The Finnish Environmental Assessment and Classification System (PromisE)
Current State and First Experiences

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1. INTRODUCTION

An increasing number of companies in the real estate and construction sector see a business opportunity in environmental issues. The environment must be taken into account in order to minimize unnecessary risks and to uphold a positive corporate image. Solutions that are friendly to the environment are often also economically viable in the long term.

The greatest challenges and opportunities lie in the added-value factors related to environmental values. Clients are showing growing interest in environmental issues, and the demand for environmentally friendly products is increasing. Examples may be found in tourism, hotels, retail chains and housing. Although the importance of 'green' values is increasing, it is not easy to market a building using environmental arguments.

A significant factor in these marketing difficulties is a vagueness concerning what 'environmentally compliant' or 'environmentally friendly' actually mean. The environmental impact of a building over its entire life cycle of several decades consists of a number of factors that clients cannot be expected to be conversant with. Distilling the environmental properties of a building into a concise and attractive package is an absolute must for marketing to succeed.

PromisE Environmental Classification System for Buildings is being developed in order to support this market development. PromisE is a marketing tool whose basic idea is to evaluate the major environment effects of a building with simple but dependable indicators. The results are awarded points, and the building is given a grade, which reflects the quality of its environmental properties. The classification enables buyers or tenants to assess the 'environmental friendliness' of a building classified as Class A, B, C, D or E just as with household appliances.

Environmental classification is intended as a tool for all actors in the property, construction and building services industry. The environmental impact of a building consists of its design solutions, the products and materials used in its construction and also the way the building is

used and maintained. Environmental classification helps create a shared view of what 'environmentally friendly' means in practice.

2. ENVIRONMENTAL CLASSIFICATION FOR BUILDINGS

Underlying the environmental classification is a decision in principle taken by the Government in December 1998 concerning the promotion of sustainable construction. The development and introduction of an environmental classification system for buildings is mentioned as a key market-driven development measure in that decision.

Environmental assessment and classification systems for buildings have been and are being developed in a number of countries: Ökoprofil in Norway, EcoEffect in Sweden, BREEAM in Britain, BEPAC in Canada and LEED in the USA. The most widely spread of these is BREEAM, which is used to classify 30% of all new office buildings in Britain.

The structure of the classification, the things it measures, the weight and indicators of these measurements and the reference levels are complete and posted on the Internet for comment. The indicators are divided into four categories: human health, use of natural resources, ecological consequences and environmental risk management. The categories consist of more detailed criteria assessed with the indicators selected.

2.1 Human health

Human health (figure 1) is part of the PromisE system addressing to the health issues of people staying indoor. Emissions, moisture risks and infiltrated outdoor air pollution are given measurable indicators that can be used when assessing human health in buildings. Human health is weighed as 25 % of the PromisE system.

