Some thoughts to realignment of PortalU

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Abstract

Environmental information is the basis for improving the environmental situation in the EU. The challenge poses the tailoring of information to a defined group of interest and not only the technical possibility to retrieve the environmental information. Even though, the technical infrastructure for retrieving public environmental information is the first step. Hence, the clear understanding of the needs of the general public is essential for a successful environmental information portal for the interest group “general public”. What does this mean referring to the German Environmental Information Portal PortalU? Since the launch of PortalU the focus of the portal is set on making available official environmental information especially on German Federal Republic and Federal States level. Currently, information from web pages represents the greatest amount of information. In contrast, information from environmental data catalogs and further data bases represent a smaller amount of information within PortalU. But quantity itself does not tell anything about the demand of a target group. The experience of the last years has shown that environmental interested citizens use mainly general search engines like Google to find information from public environmental web pages. Thus it would be worth thinking about a realignment of PortalU. The idea of a prospective alignment of PortalU is to concentrate on important environmental information, which is not easily found via Google and other general search engines. This information is mainly provided via environmental data catalogs and possibly further data bases. Some thoughts about the potential form and design of a respectively aligned environmental portal are discussed in the paper.

1. Introduction

Environmental information is needed by a wide range of organizations: it is used in particular for land use planning, environmental protection and impact analysis as well as for geo-hazard risk analysis. As stated in the latest Staff Working Document of the European Commission the “efforts to secure a better environment for the EU depend on information” (European Commission 2013). This finding is not new, but poses until today a big challenge, especially in states with a distinct federal structure like Germany. Important aspects are thereby that the retrieval, exchange and assessment of environmental information are ensured. In order to secure these aspects the essential task is to tailor and present the often massive amounts of information as best as possible to the needs of the addressed target group.

2. Current state of PortalU

The German environmental information portal PortalU (www.portalu.de) offers central access to official environmental information. The portal, which is operated by the Federation and all sixteen Federal States cooperatively, was launched for public use 2006. Since that time software and content have developed continuously. The content of PortalU can be classified in three classes: (class 1) web sites from public institutes, (class 2) InGridCatalog (IGC) entries from the environmental data catalogs “Umweltdatenkataloge” (UDKs) from the Federation and several Federal States and (class 3) further environmental data ba-

1 Coordination Centre PortalU at the Lower Saxony Ministry of Environment and Climate Protection
ses (Fig. 1). Currently, six from seven searchable information entries (86 %) are web sites (over one million entries). IGC entries amount to eight thousand five hundred and further data sets amount to one hundred ninety thousand entries.

In PortalU the user can choose between several options to search for information. Over-all search with additional filter option are also possible as selected search for maps, single environmental themes (e.g. soil) or environmental monitoring data. Thus PortalU is an important instrument relating to the EU-Directive 2003/4/EG, which specifies the public access to environmental information. Beyond that, PortalU offers an access to environment specific data catalogs where the environmental data stock on Federal and State level is described. In detail these can be external data catalogs on the basis of OGC-conform Catalog Service Web (CSW) or the internal IGCs. Thereby the IGCs comply with the requirements of the European INSPIRE-Directive (2007/2/EG). The comprehensive environmental information stock of PortalU could be useful for citizens, as well as experts from administration, economy and science. Up to now the main focus of PortalU has been set on “the public”: a broad target group, which can be described as a not-age-specific group of German citizens with elementary interest on environmental themes. A secondary focus

Figure 1
Content of PortalU classified in three classes. The upper diagram refers to the total amount of information (1.4 million entries). The lower diagram refers to all entries without web sites (200.000 entries) (status: 2.7.2013)
has been set on experts from administration, economy and science especially referring to the subject-specific UDK content.

The success of PortalU can be measured by different kinds of parameters. Here some examples: The portal was presented at the „Woche der Umwelt“ (2007), an annual event of the German Federal Present for forward-looking environmental projects (http://www.woche-der-umwelt.de/). PortalU qualified as finalist project for the egovernment award of the European Commission (eGovernment Ministerial Conference, Lisbon, 2007). The PortalU software InGrid was used and developed as one of the best practice technologies within the EU-funded project GS Soil (2009 – 2012) (http://gssoil-portal.eu). Metadata know-how from the coordination centre PortalU was inserted in the INSPIRE implementing rules for metadata (EC, 2009). Moreover PortalU is seen as best practice example for a potential SEIS (shared environmental information system). Thus the portal is mentioned in the Communication toward a Shared Environmental Information System (European Commission 2008). PortalU is also recognized beyond Europe as par example a visit of a South Korean government delegation in Hannover shows (Germany, May 2010).

By all positive resonance also different kind of obstacles occurred during the years. Currently the most important discussions of the steering committee PortalU (LA PortalU) goes in for the prospective strategic alignment of PortalU referring to the fast technological development and trends within the Web. How do these changes interfere with the technical components of PortalU? Within the LA PortalU currently two directions begin to show during the continuing strategy discussion: One group is discussing new starting-points for a prospective cooperation between the Federation and Federal States referring to preferably innovative ICT projects within the environmental administration. The other group focuses mainly on the PortalU software with special interest on the IGC.

