Creating a national system for environmental classification of buildings. A Swedish project.

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Background

- The dialogue project ”Building, Living and Property Management for the Future”
- The dialogue resulted in an voluntary agreement between some companies, municipalities and the Government
- Several commitments
- One concerns classification of buildings

Commitment on classification of buildings

- By the year 2009 all new buildings and 30 % of existing buildings should be classified
- All parties promise to develop such a classification system
- The insurance companies promise to …
- The credit institutions and banks promise to…
- The government promises…
- The promises are a bit vague but the idea is that there should be incentives (for example reduced property taxes) to promote classification of buildings

Aim of our project

- To develop a system for environmental classification of buildings.
- It should be possible to use within the dialogue ”Building, Living and Property Management for the Future”.
- It should be possible to use in other contexts.

The project ”Environmental classification of buildings”

- 2005-2007
- 3 groups in the project team
- Funded by Formas (The Swedish Research Council for Environment, Agriculture Sciences and Spatial Planning) and 19 companies and organisations
- A sister project with nearly the same aim which we coordinate our work with, consisting of 4 research groups and 18 companies and organisations
- A number of additional stakeholders
- Altogether approx 40 organisations involved

- An interesting project organisation

Four phases

- An initial phase. Completed with the report by Sundkvist et al (2006).
- An R&D-phase. 2005-2006. Will result in one or several suggestions for a classification system.
- A test-phase. 2006-2007.
- A final phase. 2007.

The initial phase

- Inventories of
  - Available methods
  - Needs and expectations among different stakeholders
  - The policy context for the project
  - Incentives in other countries

Available methods

- A large number of methods available
- We reviewed 25 Swedish and 11 international methods
- Several methods needed because they answer different questions.
- Limited use.

Results from interviews with companies

- A method is seen as useful if (examples)
  - It is established and used by others
  - Is based on a life-cycle approach
  - Includes a database for different materials
  - Have user friendly ”light versions”
  - Is transparent
  - Has a simple and clear presentation
  - Is based on well established computer programs
  - Is based on questionnaires to the users
  - Has results which are verified by a third party

…results…

- A method is seen as useful if
  - Is easily accessible
  - Is comprehensive
  - Is flexible
  - Is compatible with other inventory methods and classification systems
  - Is owned by real estate managers and consultants together

…results

- A method is seen as not useful if
  - Is developed and owned by a consultancy company
  - It has complicated routines and tools
  - Is complicated and requiring expertise by the user
  - Is not established on the market
  - Is based on questionaires to the users
  - Is expensive to use
  - Not applicable to all types of buildings

Results from interviews: Incentives

- Incentives are not necessary for the implementation of a classification system, but will speed up the process
- Examples of incentives:
  - Reduced property taxes
  - Improved terms for insurances and taxes
  - Reduced costs for inspections
  - Requirements to get permits to build
  - Requirements in procurement
  - Subsidies for investments

Some of our starting points

- Make use of national and international experiences
- Should be useful in a long time-perspective
- Should be used by a large number of actors
- Should be used on different types of buildings
- Should be easy to use but still scientifically sound and comprehensive
- Developed in a broad cooperation
- Compatible with other societal goals
- Based on life-cycle thinking

Examples of indicators under discussion (1)

- Energy use for heating [kWh/m^2]
  - Criteria:
    - Class A: Reduced by 50 % compared to present average
    - Class B: Reduced by 20 % compared to present average
    - Class C: Present average.
    - Class D: No criteria

Related to National environmental quality objectives and commitments in the dialogue project

Examples of indicators under discussion (2)

- Emissions of carbon dioxide from production of heat and electricity
  - Criteria
    - Class A: No (or only limited amounts of) fossil fuels used
    - Class B: ?
    - Class C: Present average
    - Class D: More than present average.

Related to National environmental quality objectives and commitments in the dialogue project

Examples of indicators under discussion (3)

- Air emissions from small scale heating
  - Criteria
    - Class A: Fulfilling criteria for ecolabels of small scale boilers
    - Class B ? Same?
    - Class C ?

Related to National environmental quality objectives

Examples of indicators under discussion (4)

- Presence of hazardous chemicals
  - Criteria
    - Class A: No chemicals which should be phased out according to Swedish chemicals policy
    - Class B: None of the following chemicals: X_1, X_2, X_3, X_4, X_5…
    - Class C: None of the following chemicals: Asbestos, PCB, ?
    - Class D: Anything goes

Related to National environmental quality objectives and commitments in the dialogue project (Class A) and current practise (Class B – D)

Examples of indicators under discussion (5)

- Knowledge about presence of hazardous chemicals
  - Criteria
    - Class A: Knowledge on chemicals which should be phased out according to Swedish chemicals policy
    - Class B: Knowledge on the following chemicals: X_1, X_2, X_3, X_4, X_5…
    - Class C: Knowledge on the following chemicals: Asbestos, PCB, ?
    - Class D: Anything goes

Related to National environmental quality objectives and commitments in the dialogue project (Class A) and current practise (Class B – D)

Examples of indicators under discussion (6)

- Ventilation
  - Compulsory ventilation control performed and approved
- Moisture and mould
- Noise
  - Noise from traffic and ventilation
- Radiation
  - Radon
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Presentation of results (under discussion)

- Results for the whole list of indicators should be presented
- Overall indicators can be presented, e.g.:
  Class A: Max two class B, No C or D
  Class B: Max two class C, No D.
  Class C: Max two class D.
  (The system can be more complex also)

What happens now?

- We’re working on the classification system.
- One or several preliminary suggestions will be presented this fall, and tested coming winter.
- Final suggestion will be presented end of 2007.
- Ongoing discussions with participants in the project and other stakeholders.

Contacts

- Any questions or comments are welcome!
- You are welcome to join the project!
- Please contact
  Göran Finnveden (goran.finnveden@infra.kth.se)
  Helene Wintzell (helene@helenewintzell.se
- The report by Sundkvist el al (2006):
  Miljöklassning av byggnader – Inventering av metoder och intressenternas behov
  is available on www.infra.kth.se/fms