeting will include:

(a) A press release will be issued containing Forum's conclusions.

(b) Presentations will be made available on the TC and European Forestry Commission homepage: www.unece.org/timber.

Annex

United Nations Economic Commission for Europe, Food and Agriculture Organization of the United Nations and Society of Wood Science and Technology

Building codes and standards: Influence on material use and construction practices: a joint Policy Forum of the United Nations Economic Commission for Europe and Society of Wood Science and Technology

Provisional agenda

<i>Schedule</i>	<i>Topic</i>
09:00 – 10:00	<i>Registration and coffee</i>
10:00 – 10:10	Opening
10:10 – 10:35	Keynote: Building codes and standards and their impact on material choice in construction
10:35 – 11:35	Session I: Codes and regulations – State of the Art and Prospects
10:35 – 10:55	A Review of International Building Environmental Assessment Systems and Standards and the Trend to Global Standards
10:55 – 11:15	Comparison of European Codes, Standards and Practices, Including with other Global Regions
<i>11:15 – 11:40</i>	<i>Discussion</i>
11:35 – 11:55	Session II: Role of Life Cycle Assessment in Developing Building Codes and Standards
11:35 – 11:55	Recent Developments in Life Cycle Assessment Parameters
11:55 – 12:15	Environmental Evaluation of Timber Buildings Using Life Cycle Assessment Methodology
12:20 – 12:40	Towards a Sustainable Building Sector: Life Cycle Primary Energy Use and Carbon Emission of a Wood-framed Apartment Building with Biomass-based Energy Supply
12:40 – 13:00	Discussion
<i>13:00 – 15:00</i>	<i>Lunch Break</i>

<i>Schedule</i>	<i>Topic</i>
15:00 – 16:30	Session III: Role of Wood Products in Mitigating Climate Change
15:00 – 15:20	Wood Products in Climate Policies and its Linkage to Sustainable Building Assessment Schemes
15:20 – 15:40	Why Wood is Not Used to a Greater Extent in the Construction of Multi-Story Buildings
15:40 – 16:00	Discussion
16:00 – 18:00	Session IV: Users' Demands – their impact on the Forest-based Sector
16:15 – 16:35	Designers Views of Green Structural Materials: Implications for Wood Science Research
16:35 – 16:55	Marketing Certified Wood for Building Construction in Italy and the United Kingdom: What is Missing?
16:55 – 17:15	Future Impact of Users' Demands on the Forest Sector
17:15 – 17:45	Discussion
17:45 – 18:00	Chairs Summary and Closing Remarks.
