



Distributed Research Infrastructure for Hydro-Meteorology

Overview:

Predicting weather and climate and their impact on the environment, including hazards such as floods and landslides, is still one of the main challenges of the 21st century, with significant societal and economic implications. As the [Distributed Research Infrastructure for Hydro-Meteorology Study](#) (DRIHMS) project suggests, being able to access hydrometeorological data and models easily and facilitate collaboration between meteorologists, hydrologists, and Earth science experts for accelerated scientific advances in hydrometeorological research (HMR) lies at the heart of the challenge of climate prediction. The proposed Distributed Research Infrastructure for Hydro-Meteorology (DRIHM) project intends to develop a prototype e-Science environment to facilitate such collaboration, and provide end-to-end hydrometeorology research (HMR) services (such as models, datasets and post-processing tools) at the European level, with the ability to expand to the global scale. The objectives of the DRIHM project are to lead the definition of a common long-term strategy, to foster the development of new HMR models and observational archives for the study of severe hydrometeorological events, to promote the execution and analysis of high-end simulations, and to support the dissemination of predictive models as decision analysis tools.

Benefits of DRIHM:

DRIHM combines the European expertise in HMR, and in Grid and High Performance Computing (HPC). Joint research activities will improve the efficient use of European e-infrastructures, notably Grid and HPC, for HMR modelling and observational databases, model evaluation tool sets and access to HMR model results. Networking activities will disseminate DRIHM results at the European and global levels in order to increase the cohesion of the European and possibly worldwide HMR communities, and to increase the awareness of the potential of ICT for HMR. Service activities will deploy the end-to-end DRIHM services and tools in support of HMR networks and virtual organizations on top of the existing European e-infrastructures.

Collaboration with EUDAT:

DRIHM will be primarily involved in the development of the B2SHARE service which DRIHM wants to offer to citizen scientists active in the field of hydrometeorology and whose data can be relevant to the DRIHM community. EUDAT will develop this service for the DRIHM community with a customized interface and make storage capacity available for individuals depositing data via the DRIHM customized interface. In its current ("basic") version, this service and the storage will be provided free of charge. In return, DRIHM will help develop the service by providing feedback and comments on its design and usability.

The work performed in collaboration with DRIHM was concluded in March 2015.

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