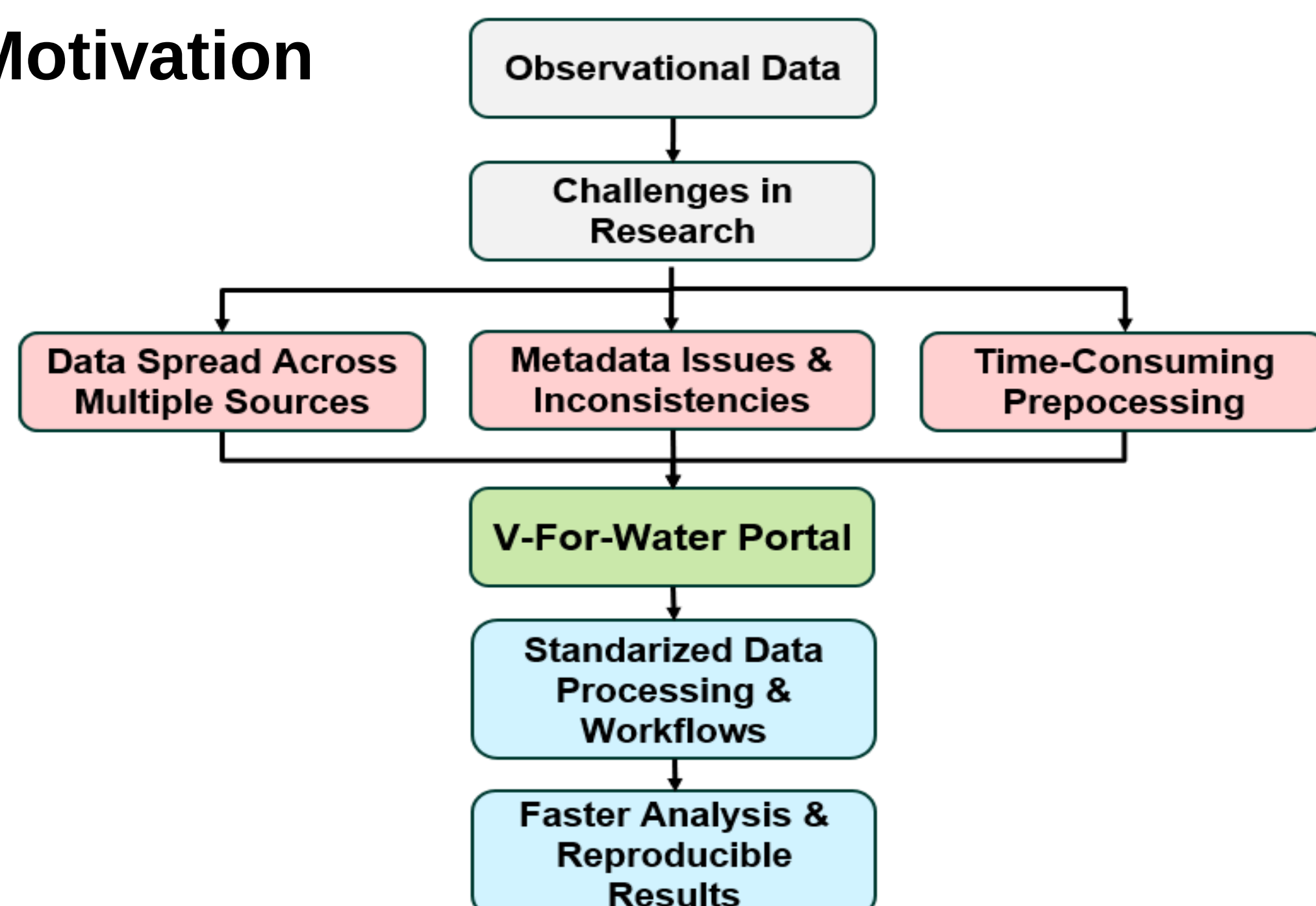


V-FOR-WaTer: A Scalable Web Portal for Simplified Environmental Data Processing and Analysis