3. Ideas for realigning PortalU

The way, how users search for specific information within the Web, has changed clearly in the last decade. The dynamic of the user behavior is based on different factors: like the continuously rise of Google\(^2\), the trend of the increased use of Web 2.0 technology (e.g. facebook, twitter etc.) or the increased use of mobile applications (e.g. Apps). Not only the Web behavior is changing, user needs change as well. The experience of the last years shows that environmental interested citizens use mainly general search engines like Google to find information from public environmental web pages.

Thus from the authors point of view it would be worth thinking about a realignment of PortalU. The idea is to concentrate on important environmental information, which is not easily found via Google and other general search engines. Accordingly, the authors believe that the current PortalU content class 1 (web sites), as described in chapter 2, is not needed any more. In fact it would be better to concentrate especially on the content of class 2 and class 3, the IGCs and other databases.

The following ideas about the potential form and design of an aligned environmental portal are based on the given below facts and thesis:

\(^2\) In the last years the market dominating position of Google is distinctive. The amount of Google employees rose from 11.000 in 2006 up to 54.000 in 2012 (http://www.finanzen.net/bilanz_guv/Google) and the companies turnover exposures rose from 11.000 Mio. USD in 2006 to 50.000 Mio. USD in 2012.
- The potential of the environmental data catalogs and its software the InGridCatalog (IGC) is underestimated.
- The metadata profile of the environmental data catalog (IGC-profile) bases on a long-standing expertise. Thus the profile offers more and better-tailored possibilities for public environmental needs than other metadata systems.
- The IGC-profile considers not only geographical data like most metadata systems but also methods to describe e.g. non-geographical data, literature or research projects.
- The IGC-profile can be extended easily. Thus prospective needs can be implemented easily.
- The IGC offers advanced features like metadata-data-coupling which allows direct visualization of maps. This could be advanced to a visualization of time series in near future.
- The IGC profile offers all possibilities to describe open data, and give links to download them. So it fulfills all needs of an open data platform especially for the environmental domain.
- The IGC implies many interfaces to deliver data to all important central portals, like geoportal.de, inspire geoportal or govdata.de.
- The IGC is coupled to the environmental thesaurus of German environmental protection agency (UMTHES). So the metadata system could be easily extended to linked open data.
- It is useful to invest on a better shared presentation of the information from the environmental data catalogs for the general public.
- A shared presentation of information from all environmental data catalog for public use has an added value for all citizens in Germany.
- The cooperation PortalU offers the possibility to standardize metadata profiles and data interfaces and to harmonize the content of metadata.

Scenario:

The IGC metadata model is enlarged: The single IGC entry can contain different kind of data besides its ordinary description about data (metadata). Thus an easy access directly to the data is possible. The focus of the user interface (portal) is hereby set on monitoring data, maps, literature (pdfs) and further data (compare Fig. 2). Further data could also be mobile web apps or videos. The ordinary metadata are building the framework.
Current and potential new search result presentations in PortalU; example: bathing water

With a single click on one of the pictograms (e.g. map) the data are shown. All IGC entries with data or links to data are higher ranked than entries without any data or data links. Moreover the start on the web site could be lighten with selected interesting environmental topics (e.g. renewable energy, climate change or air pollution) from single IGC entries or a combination of IGC entries.

The consolidation of the PortalU content implies chances: The kind of content is limited. This makes it easier to communicate, what can be found in the portal. Thus the expectations of the user can be better achieved. The enlargement of the IGC model enlarges the relevance of the IGC entries. This can cause higher motivated IGC editors. Thus the editors are not only responsible for the publication of catalog entries but also for the publication of the data itself. The continuing common platform offers the advantage that the single catalog operators exchanges not only technical aspect but also converge referring to content.

The content of the web site should be communicated as clear as possible with selected functions and only little background information. A map viewer par example will be opening when the user click on “map” as function depending tool, but not as additional playing field.

4. Perspective

The authors are convinced that the depicted scenario generates an added value for interested citizens. The active participation of all partners is thereby important for the success of the realigned portal. Not only the metadata but the data itself have to be held up-to-date. A second sometimes underestimated key for success is the appropriate addressing of the target group (ICT Ensure, 2010). Thus, approved tools like the
Sinus-Milieus (Sinus 2011) or studies on the topic (Bormann et al. 2013) could be used to understanding the environmental consciousness, behavior and motivation to assess their needs.

Referring to the above mentioned Staff Working Document a realigned PortalU could contribute to the enlisted priority number four “Improving public access to environmental information…” (European Commission 2013). The existing technical infrastructure has hereby the potential to contribute to the EU open Data strategy (European Commission 2011)

The described ideas in this paper about the realignment of PortalU are general thoughts referring to the authors. It remains to be seen, if some of these suggestions will be seized by the LA PortalU or other working groups.

Bibliography


