Swedish EnviroNet (http://smn.environ.se/)

Hammarsten, S., Moshiri, A. & Sjö, M.

The Swedish EnviroNet, 106 48 Stockholm, Sweden,
smn@environ.se

Abstract

The Swedish EnviroNet is the main gateway to electronic data and information about the Swedish environment. The EnviroNet co-ordinate major public agencies, NGO's (non-governmental organisations) and private companies in the environmental field. The information is published at the web sites of the members and the EnviroNet server provides links, metadata and other general services.

The most important user group for the EnviroNet is professionals working with environmental issues in Sweden. But the EnviroNet also fulfil the needs of wider user groups, such as: environmental activists, students and teachers, politicians and the media.

The EnviroNet provides the following services, in Swedish and English:

- An Environmental catalogue with links to documents provided by the members
- A Search function to search the database containing the metadata and full text of all the members' EnviroNet-linked documents
- Electronic conferences
- E-mail directory

The EnviroNet provides links to electronic documents (usually in HTML-format). The contents of the documents are described using a subset of the Dublin Core metadata standard. The EnviroNet provides a classification scheme for the Subject and Type elements in Dublin Core.

Members select documents to be linked to the EnviroNet, and provide these with metadata according to the standards specified by the EnviroNet. A robot regularly searches the sites of each member for EnviroNet documents and collects the metadata and the full text of these documents. This information is stored in a database, which is used in the Search function and is also the basis for building a new link-catalogue upon each new collection of documents.

1 Background

The decision to build the Swedish EnviroNet was taken by the Swedish government in December 1996. The building of the EnviroNet was one of several proposals in an Official Report on "Information Technology in Environmental Management" from the Environmental Council. The Report concluded that general search engines and catalogues did not give environmental professionals adequate tools for information retrieval from the Internet. It was felt necessary to co-ordinate the publication of environmental information on the Internet that different Swedish organisations had begun.

The Director General of the Swedish Environmental Protection Agency decided the constitution of the Project Board and Project Organisation in February 1997.

2 Mission

The Swedish EnviroNet shall become the main World Wide Web gateway to electronic data and information on the Swedish environment. The EnviroNet shall provide easy access to information with high quality content.

3 Members

The EnviroNet co-ordinates the Internet publishing of public agencies, NGO's and private companies in the environmental field. These are the so-called members of the EnvrioNet. Information is published at the web sites of the members and the EnviroNet server provides links, metadata and other general services.

Only member web sites are included in the environmental catalogue and only member documents are accessible through the EnviroNets search function.

4 Users

The most important user group for the EnviroNet is professionals working with environmental issues in Sweden. But the EnviroNet will fulfil the needs of wider user groups, such as: environmental activists, students and teachers, politicians and the press.

5 Services

- An Environmental catalogue with links to documents provided by the members
- A Search function to search the database containing the metadata and full text of all the members' EnviroNet-linked documents
- Electronic conferences
- E-mail directory

6 Catalogues and metadata

The EnviroNet provides links to electronic documents (usually in HTML-format). The document can contain information or point to other sources that contain environmental information or data, e g databases. The contents of the documents are described using a subset of the Dublin Core metadata standard. The Type element is used to describe the resources referred to, i.e. thesis, review, database, advertisement etc. The EnviroNet provides a classification scheme for

the Subject and Type elements in Dublin Core. The classification scheme for the Subject element provides a controlled vocabulary (term lists) for each of the catalogue entrances. Users can search information using several subject entrances organised in the following way:

- Environmental threats
- Sectors
- Nature types
- Chemical substances
- Biological species
- Geographical areas
- General
- Environmental data

Most of the term lists used are internationally or nationally accepted standards. The 14 environmental threats that are used have been used extensively in Sweden. term list for Sectors is based on the classification of economic activites in the European Community, NACE rev 1. The Nature types correspond to the EU CORINE Land Cover classification. Geographical areas correspond to the administrative divisions of Sweden (counties and municipalities), the larger sea basins and the larger lakes. The Environmental data entrance follows the program areas of the Swedish national environmental monitoring.

As the Environmental catalogue grows the Search function will be more used. The Search function offers simple full text searches as well as sophisticated searches where the metadata

Can be fully used to limit the number of unwanted hits. Members can provide documents without metadata, except for a tag that makes

it available for free text searches. These documents will only be available through the Search function.

7 Technical solutions

Members include metadata in their documents according to the standards specified by the EnviroNet. The normal procedure is to include it in the head section of the HTML-document. Some members may want to keep their metadata in a separate database for easier maintenance. The EnviroNet has developed an application that members can use to create and edit metadata. The application (in Swedish) is available at the EnviroNet's web site. The classification scheme for the Type and Subject elements provide the basis for automatic translation of the terms used in classification, so that even though all classification is originally in Swedish, it is possible to search all documents in English also.

Once a week a robot (Harvest) searches the sites of each member for documents that the member has selected to be linked to the EnviroNet. The metadata and also the full text of these documents are collected and stored in a database (BRS/Search). After each such collection the contents of the link-catalogue is updated automatically. The Search function can search the database using the full Dublin Core metadata information and the full text of the documents.

The electronic conferences use a commercial program called Webboard. This program has been translated into Swedish and customised to suit the EnviroNet. It is

accessed through a web browser. The use of News-based programs was not considered as several users might have firewalls that are closed for News traffic.

The Email directory uses the same database engine as the Environmental catalogue and users of the EnviroNet are encouraged to register. There is also a complementary directory service based on a book called "Who is who in Swedish Environmental work?" This directory covers all environmental organisations in Sweden.

8   Results

The Swedish EnviroNet was officially opened on December 11th 1997. In the late spring of 1998 there are more than 50 member organisations linking some 1500 documents. More than 400 persons have registered in the electronic conference system. About 100 000 hits per month are registered. Most of the important governmental agencies are members as well as the major NGO:s. There is an increasing interest from local and regional organisations. The number of private companies is still rather small, but also increasing.

The EnviroNet is now focusing on the quality of the catalogue and search function. The members are the content providers and classify their own documents. More than 70 persons have had a short course on how to classify information for the EnviroNet. The EnviroNet is built in an extremely decentralised way. This will allow the EnviroNet to grow rapidly with a small staff but there is a considerable risks that a uniform standard in the classification of the information can not be maintained when the EnviroNet grows. The project has therefore closely reviewed how the members have initially classified their information. It is believed that this is a sound investment in the early phase of the work.

9   Future developments

The instruction for the Swedish Environmental Protection Agency (SEPA) was changed on May 1st to include the EnviroNet as a part of the Agencies ordinary activity. A separate board will decide on the development of the EnviroNet and a staff of 3-4 persons located at SEPA will maintain and develop the EnviroNet. It will be funded by the ordinary budget and currently all services are provided free of charge.

The plans for 1998 include fitting a Z39.50 interface to the existing database based on the profiles currently developed through the GELOS initiative and the EEA. This will make it possible for users to query the EnviroNet together with several other environmental databases throughout the world. Z39.50 is an ISO standard for data exchange between databases that have been used between libraries for several years. The databases share a common set of fields, the profile. The user does not have to know where the data is stored or the names of the tables and fields in the different databases. All the databases can be queried with the same client, normally a web page.