



Development of a hydroinformatics system for the water resources of the Nile river basin

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From Lake Victoria to the Mediterranean Sea, the length of the Nile is ca. 5600 km and the basin has an area of more ca. 3350000 km². The ten countries that make up the Nile river basin all contribute differently to the basin and have different needs for the water resources. While the river Nile has been providing life to the basin for thousands of years, many fear that population growth and the looming water scarcity may result in international conflict in the coming decades. However, initiatives such as the Nile Basin Initiative try to avert this danger. Improved understanding of the integrated aspects of the water resources management at the scale of the entire river basin is a key issue in order to avoid future conflicts.

For this purpose, the Nile river basin hydroinformatics system is developed, aiming at providing decision support for the management of the water resources in the Nile river basin. The system consists of data-bases, linked modelling tools, GIS and web-based features that are linked to public available data and public domain open-source software such as Soil and Water Assessment Tool (SWAT).

The benefit of such a system is to: (1) Centralise all data relevant to public domain data on the water resources of the river Nile (2) Synthesise the data and construct reports (3) Analyse causes and impacts in the system (4) Design alternative management scenarios (5) Apply models to evaluate management scenarios (6) Propagate small scale management scenarios to larger scales (7) Communicate potential policies and effects to stakeholders and the public (8) Support the design monitoring programmes