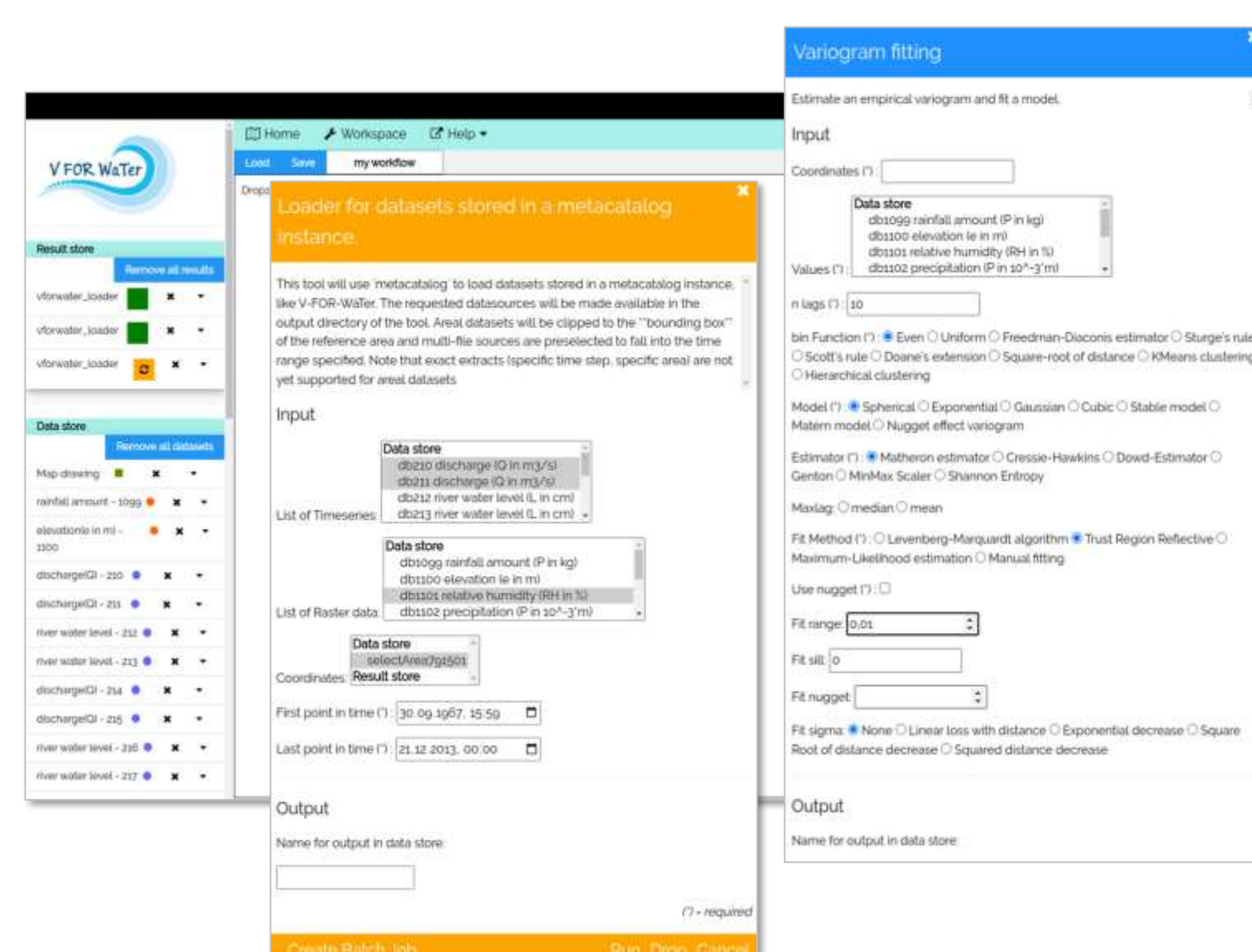
Safa Bouguezzi¹, Elnaz Azmi¹, Balazs Bischof², Kaoutar Boussaoud¹, Goutam Das¹, Alexander Dolich², Sibylle K. Hassler^{2,3}, Mirko Mälicke², Ashish Manoj J.², Jörg Meyer¹, Achim Streit¹ and Erwin Zehe²

Motivation



V-FOR-WaTer simplifies hydrological data processing, making research more efficient and reproducible

