

## FLUMAGIS

### Interdisciplinary development of methods and tools for the planning process and measurement control for river basin management with geoinformation systems

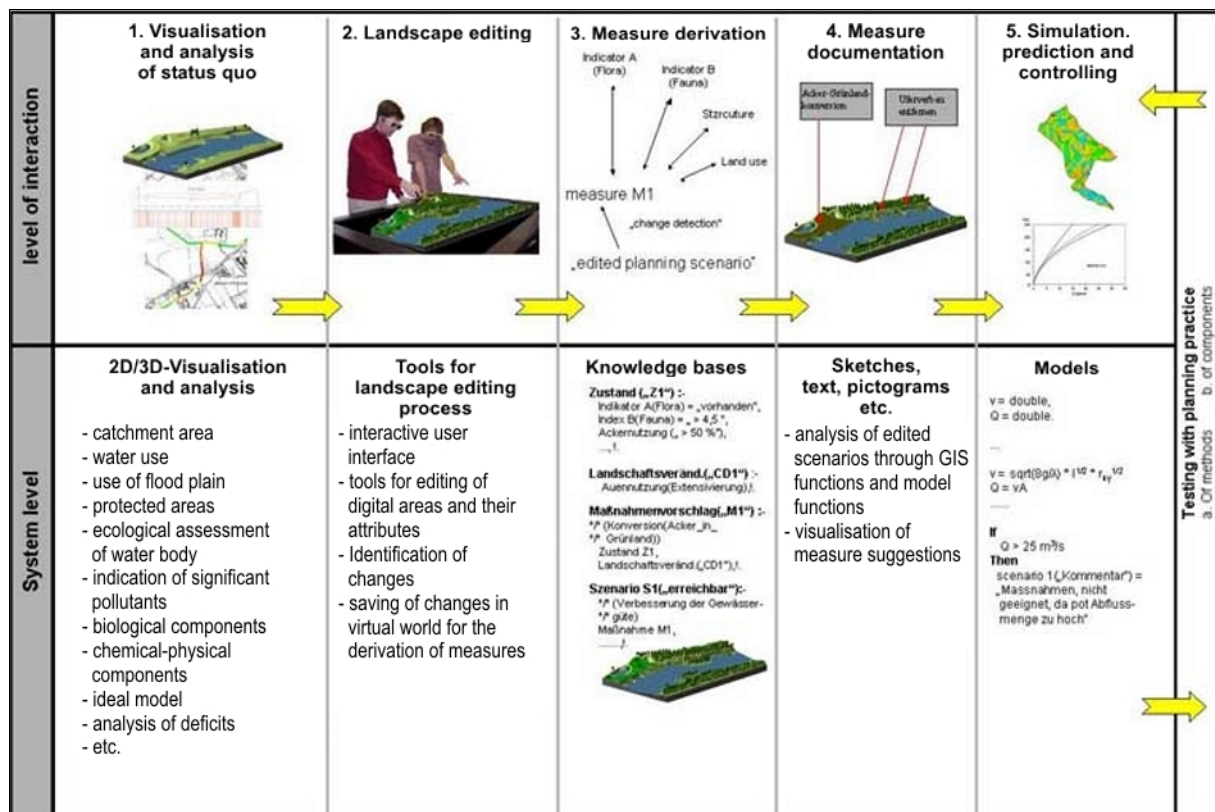
#### BACKGROUND

The development of river basin management plans for each river basin district is one aim of the European Water Framework Directive (Article 13). The river basin management plans also implement management plans for sub-basins, sectors, issues, measures, water types and deal with particular aspects of water management.

#### PROBLEMS

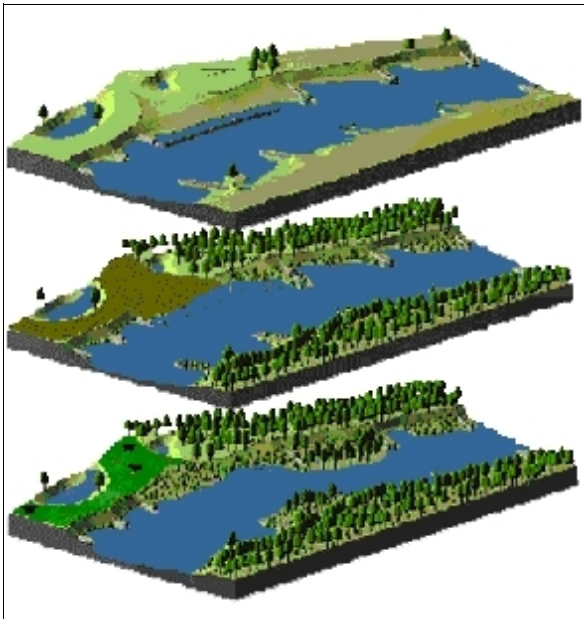
Water management in river basin districts requires experts with specialist knowledge in the domains:

- limnology
- landscape ecology,
- hydraulic engineering,
- hydrology,
- geoinformatics and socioeconomy.



### SOLUTIONS

The FLUMAGIS project uses interdisciplinary development of methods and DV(Digital Video)-tools in support of the planning and management of river basins. The project focus was the development of an interactive tool facilitating the evaluation and (3D) visualization of river basin environments. This comprises the representation of current inshore water and landscape ecological aspects as well as representation of the water balance and substance balances. Editing of virtual environments makes it possible to elaborate future planning and management scenarios on the basis of an interdisciplinary data and knowledge platform in accordance with the EU-WFD. Possible alternatives and effects of various planning scenarios become transparent, and can be discussed and experienced in a participatory process.



### BENEFITS

- The integration of GIS services, micro- and meso-scale simulation models and the derivation of knowledge based measures for supporting the decision process.
- Scientific and technical sub-goals:
- concretion of regional overall concepts
- identification of ecological and socio-economical indicators;
- visualisation and adaptation of landscape- and inland water states;
- deduction of development measures;
- prognosis und simulation;
- integration of knowledge bases, (hydrologic) models, GIS-components, visualisation techniques relevant for participative planning;
- test of the tools



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