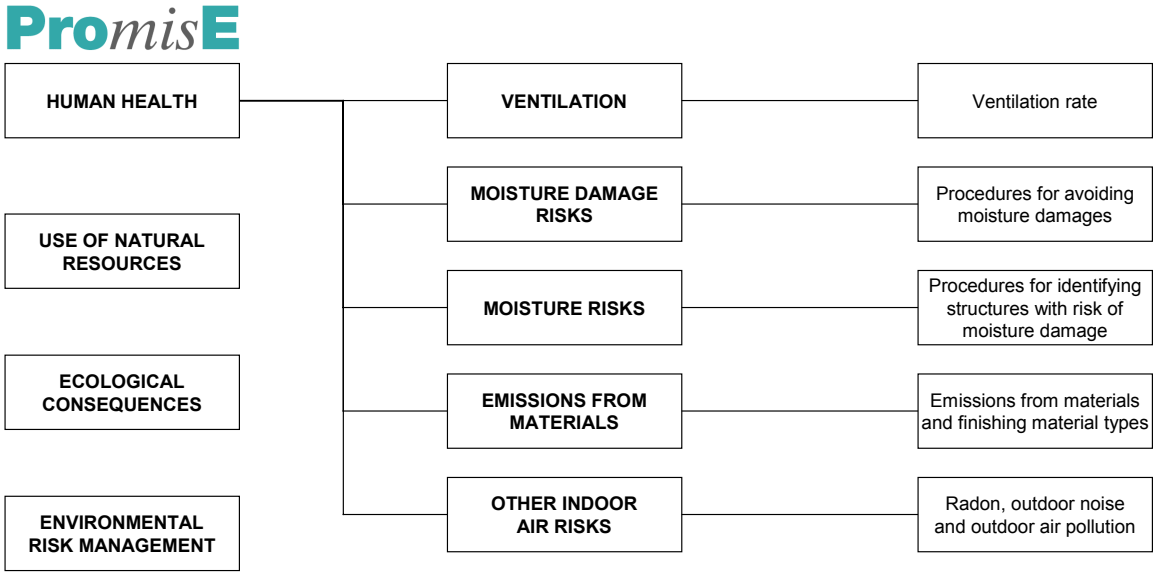


Figure 1 Human health (25 %).

2.2 Use of natural resources

Use of natural resources (figure 2) emphasises energy, water and service life. Since there aren't yet simple methods for considering the land use and materials issues they are, for the time being, left out from the system. The service life part includes service life design, flexibility and adaptability, and procedures for systematic maintenance planning. Thus, the

materials omission is partly compensated by the service life items. The weight factor for natural resources is 15 % of the total system.

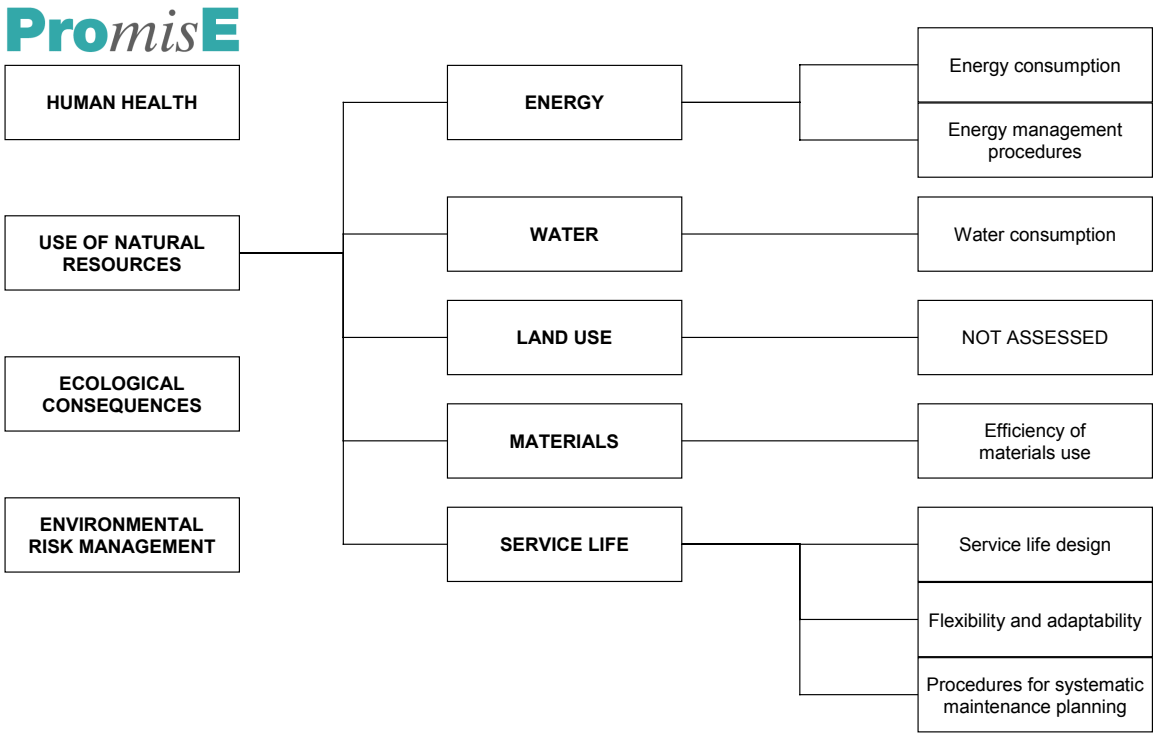


Figure 2 Natural resources (15 %).

