A webb-based information service for the follow-up of Swedish environmental objectives

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The Swedish government has set up a primary environmental objective to hand over to the next generation a society in which the major environmental problems have been solved. Fifteen environmental quality objectives have been adopted, which focus on the ecological dimensions of sustainable development. They are formulated with regards to nature´s capacity for absorbing environmental impacts and describe the state which the environmental measures seek to achieve.

A number of sectoral authorities have been given the task to support and follow up, within their area of responsibility, the development relative to the environmental objectives.
An Environmental Objective Council has been set up under the Swedish Environmental Protection Agency, for the task of monitoring progress. To achieve this, a transparent system for monitoring and evaluation based , among other things, on indicators is envisioned.

A substantial part of the national environmental monitoring in Sweden is performed by the Swedish University of Agricultural Sciences (SLU). It includes national inventories and monitoring of forests, agricultural land, surface waters and species and it is performed under the heading ”continous environmental monitoring and assessment”, which along with research and education is one of the three branches of activity at SLU.

Data from the environmental monitoring of SLU have since long been publicly available over the Internet. A special effeort is currently being made, however, to provide an extended and improved access to results through the development an environmental information system ”MiljöInfo”. The system will provide views of the state of the environment, access to data bases and access to various tools for environmental assessment.

The need to develop a transparent monitoring and evaluation system for the environmental objectives, and SLU:s plans for an internet-based environmental information system, resulted in a commission to SLU from the Swedish Environmental Protection Agency and from the cooperative body of the regional country boards to develop a demoversion of a system for the follow up of the environmental objectives. The first phase of the development was finished by the end of February.

Briefly described, the system enables the user to access an information page for each indicator with a map showing the spatial variation within Sweden and a diagram describing the development over time, and with a brief text commenting the major facts, including the development relative to the environmental quality objectives. It is also possible to see the underlying data, to download tables or diagrams and to read about methods and, to some extent, to get further comments and explanations on causes and effects. By pointing to the map, the user may also, in so far as data are available, get the same presentation at county level. Besides the indicators, the user will be able to get a view of the state of the environment through an application using the national Swedish Environmental Quality Criteria. It will also be possible to select specific variables (physico-chemical variables and species) and view

their spatial and temporal distribution in the same way as the environmental quality indicators are presented. Finally, the user will have acess to an archive of articles from recent years, dealing with various methodological and thematic aspects on the state of the environment. The presentations beyond the indicator level will be available only for SLU:s field of expertise and data.

The system architechture is made up of a java-based webb application with a data base server and a map server. The webb pages are produced dynamically, and hence give actual, uppdated information. XML is used for the information flow through the system. The system is using data from a number of distributed data providers, many outsider SLU. Data and metadata for the first version have been supplied in Excel files. Work to ensure a seamless data flow has started, beginning with selected data bases available within SLU.

The system will now be tested by the Agency and the country board, whereafter decisions will be taken on its future destiny. At the same time, SLU continuous to develop the system.