A Scientific SDI Node for Sustainable Land and Water Management

Matthias Schroeder, Joachim Wächter

Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences

The value of Spatial Data Infrastructures (SDI) is not only determined by the resources offered by the infrastructure in terms of basic services but also by the availability of tools supporting the utilization of these resources for variable tasks and use cases. More than that, Scientific SDIs (SSDI) has to support complex scientific workflows with a broad range of functions to be valuable for scientists. These functions include:

- data acquisition and metadata management,
- data analysis and result presentation,
- modeling and computing,
- decision support,
- networking and information exchange within scientific communities, and
- stakeholder integration.

In our presentation we want to give an overview about the current status of a SSDI of a large scale research project in China. In the context of the “Sustainable Land Management” (LAMA) initiative funded by the German Federal Ministry of Education and Research (BMBF) the project SuMaRiO (Sustainable Management of River Oases along the Tarim River) is responsible for the development of an indicator-based Decision Support System (DSS) that allows a Sustainability Impact Assessment (SIA) for a sustainable regional planning. The SuMaRIO SSDI will be the data management backbone of the project offering a complete range of function supporting complex scientific work flows and various decision processes. At a later stage, this specific SSDI will be a part as an infrastructure node in a larger scale SDI for all LAMA projects. Our workshop contribution addresses further open issues of data processing and infrastructure design.