2.3 Ecological Consequences

Ecological consequences (figure 3) are counted from emissions to air, solid waste and sewage, local biodiversity and emissions from transports. Emissions to air (greenhouse gases, acidifying emissions and volatile organic compounds) is the most important group of parameters under ecological consequences. The structure of waste and transports categories differ depending on the building type in question. Ecological consequences are weighted to represent 40 % of the PromisE score.

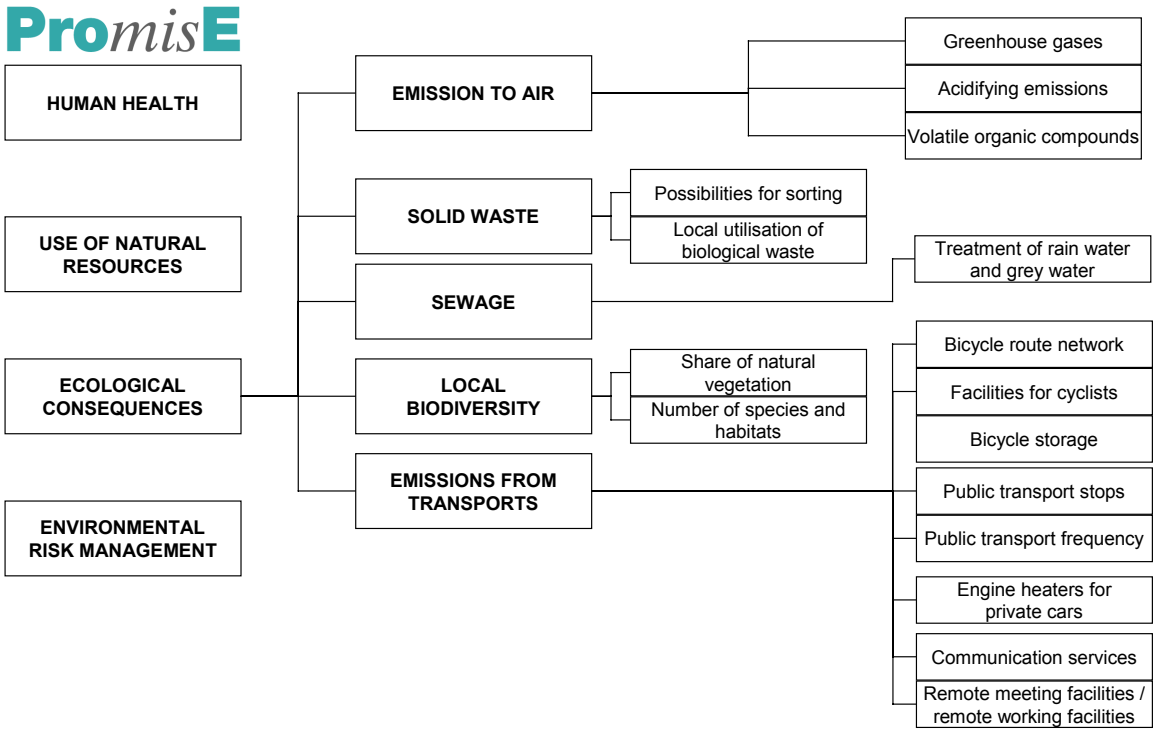
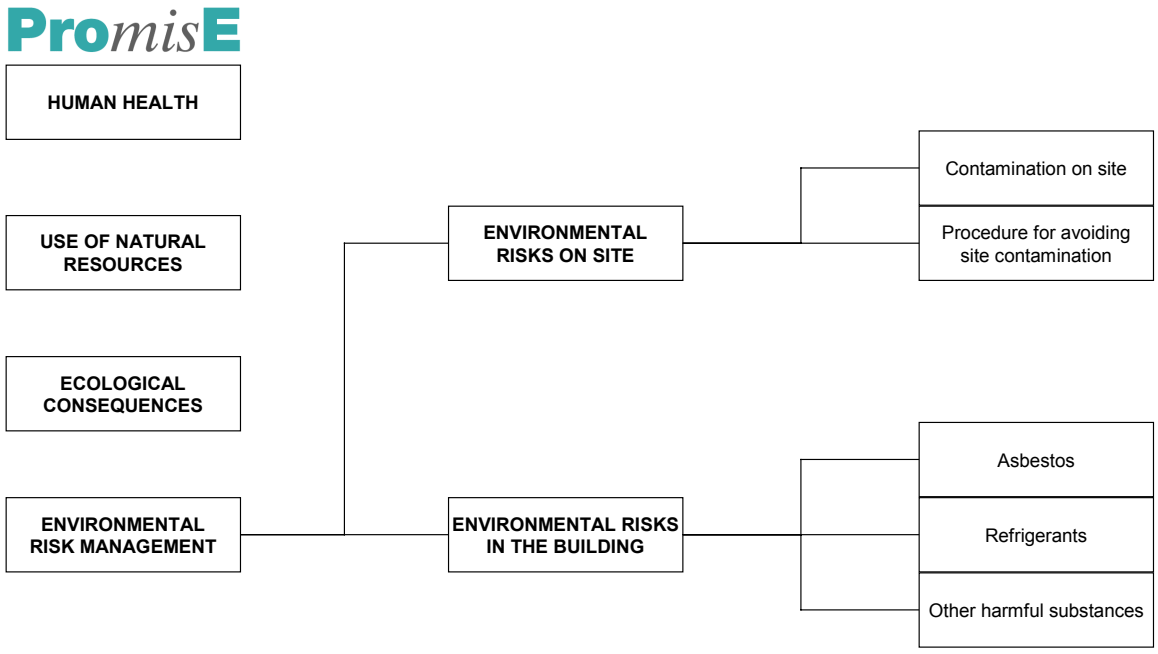


