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Hydrological Atlas of Austria

Submitted by Austria**

Idea

Protection and sustainable use of water resources require comprehensive knowledge of the water cycle components and their spatial and temporal distribution as well as information about human impacts and water quality. A synopsis of different hydrologic topics and water management issues is of special importance for a better assessment of possible developments.

The Hydrological Atlas of Austria (HAA) offers a uniform and consistent representation of hydrologic information about Austria. This detailed knowledge is made accessible to a wide audience in an illustrative form. Its aim is to increase public awareness of the fact that water is a precious resource. The contents of the Atlas and its presentation are useful for meeting the information demand expressed through the different areas of public interest, for example, research, education, economy and politics.

Contents and the product

The Hydrological Atlas of Austria is a dual product. It consists of conventionally printed thematic maps and is combined with a digital geographic information system (GIS)-based version. Both the expectations of the traditional map users and those who prefer electronic representations are thereby met.

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A cartographic conceptual basis has been found that, on the one hand, enables a homogeneous layout to be presented which gives the HAA its own identity and, on 95the other hand, enables an optimal presentation of the various topics in the Atlas.

The structure of the Atlas covers the different components of the water cycle (for example, precipitation, run-off, lakes and groundwater), contains various chapters dealing with water and mass balance, and also covers water management themes as well as those on water and environment.

The authors of individual maps represent the leading Austrian institutions in the fields of the topics covered. Thus, the HAA is a true collaborative product of Austria's hydrologists.

The digital HAA is a combination of thematic maps and digital data sets, which enable the users to carry out further analysis, to query and verify, and to make their own applications. The complete HAA contains 52 map sheets and 70 explanatory sheets.

Printed version

The concept and the layout of the printed version of the HAA take the following principles and factors into account:

- Collection of maps in a file with cover
- Uniformly designed and high-quality cartographic map layouts
- Maps with simultaneous readable explanation sheets
- Main scale of the printed version is 1:1,000,000; 1:2,000,000 is used for maps with a lower information density (format when opened: 668 millimetres x 420 millimetres)
- Legends and explanation sheets are written in German and in English

A map sheet consists of a map section with header, the map with legend and an explanation sheet. For the representation of the theme, a map section can include up to four single maps.

The digital Hydrological Atlas of Austria

The software that is used to present the contents of the digHAA fulfils a number of criteria. The digHAA contains all the information of the printed version. The menu with which to call up the topics uses the theme structure of the analogue HAA. Since the screen modes have a low resolution, zoom lens and moving functions are necessary. Graphic evaluations, tables and explanations that correspond to the maps can be activated by controlling elements on the user interface.

The digital version is based on an especially developed viewer, providing the following functions:

- Presentation of the printed map sheets
- Linking map objects with tables, texts and charts
- Overlay of diverse themes
- Original data sets of themes ready for user-specific application

When developing the user interface, great value was attached to an easy navigation through the Atlas. Information about the present position in the Atlas — spatially and thematically — is always displayed. In addition to the complete contents of the printed version, a “hot key” function allows, for example, the graphical representation of time series.