

Government Actions for Resource Efficiency

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- approach towards resource efficiency in the 10YFP SBC Programme
- resource efficient policies in Finland
- reducing environmental impact of construction materials in Finland
- core Building Performance Indicators by GBC Finland
- material efficiency by Helsinki Region Environmental Services Authority HSY



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10YFP Sustainable Buildings and Construction Programme

1. Promote **common language** and tools on sustainable building
2. Adopting a **lifecycle approach** and **resource efficiency** in building supply chains
3. Using **scientific** and technological **knowledge** to produce tools that are designed for field actors and lead to cost-effective policies
4. SBC depends on **sustainable infrastructure**
5. SBC should strive to be near-zero impact, or even, when relevant, **resource positive**
6. SBC should have a **circular economy** approach
7. SBC should begin at **home**
8. SBC requires the engaged, knowledgeable and active participation of **all stakeholders**
9. SBC necessitates a **climate responsive** approach
10. Monitoring, verifying and **provide feedback** is critical for success
11. There is a key role for government at all levels to **lead by example**
12. **Demonstration** of SBC approaches

Resource efficiency policies in Finland

Energy use

- New energy efficiency regulation for new building (2012) and renovation (2013) according to EPBD
- Implementation of EPBD concerning Nearly-Zero Energy Building regulation, implementation of EED
- Development of HVAC and renewable energy technology; several projects

Construction and Demolition Waste

- Implementation of Waste Framework Directive
 - Waste Act 2011 and Decree 2012: New regulation for sorting C&D waste
- Promotion programme for material efficiency in building sector
- Challenge: reaching the 70 % target of recycled C&D waste because of big share of wooden waste in Finland

Reducing environmental impact of construction materials in Finland

- Increasing role of construction materials in life cycle GHG emissions of buildings as we move towards nearly zero energy buildings
- Finnish Government platform 2011: promotion of LCA of construction materials and wooden building in construction
- Target: inclusion of environmental impact (embedded energy and GHG emissions) of construction materials in building legislation 2020s (energy efficiency regulation?) → roadmap

Challenges

- harmonization of assessment methods
- role of other environmental impacts (acidification, eutrofication, scarcity of natural resources)
- role of carbon sequestration in climate impacts assessment

EU Activities

- communication on Resource efficiency of construction sector: core indicators
- standardisation of environmental qualities of construction products

Core Building Performance Indicators in design phase



ECONOMY
Lifecycle Cost €
(EN 15643-4)

ENERGY
Imported energy
Imported primary energy
Baseload power

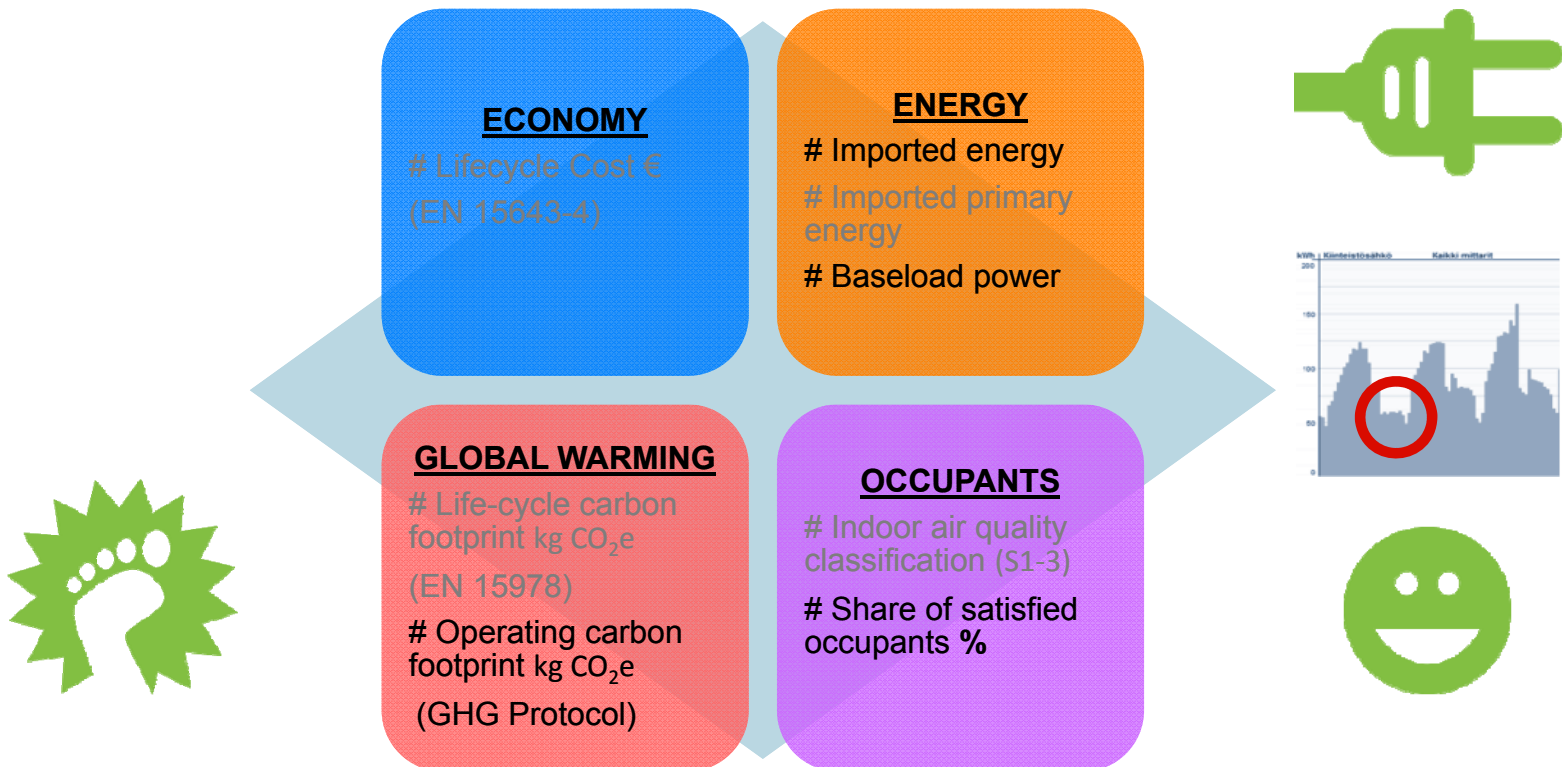
GLOBAL WARMING
Life-cycle carbon footprint kg CO₂e
(EN 15978)
Operating carbon footprint kg CO₂e
(GHG Protocol)

OCCUPANTS
Indoor air quality classification (S1-3)
Share of satisfied occupants %

E-value
kWh
/m², a



Core Building Performance Indicators in use phase



Calculation of Material Balance 2012

