

THE TISZA RIVER CATCHMENT

The Tisza catchment (~157,000 km²) is part of the European Danube basin. The Tisza river originates in the Carpathian Mountains, flows through the Great Pannonian Plain and finally discharges into the Danube River. The Tisza catchment is characterised by central lowlands, which are confined by high mountain chains to the North, East and South. This topography results in a high flooding risk for the lowlands in case of strong rainfall in the mountains. 29% of the Tisza catchment area, mainly lowland, are in Hungary. Further parts are located in Romania (47%), Slovakia (10%), Ukraine (8%) and Serbia (6%).

SOCIO-ECONOMIC DESCRIPTION

Hungary and its neighbour countries have faced major societal and economic transformation processes after the break-down of communism. The Hungarian Tisza catchment experienced “decades of ecological, economic and social decline, punctuated by extreme events such as flooding, water stagnation and toxic spills” (Sendzimir et al. 2008).

WATER MANAGEMENT ORGANISATIONS

The International Commission for the Protection of the Danube River (ICPDR) coordinates transboundary cooperation in the entire Danube basin. Permanent bilateral commissions coordinate Tisza river management between Hungary and its neighbour states. Until 2010, primary water management organisations in Hungary were the Ministry of Environment and Water (KvVM) and the Central Directorate for Water and Environment (VKKI). Six Environmental and Water Management Directorates (KÖVIZIG) are in place to manage the Hungarian part of the Tisza at sub-basin level.



The Tisza basin (Burnod-Requia 2004, in: Bohn et al. 2005)

NEWATER PROJECT

The Tisza was one of seven cases studies that were examined during the NeWater project. Research took place in the Hungarian and Ukrainian parts of the river catchment.

The Hungarian sub-case focused on the Bodrog floodplains. These floodplains had been heavily modified in the Austro-Hungarian Empire and are nowadays characterised by intensive agricultural land use, which is responsible for increasing land use conflicts and increasing poverty. Until today, the Bodrog floodplains are offering a high potential for biodiversity and water retention.

The case study in the Hungarian Tisza pursued a **participatory approach** to identify options for more adaptive water management. This allowed stakeholders to exchange their perspectives and discuss ideas in an open manner. Participative modelling processes served to create **conceptual models** concerning sustainable floodplain management, e.g. with regard to a household's capacity to cope with floods. Furthermore, NeWater developed a **floodplain management game**, which helps to explore new knowledge about the complexity of water management and the uncertainties with regard to floodplain management. **Capacity building** dealt with the issue of how to involve and jointly work with different stakeholders in water management.

NeWater examined an **informal learning platform**, which aims to transform Hungarian water management practices in order to favour more adaptive and sustainable solutions, e.g. with regard to flood protection. This learning platform involves a range of environmental NGOs as well as actors and initiatives from the local or regional level who aim to promote rural development.

(ADDITIONAL INFO ON WWW.NEWATER.UOS.DE)

ABOUT TWIN2GO

Twin2Go reviews, consolidates, and synthesises research on adaptive and integrated water resources management in basins around the world. The aim is to draw insights relevant to policy and research on issues around adaptive water governance in the context of climate change, and to make them transferable to other basins. Twin2Go further promotes sharing of research results with practitioners and high level decision makers through effective dialogue.