



## **V-FOR-WaTer – a new virtual research environment for environmental research**

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The preparation of heterogeneous datasets for scientific analysis is still a demanding task. Data preprocessing for hydrological models typically involves gathering datasets from different sources, extensive work within geoinformation systems, data transformation, the generation of computational grids and the definition of initial and boundary conditions. V-FOR-WaTer, a standardized and scalable data hub with compatible analysis tools, will ease comprehensive studies and significantly reduce data preparation time.

The idea behind V-FOR-WaTer is to bring 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) and to provide common as well as innovative scaling tools in space and time to generate a coherent data grid. Each dataset holds detailed standardized metadata to ensure usability of the data, offer a comprehensive search function and provide reference information for appropriate citation of the dataset creators.

V-FOR-WaTer includes a basis of data and tools, but its purpose is to grow by users who extend the virtual research environment with their own tools and research data. Researchers who upload new data or tools can receive a digital object identifier, or protect their data and tools from others until publication. Access to data and tools provided from V-FOR-WaTer happens via an easy-to-use web portal. Due to its modular architecture the portal is ready to be extended with new tools and features and also offers interfaces to Matlab, Python and R.