



Resource Efficiency Opportunities in the Building Sector

Josefina Lindblom
Directorate General for Environment
European Commission

Resource consumption

- **Construction and use of buildings in the EU amounts for about:**
 - **1/2** of extracted materials
 - **1/2** of energy consumption
 - **1/3** of water consumption
 - **1/3** of waste generated

Communication - overall aim

- To promote a more **efficient use of resources** in the construction and renovation of commercial, residential and public buildings
- To **reduce the overall environmental impact** throughout the life-cycle of buildings

Barriers – stakeholders' views

No common European understanding and dialogue about green buildings.

Lack of reliable, transparent and comparable data to move mainstream market.

Market needs to better and more widely understand the environmental pillar of sustainability.

Difficult to convince stakeholders of the business case and necessity of reducing environmental impacts.

Existing schemes for the assessment of environmental performance are difficult to compare.

Barriers - conclusion

- Lack of **reliable, comparable and affordable data**, methods and tools
- Absence of guidance on how to **incorporate environmental considerations** in purchasing decisions

Objectives

- Influence decision-making along the life-cycle of buildings by **providing relevant and comparable information** regarding environmental performance

⇒ Assessment framework with **core indicators**=
"common language"

Priority must be core indicators, which should be kept to a digestible minimum, focusing on impacts that stakeholders can easily understand.

Construction resource use and waste disposal are key priorities for the future.

Provide a simple framework that will encourage mainstream market to move towards better (not best) practice!

Right time to focus on impacts of the environmental performance of buildings, particularly the resources they use and the waste they generate.

We should encourage better design, better project planning, more resource-efficient construction products as well as construction and renovation. Tackle end-of-life now!

Framework - features

- **Flexible** – to be integrated in existing assessment schemes or used on its own
- **Simple**– to provide limited, easily understandable but relevant and comparable data, also translating technical indicators into financial info
- **Free** – to be used in decision-making by different actors and in policy-setting at various levels
- **Efficient** – increase the number of buildings assessed for their environmental performance, today < 1 %!

Framework – aspects to consider

- Total energy use
- Material use
- Water consumption determined by building design

**Indoor
comfort**

- Durability of construction products
- Recyclability and reusability of construction materials

Use intensity of (mostly public) buildings, using the same building for different purposes during the day/week.

Management of construction and demolition waste

Framework – benefits

- **Common language, transparency**
- **Build-up of reliable and comparable data**
- Effective transfer of better and best practices
- Expand into more countries and markets
- Making the business case starts with good data
- Improve professional knowledge, advice to clients and informed decision-making on supply and demand side
- Provide public authorities with relevant data to support policy

Framework – future steps

- **Two year timeline** for development of first set of indicators
- **Build on existing work** – technical standards, certification schemes, research projects, developments at international level
- **Co-operation** with stakeholders and Member States, different forms of consultation, necessary for quality and acceptance

Objectives

- Increase the use of recycled materials in the construction and renovation of buildings
- ⇒ A better functioning market for recycled construction and demolition waste (CDW)

Obstacles

- **Cost internalisation** – environmental damage costs not included in landfill fees or in cost of primary materials
- **Split incentives** – cost of dismantling, separation and processing waste has to be borne at the demolition phase while the savings from the use of recycled material accrue at the construction/production phase

Stimulate CDW markets - future steps

- Tools and guidelines for **assessment of buildings prior to demolition** and renovation to ensure optimal use of CDW
- **Benchmarks for content of recycled material** via GPP to stimulate demand
- **R&D and demonstration** projects in areas such as
 - design for deconstruction, and separation and recycling techniques;
 - collaborative schemes between demolition and construction product sectors aiming at sharing costs and benefits
- Promotion of best practice and collaboration with Member States to **divert CDW from landfilling** and to **integrate external environmental cost in price of virgin material**

Strong market for CDW - benefits

- **Environmental benefits** – reduction of natural resource depletion; less landfilling and backfilling of waste; lower rate of emissions
- **Economic benefits** – lower prices for recycled materials; savings in terms of energy/water
- **Employment opportunities** – job growth in deconstruction, sorting and recycling of construction materials