

“THE **ROLES OF WOOD** IN GREEN BUILDING
AND GREEN BUILDING EFFECTS ON THE
FOREST SECTOR IN THE UNECE REGION”

Monday October 20th, 2008, ROMA, Italy

Outcomes and recommendations

**By the
Team of Markets Specialists
on Forest Products and Marketing**

**UNECE Timber Committee
Rome, October 21st 2008**

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Wood

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and green building ?

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What is green building ?

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GREENBUILDING are designed and developed with much greater consideration for the full lifecycle of the building than conventional ones. Their target is to minimise construction impacts, use less resources and be healthier during the operation phase and also be suitable for recycling and minimisation of waste. They should even be designed for long life and adaptability to different uses. This concept embraces a big number of aspects such as design and management choice of materials, building performance as well as interaction with urban and economic development and management. Different approaches are followed according to the local socio-economic context; in some countries priority is given to resource use (energy, materials, water, and land use), while in others social and economic issues are the more determining factors.



Source : Spirandelli, 2008

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Why should we care about green building ?



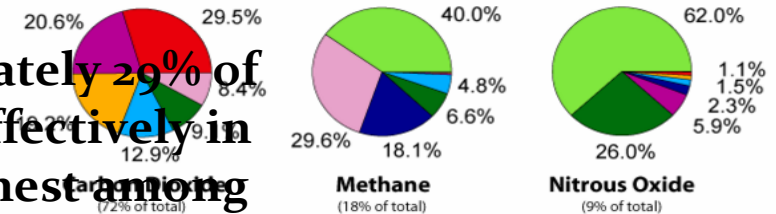
Opportunities: climate change and energy efficiency



- **EU estimates that 57% of emissions are from all CO₂ emissions from buildings in 2002. transport building and industry (Stern, 2007)**
- **Largest cost-effective savings potential lies in the residential (households) and commercial buildings sector.**

expected to grow 70% between 200 and 2050
(Stern, 2007).

Annual Greenhouse Gas Emissions by Sector

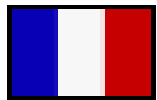


- **There is a global potential to reduce approximately 29% of the projected baseline emissions by 2020 cost-effectively in the residential and commercial sectors, the highest among all sectors (...)** (IPCC 2007, p. 389.)
- **Land use changes account for a very high proportion, almost 7% of global emissions.**

Green building systems worldwide



▪ BREEAM



▪ Démarche HQE



▪ LEED



▪ Eco-Profile



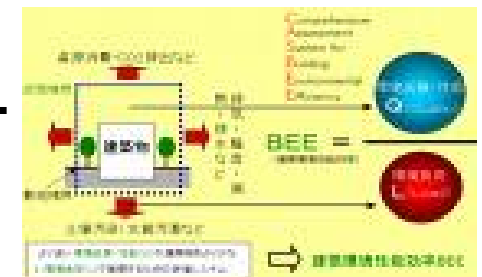
▪ EcoEffect



▪ German Sustainable Building Council (DGNB)



▪ CASBEE



Source : Filippi, 2008

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Why should we care about green building ?

Many prescriptive green building rating systems

Lack of science based criteria

Identification and comparability of criteria

**UNECE Timber Committee and other bodies common
frame work for identifying and comparing criteria – need
a life cycle analysis approach**

Did you know that wood is the preferable building material to achieve green building ?

1. Wood needs to be *branded*

- **Desired identify** : environmental benefits, change negative perception
- **Perceived identify gap** : fire, durability, structural performance, value
- **As a high-tech material**

Did you know that wood is the preferable building material to achieve green building ?

Wood needs to be *branded*

- As sustainable recognised eg– certified, carbon storage
- Low embodied energy - lowest embodied energy of any building material
- The substitution effect - Every m³ of wood used instead of other building materials reduces CO₂ emissions by an average of 1,1 tonne
- Thermal efficiency - Wood continues to save CO₂ throughout a building's life, because its natural thermal efficiency saves energy

Did you know that wood is the preferable building material to achieve green building ?

2. Wood needs to be *marketed*

- **General public – promotional campaign**
- **Key influencers - policy makers, architects, developers**
 - **Lack of awareness**
 - **Need information based on science**
 - **Education, training and skills**

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Did you know that we need to put green building high on political agenda ?

- Discuss green buildings in international fora
- Bring the issue into the climate change talks and other SD agendas
- Develop binding tools as well as soft laws
- Holistic approach (wood as systemic solution responding to challenges) :
 - Reduce energy consumption from buildings
 - Timber procurement and climate change
 - Environmental and other impacts of a product
 - Transportation (wood mile)
 - Life cycle analysis

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Did you know that we need to put green building high on political agenda ?

