

# **Resource Efficiency Opportunities in the Building Sector**

**Josefina Lindblom**

**[http://susproc.jrc.ec.europa.eu/Efficient\\_Buildings/](http://susproc.jrc.ec.europa.eu/Efficient_Buildings/)**

# Resource consumption throughout the full life cycle

- **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

# Barriers

- No common European understanding about "green" buildings
- Lack of **reliable, comparable and affordable data**, methods and tools
- Absence of guidance on how to **incorporate environmental considerations** in purchasing decisions

# Objective

- Influence decision-making along the life-cycle of buildings by providing a tool which can result in **relevant and comparable information** regarding environmental performance

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

# Benefits with framework

- **Common language, transparency**
- **Build-up of reliable and comparable data**
- Making the business case starts with good data
- Effective transfer of better and best practices
- Informed decision-making on supply and demand side



# Macro-objectives

**Greenhouse gases from life cycle energy use**

*(operational and embodied energy)*

**Resource efficient material life cycles**

**Efficient use of water resources** *(if water stress)*

**Healthy and comfortable spaces**

**Resilience to climate change** *(thermal performance)*

**Optimised life cycle cost and value**

# Broad scoping to identify indicators

- Public sector initiatives, with permitting and planning requirements
- Building practitioners/field studies of building projects
- Assessment and reporting multi-criteria schemes
- Technical studies, Member State experience in relation to performance measurement tools, metrics and guidance
- Standards and harmonisation initiatives
- Collaborative EU projects

# Consultation - First indicator proposal

- Total primary energy consumption
- Operational and embodied GWP

- Indoor air quality

- LCA
- Service Life
- Deconstruction and recyclability
- Construction and demolition waste

- Operational water consumption

- Thermal comfort
- Additional cooling
- Microclimate cooling

- Life cycle costing
- Acquisition and maintenance costs
- Value/risk factors



# Consultation - Horizontal themes

- Differing ambition levels, to encourage professional development
- Data availability, quality and transparency
- The potential to track performance along a building's life cycle

## **Next steps**

- Public consultation ends 7 October
- Next working group meeting in Brussels on the 30 November
- Finalised framework by June 2017