Process Data Within Portal

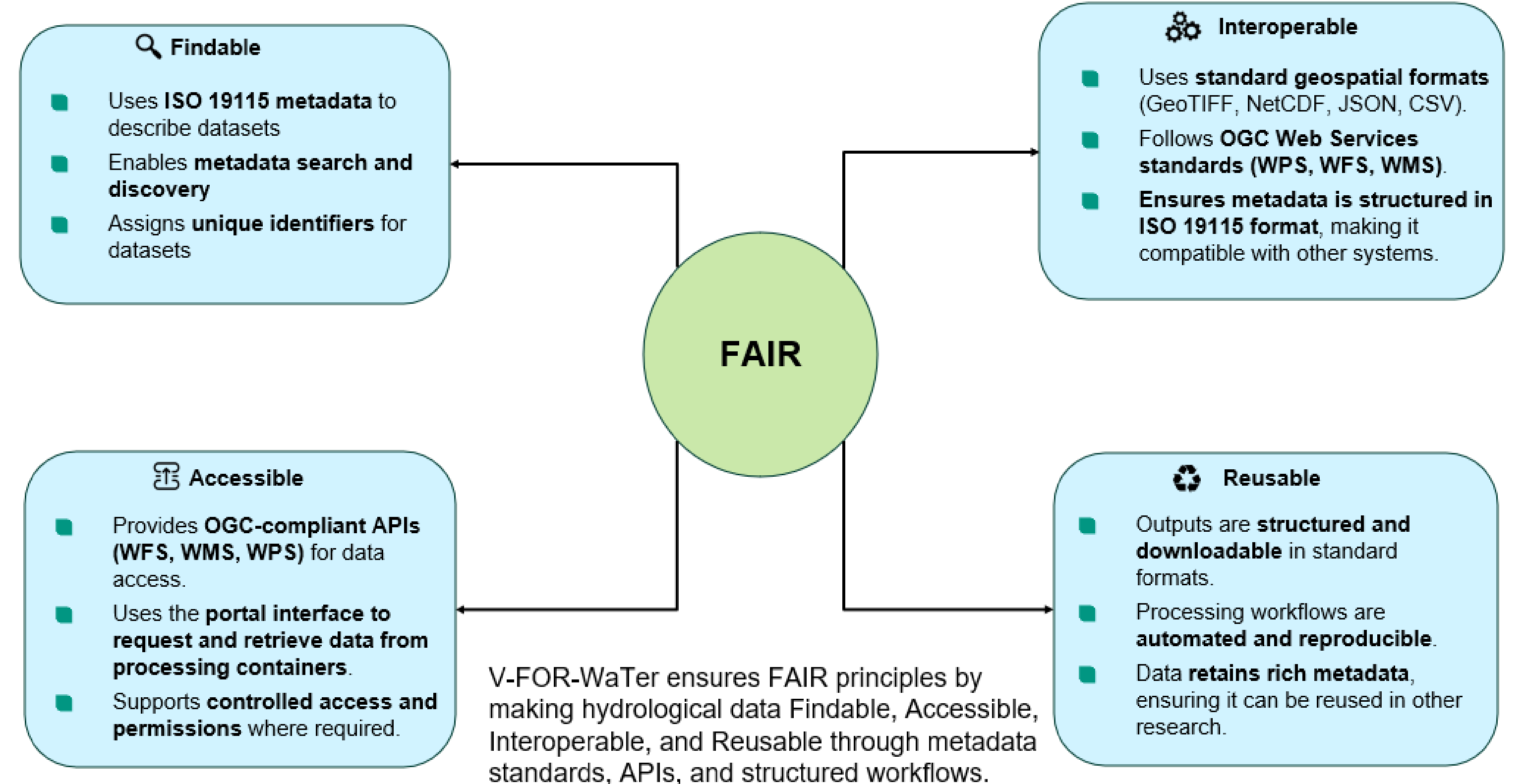
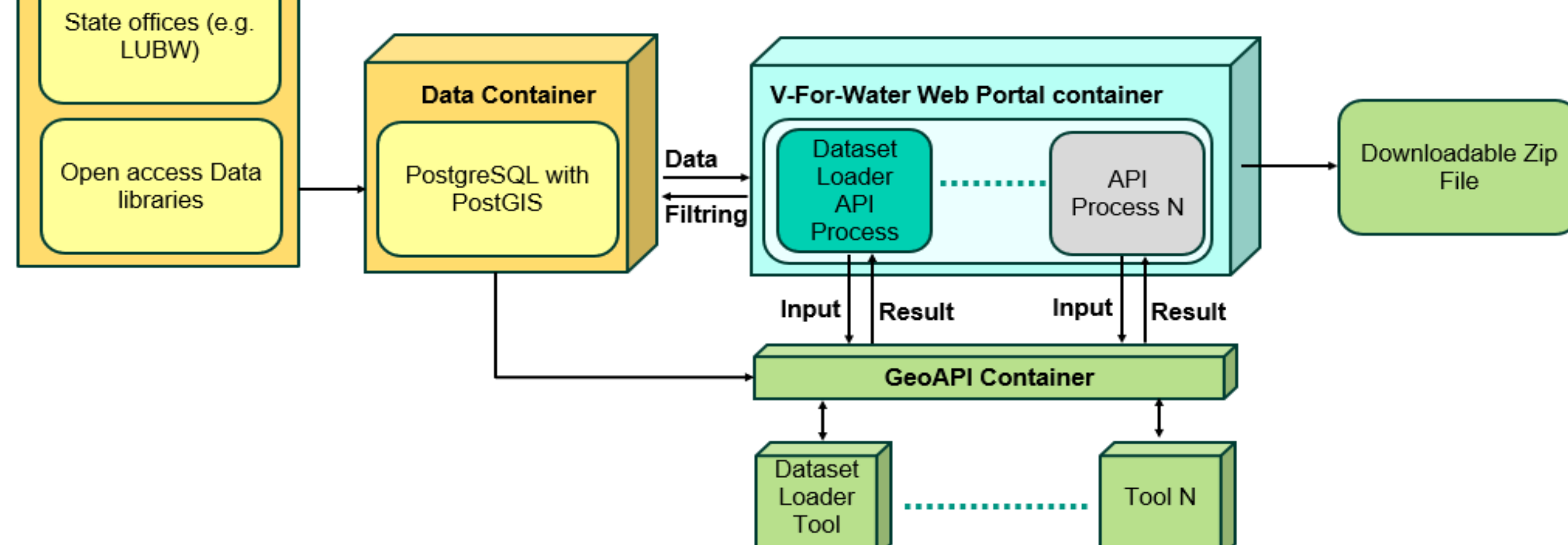