- **National, provincial, regional policies and private sector :**
 - **Need for policies / incentives to increase use of wood in construction (structural and appearance) – focus on environmental benefits**

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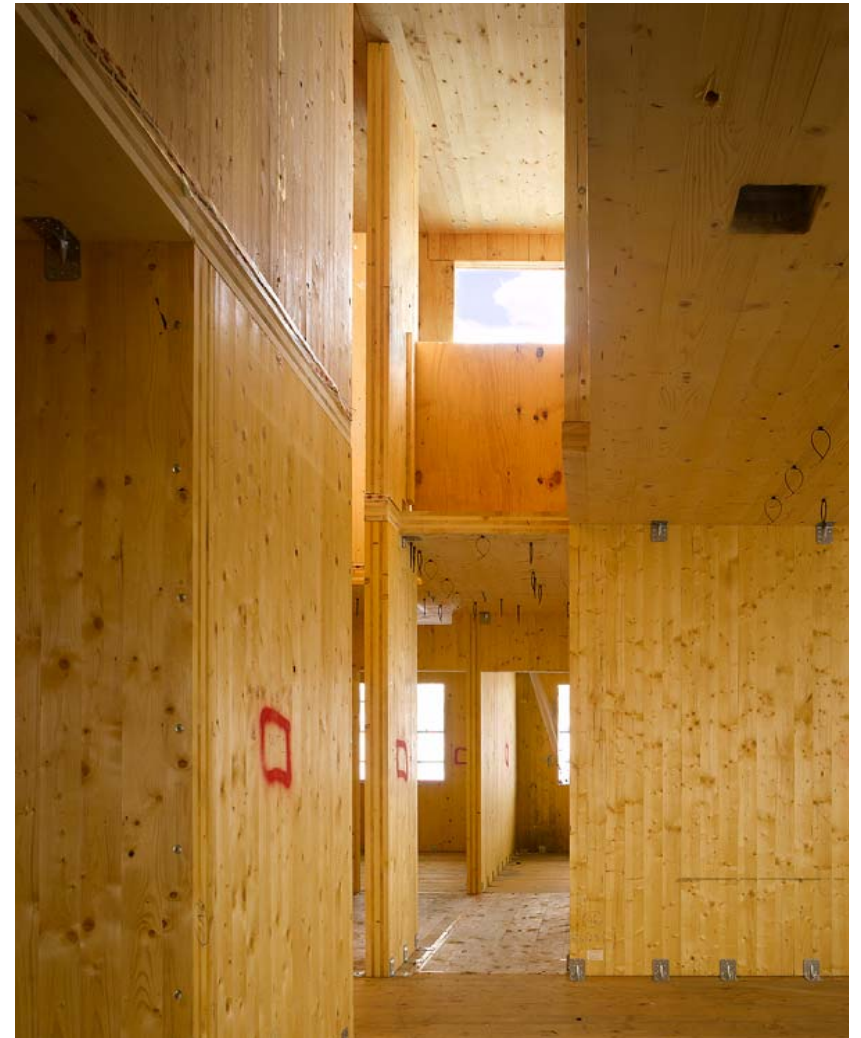
Did you know that wood is wood is a high-tech material ?

- **Calls for :**
 - **New building systems eg – multiple storeys (urbanisation) + Ty Unnos**
 - **Engineered wood products**
 - **Pre-manufacture off site + all tree parts + reduce waste**
 - **Innovation : passive houses – research**
- **Less waste, reusable, recyclable**
- **Education, training and skills**
- **Wood could benefit from policies for renovation / rehabilitation**

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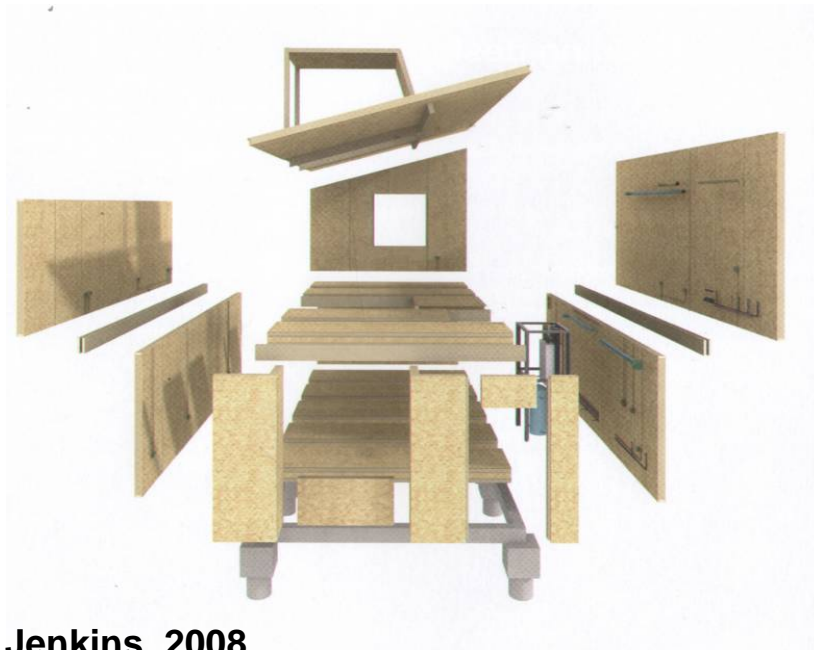
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PREFABRICATION

- High-tech engineering



Source : Jenkins, 2008



Did you know that they are true believers for wood out there ?

- **Club du bois / COP 15 Initiative**
- **National / regional campaigns by wood trade associations :
France, Germany, UK**
- **Government initiatives :**
 - **UK Procurement : Cooperation / synergies civil society and private sector**
 - **Québec (Canada) government strategy to increase the use of wood in construction**
- **Why not link with to FAO / UNECE Forest Communicators Network**

Recommendations :

- Request the UNECE TC to transmit the results of the Green Building Workshop to the Committee on Housing and Land Management and other relevant bodies for their consideration.
- UNECE TC invites the Committee on Housing and Land Management and other relevant bodies to cooperate on follow-up activities on Green building
- Team of specialists is considering a follow-up event building on the conclusions of the workshop