

PortalU, a Tool to Support the Implementation of the Shared Environmental Information System (SEIS) in Germany

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Abstract

The German Environmental Information Portal, PortalU®, provides one-stop access to government-owned environmental information in Germany. The portal integrates the access to a large number of heterogeneous and geographically distributed information sources organisationally and technically. A user-friendly interface in addition to advanced search and visualization tools enable both experts and non-experts to find and view texts of national, regional and local legislation, information about environmental policies and programmes, environmental reports, monitoring data, digital maps, and many other types of environmental information and data. As an online information portal, PortalU® (www.portalu.de) is freely accessible to all internet users.

The portal features a number of information services, among them up-to-date environmental news, access to environmental monitoring data, chronicles of environmentally relevant events, and links to new publications and events. Most importantly, however, PortalU® maintains an index of environmental information (metadata catalog) held by public authorities in Germany. Today PortalU® gives access to more than 2,500,000 webpages and more than 500,000 data and metadata sets from different national, regional and local authorities. The portal functions as a highly-visible and central access point to this information.

Organisationally PortalU® is the result of a cooperation of federal and regional environment agencies. Funded through an administrative agreement between the federal government and the 16 German states (Länder), PortalU® could be established as a sustainable long-term project. This is important, because Germany is a federal structured country. Many information and data are collected and maintained by the regional level, the German states. So PortalU® is a national shared environmental information system and could be a model for a pan-European shared environmental information system (SEIS) not only in technical but also in organisational sense.

PortalU® is part of the administration's strategy to comply with the Aarhus-Convention and EU-Directive 2003/4/EC, both calling for better public access to environmental information. Furthermore it is the national information knot for environmental metadata in the context of the INSPIRE Directive. In future it will be the national implementation of the pan-European shared environmental information system (SEIS).

One of the core components of PortalU® is a metadata catalog (InGrid®Catalog) for environmental information. The metadata model of the InGrid®Catalog is compatible to geographical standards like ISO 19115 and 19119 and the INSPIRE implementation rules and beyond these it is quite flexible. It allows storing of meta-information not only for geographic datasets and series and for geographic services but also for all kinds of environmental information such as non-geographic datasets, non-geographic services and documents.

PortalU® is optimized for discovery of geographical and non-geographical data by searching after the describing metadata. For example it is possible to visualise a map in the PortalU® map viewer by one click on a link in the related metadata. Also it is possible to search for example for time series of monitoring data via an internal interface in the original database and visualise the data by use of the original visualisation methods of the database in the web.

It is planned to expand PortalU® to fulfil reporting obligations from the regional towards the national authorities as well as the reporting obligations from the federal government to the European commission. For this purpose the direct access to monitoring data shall be integrated into the system. Altogether a basis shall be established to visualize the data and to create reports in form of standardized documents, tables and spreadsheets. In near future a technical concept for these purposes will be developed.

Today the software InGrid®, on which PortalU® is based, integrates standardised interfaces for catalog services (CSW) and for mapping services (WMS). In future the interfaces shall be advanced to support sensor observation services (SOS) for transfer and visualization of monitoring data. So from an organisational as well as from a technical point of view PortalU® could be a prototype for a pan-European shared environmental information system.

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