Overview of Available Geoscience Data in Switzerland

Milan Beres & Andreas Kühni

Challenges

Geoscience information is made available for the purposes of recognizing and reacting to environmental problems, evaluating construction projects and natural resources, planning excursions and simply enjoying nature. Many users of this information are also producers and include various federal and cantonal agencies, the energy industry, universities as well as private consulting offices. The decentralised production of geoscience data and information in Switzerland results in a wide variety of formats, qualities, accessibilities and visualisations. Furthermore, the users commonly do not know which datasets are available, where they can be obtained and what purposes they all serve.

Recent publications (Jackson 2004; Hofmann & Schönlaub 2007) show that similar goals are relevant to earth science (Beres et al. 2008, 2009). This overview is aimed at a diverse audience (e.g. politicians, interdisciplinary professionals, researchers, teachers, students, hobby geologists, tourists) and has the following goals:

• To give an overview: eye-catching figures and short texts describe the dataset theory, purpose, source and production methods.
• To sensitise the public: as many people as possible should be made aware of how the earth sciences touch our everyday life.
• To boost public relations: producers of geoscience data and information can advertise to decision makers and the general public.
• To build a network: the results ought to promote contacts and collaboration among producers and users of geoscience data and information.
• To integrate datasets: an overview serves as the basis for integrating datasets in the Geological Information System of Switzerland (Oesterling et al. 2009).

Methods

Recent publications (Jackson 2004; Hofmann & Schölnauber 2007) show that similar goals are best achieved by creating a printed, easily understandable document. Contacting the data producers and establishing collaboration are part of the initial phase of production (Fig. 2). This phase also includes determining exactly who has what, listing and categorising the available datasets (Fig. 3), and choosing the optimal representation for a particular theme.

Dataset examples

Presently, the overview contains 54 themes, which are categorised into the following four basic groups (Figs. 3-4):

• Earth fundamentals: tectonics, stratigraphy, bathymetry, gravity anomalies…
• Construction and resources: hydrogeology, land use, rock quarries…
• Hazards and environment: earthquakes, radon risk, groundwater quality…
• Geotourism and geological heritage: show caves, geotopes…

Some examples of the geologically relevant datasets are illustrated in Figure 4. These include recent results of unique and large-scale research projects in Switzerland.

Layout

The layout stipulates two pages (A4 portrait) for each theme (Fig. 5). On the left page, the dataset, in some cases generalised, is overlain on a map of the Swiss national boundary and major lakes. In the case of point data, a simplified tectonic map serves as an additional background. Logos and an extract of a more detailed dataset or an explanatory figure are located on the lower half of this page. On the right page, the title, the theme’s category, explanatory text, data sources/ownership and a carefully chosen diagram or photograph are included. The text comprises a column in German, a column in French and a summary in English.

Conclusions

There are many reasons to publish an attractive and informative overview of the available geoscience datasets in Switzerland. Such an overview not only will illustrate the highlights of the country’s unique natural features, but it will also sensitise a broad audience and strengthen networking among members of the Swiss geo-scene. These reasons make it an important contribution to the planned Geological Information System of Switzerland.

References