The Elbe Expert Toolbox

The established network of numerical simulation models developed in GLOWA-Elbe will be introduced as the "Elbe Expert Toolbox" (EET) and will be made available for further research and planning related to the Elbe river basin

Our final goal is to make the tools developed during the project - consisting of models specifically applied to the Elbe - available to potential users as a Toolbox. The main components of the Elbe Expert Toolbox are:

- **tools** (models used in Elbe-specific applications) to solve specific modelling tasks and
- the **information system WISYS-Elbe** as a central information platform.

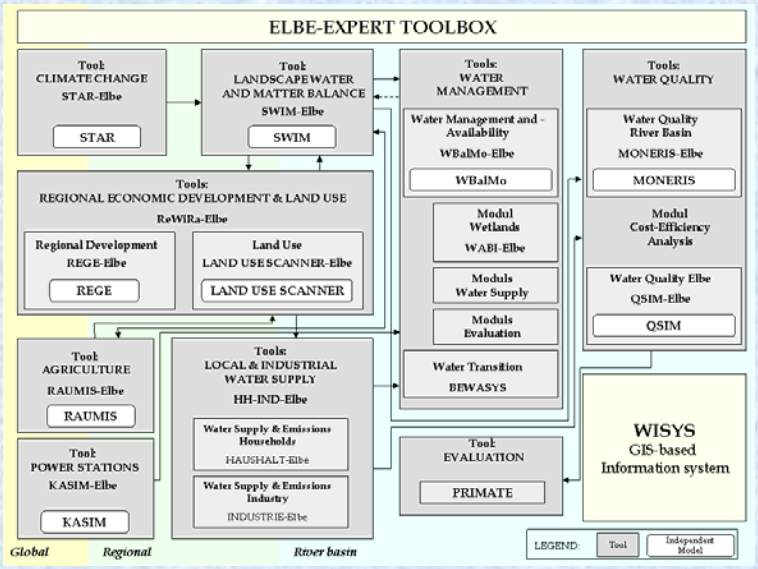

Fig. 1: Tools of the Elbe Expert Toolbox with important input-output relations between the models, whose technical realization takes place via WISYS accesses

An overview of the tools and the associated models is given in figure 1. All tools can be used individually or as a group.

The main **potential users** of the Toolbox are the River Basin Community Elbe (**FGG Elbe**) of the 10 German federal states in the Elbe basin, the International Commission for the Protection of the Elbe (**IKSE**), and the Czech water authorities (**Povodies**).

More generally, those interested working in state or local authorities, scientific institutions, universities, engineering offices, etc. can use the Toolbox.

At the close of the project, the Elbe Expert Toolbox will be hosted at the **Federal Institute of Hydrology** and provided on request.

The **WISYS®** information system

- **was developed** by the DHI WASY GmbH to aid implementation of the Water Framework Directive. Within the Toolbox, it serves as a central GIS-based platform for the administration of basic data and results, for steering additional simulations, and for the visualization of scenario analyses.
- **enables** exchange of information between the individual tools in the Toolbox and provides the data on the Elbe river basin required for model applications.
- **provides** the necessary initial data for the use of individual models, and
- **manages** and
- **visualizes** the results

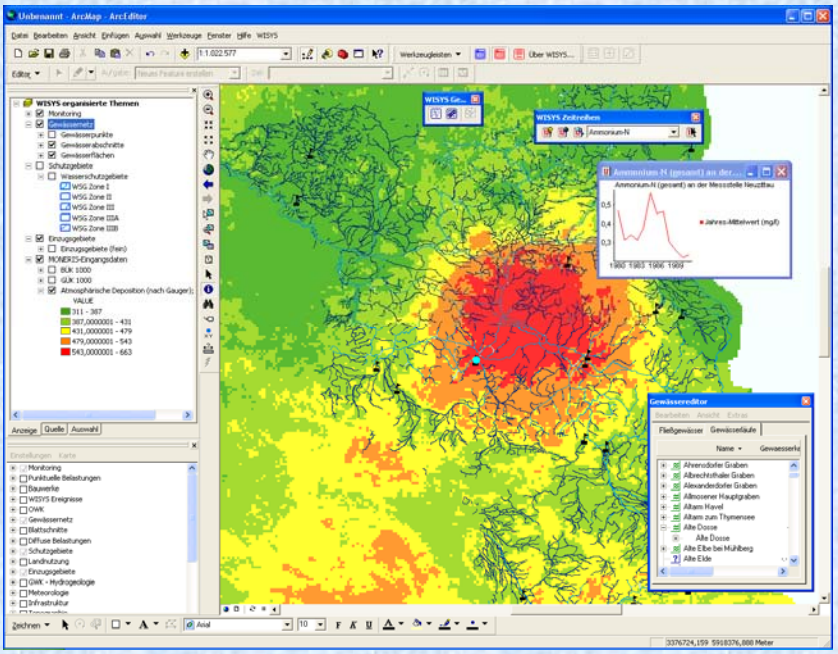

Fig. 2: Example for the illustration of WISYS Berlin-Brandenburg

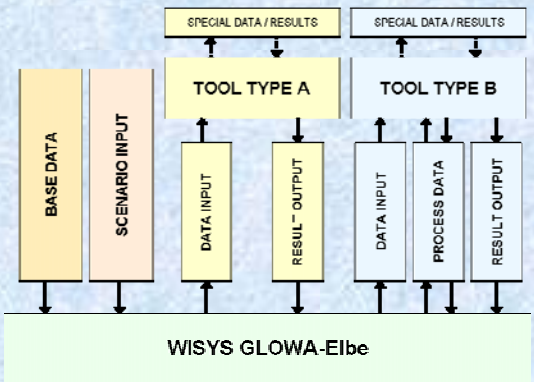

Fig. 3: Basic structure of the Toolbox

Basic data
All data required as basic data for individual or several tools are made available in WISYS.

Scenario data
Results from model simulations needed as input data for other models are taken into WISYS as scenario data.

Type A Tools
Tools (models), their input and result data, all administered by WISYS.

Type B Tools
Dynamic models with data transfer on a time step level.
In principle, this offers the possibility of also coupling models on the level of time steps by using the interface ISSNEW.

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