Figure 3 Ecological consequences (40 %).

2.4 Environmental Risk Management

Environmental risk management is defined as measures taken in order to identify and eliminate potential environmental risks on site and built into the building itself. These include measures related to contaminated land and harmful substances. Environmental risks may lead to operations with major environmental impacts if they are not identified and dealt with in time and systematically. In an existing property these may remain harmless until refurbishment takes place or something unexpected occurs. The share of environmental risk



management in the overall score is 20 %.

Figure 4 Environmental risk management (20 %).

2.5 Current State

At the moment, the classification system is being shaped into a tool usable over the Internet. The tool will accept input on a building and calculate which class the building falls into. The tool will be tested with pilot projects during the spring, and the results from these projects will be used to develop the classification further. The classification for housing, offices and shops will be completed in autumn 2002.

Project participants:
Management and piloting:
Senate Properties (offices)
Helsinki City Real Estate Office (offices)
Sampo Group, Kiinteistövarma (offices)
The City of Helsinki Housing Production Department (housing)
Asuntosäätiö (housing)
The VVO Group (housing)
The S Group (shops)
Kiinteistökesko/ Kesko Corporation (shops)

Research and development:
Motiva, Energy Information Centre
VTT Building and Transport
JP-Building Engineering Ltd
Finnish Society of Indoor Air Quality and Climate

Coordination:
RAKLI The Finnish Association of Building Owners and Construction Clients

3. FIRST EXPERIENCES AND NEXT STEPS

The Finnish Environmental assessment and classification system (PromisE) is still under a development and testing phase. The systems structure as presented in this paper is already established, including data sheets for input data collection and evaluation sheets for the assessment. The system has weights that can be revised and adjusted if so desired and the first version of the technical internet solution is almost ready.

The contents of the classification system (data gathering, indicators and assessment) were tested by the participating companies in six buildings. Experience gathered from these first pilot studies were incorporated in the final development of the system.

The PromisE Internet tool will be published during summer 2002 for use by building owners and other interested parties. Next steps after the publication of the tool will include the implementation of a marketing and dissemination programme and the establishment of a system of authorised assessors for carrying out public building rating.

4. REFERENCES

http://www.rakli.fi/progress/english.htm