Extendable Toolbox

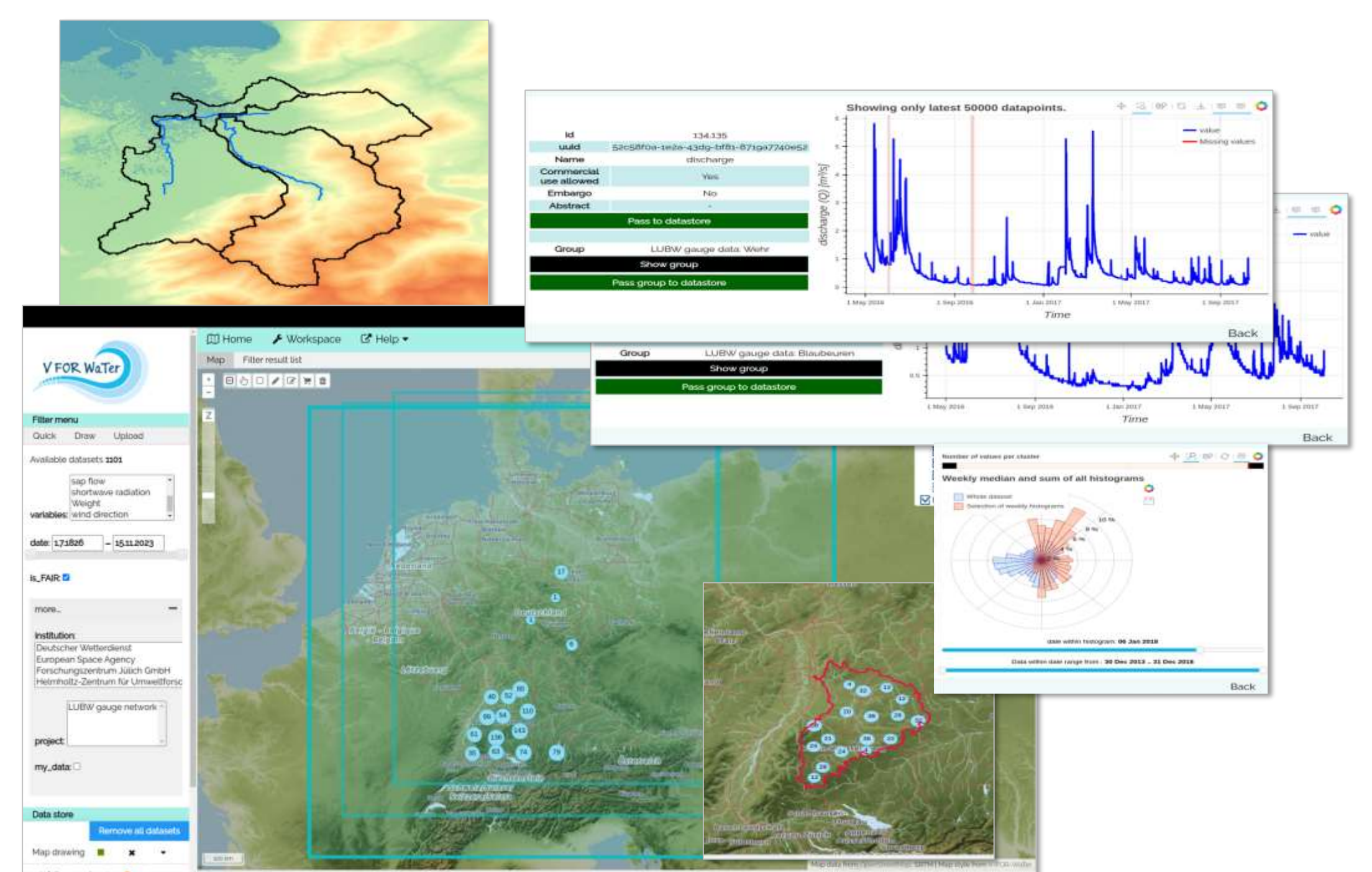
The tools operate within independent Podman¹ containers and are accessed via GeoAPI Processes of OGC standard, enabling:

- Seamless expansion of the toolbox with new functionalities
- Efficient creation of automated workflow chains
- Enhanced reproducibility, ensuring consistent and reliable results

The V-FOR-WaTer portal calls GeoAPI processes to execute containerized tools. It sends input data, retrieves processed results, and makes them available for visualization or download



Find Data



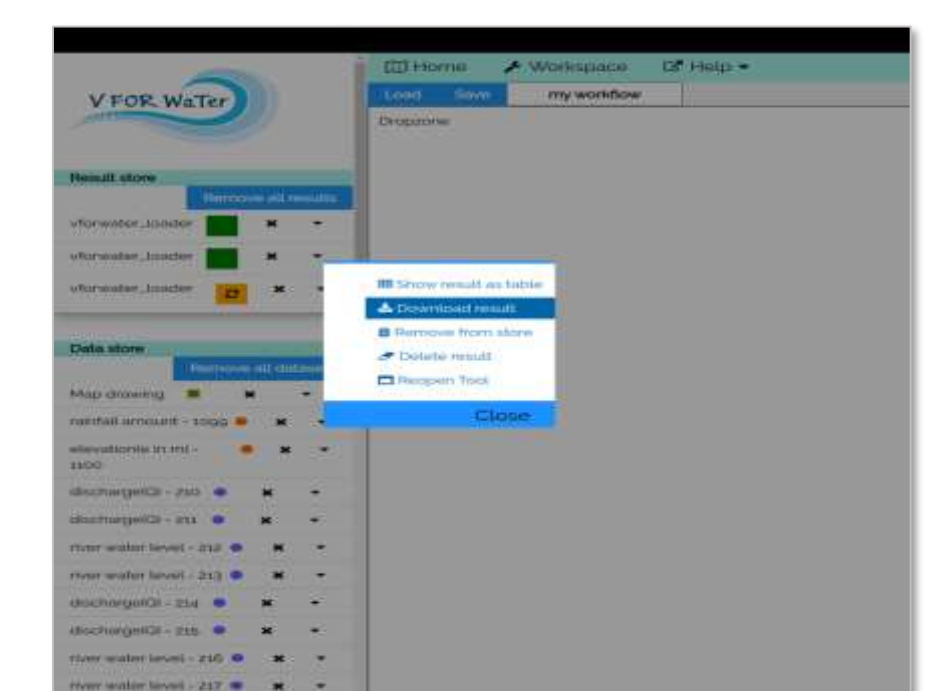
Finding Data by:

- Upload shape file of catchments
- Select data

Get Quicker Results

Downloadable Results

The obtained results from the tools can be downloaded as a Zip file or used for further analysis



Use cases

Two PhD projects that actively use the portal for data access and contribute to the toolbox (hydrological model evaluation and uncertainty², machine learning in hydrology³)

