



V-FOR-WaTer – A virtual research environment for storage and processing of environmental data

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Although the amount of hydrological data is constantly growing, the availability of this data often lags behind the needs of sophisticated models and big data analysis. Large datasets are distributed on different portals and smaller datasets are often stored only on the researcher's computer, and lack essential associated Meta information. As a consequence, data pre-processing is still a demanding task and typically involves gathering of datasets from different sources, extensive work within geoinformation systems, data transformation and the generation of computational grids.

V-FOR-WaTer brings together various datasets (e.g. point measurements, 2D/3D data, time series data) from different sources (e.g. gathered in research projects, or as part of regular monitoring of state offices), a comprehensive search function to access the data and common as well as innovative scaling tools in space and time to generate coherent data grids. In addition, each dataset holds detailed standardised metadata to ensure usability and to provide reference information for appropriate citation of the dataset creators.

Access to data and tools provided from V-FOR-WaTer happens via an easy-to-use web portal. The portal already includes a basis of tools and due to its modular architecture it can easily be extended with new tools, datasets and features. Purpose of this modularity is to grow by users who extend the virtual research environment with their own research data and tools. For researchers the contribution pays off with a digital object identifier, and the possibility to protect their data and tools from others until publication.