Building green is way forward, concludes UNECE/FAO workshop

Worldwide, 40 to 50 per cent of all primary energy is used in buildings. Buildings also account for up to 40 per cent of carbon dioxide (CO₂) emissions. According to current trends, the impact of the building sector is unlikely to decrease, and could grow to 70 per cent by 2050. In addition to direct emissions, another 8 per cent of CO₂ emissions are due to combustion of fossil fuels and biomass for heating and cooling. While unsustainable land-use patterns make urban areas even more carbon unfriendly, it is the building sector that holds the key to reducing emissions. The International Panel on Climate Change estimates that there is a potential to reduce approximately 29 per cent of the projected baseline emissions by 2020 in the residential and commercial sectors. This is the highest potential gain amongst all sectors.

“There is a huge potential to be mobilized in the building sector when it comes to fighting climate change”, confirmed Mr. Johann Georg Dengg, Chair of the United Nations Economic Commission for Europe (UNECE) Timber Committee, in his opening address. “We must be aware that most of the costs associated with emissions from the building sector can be saved by professional renovation and new construction. Thus, green building is a solution both to environmental problems as well as economic challenges”.

The workshop, held at the Food and Agriculture Organization of the United Nations (FAO) in Rome as part of European Forest Week, provided a comprehensive overview of the many opportunities offered by building green. “In addition to reduced greenhouse gas emissions”, noted Ms. Paola Deda, Secretary of the UNECE Committee on Housing and Land Management, “building green reduces the overall ecological footprint of construction over its entire life cycle and, contrary to what is commonly believed, it also reduces the cost of the building over its whole life cycle. Other positive externalities include new business opportunities, more industrial productivity, improved social welfare, increased building comfort and enhanced health for occupants”.

Workshop participants – who included architects, sustainable developers, and representatives of industry associations and governments – agreed that timber (on which the workshop focused its assessment) has low-embodied energy throughout its life cycle: no other common building material requires so little energy to produce as wood. When sustainably produced, timber is also carbon neutral and renewable. Every
cubic metre of wood used as a substitute for other building materials reduces CO₂ emissions to the atmosphere by an average of 1.1 metric tons. As noted in a recent European Confederation of Woodworking Industries (CEI-Bois) publication presented at the workshop, “Based on this figure, a 10 per cent increase in the percentage of wooden houses in Europe would produce sufficient CO₂ savings to account for about 25 per cent of the reductions prescribed by the Kyoto Protocol”. Existing projects of multi-family, multi-storey buildings also showed that using timber makes for better (and less costly) conditions for construction workers and reduces waste and pollution related to construction processes.

Participants concurred that green building, given its potential role to help us meet environmental and economic challenges, should be placed higher on the global sustainable development and climate change agendas. A more scientific approach to defining and certifying green buildings is also needed in order to avoid “green washing” and make sure that future building choices are based on solid scientific evidence.

UNECE will continue to work on green building in the years to come, through the joint work of different units and committees including the Timber Committee, the Committee on Housing and Land Management and the Committee on Sustainable Energy. This work contributes directly to the attainment of United Nations Millennium Development Goal 7, to ensure environmental sustainability.

For more on the “Roles of Wood in Green Building and Green Building Effects on the Forest Sector in the UNECE Region” workshop, please see the Earth Negotiation Bulletin, available online at: http://www.iisd.ca/ymb/efw/20october.html.

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