



Case study #09: Tisza

Case study cluster: large transboundary rivers

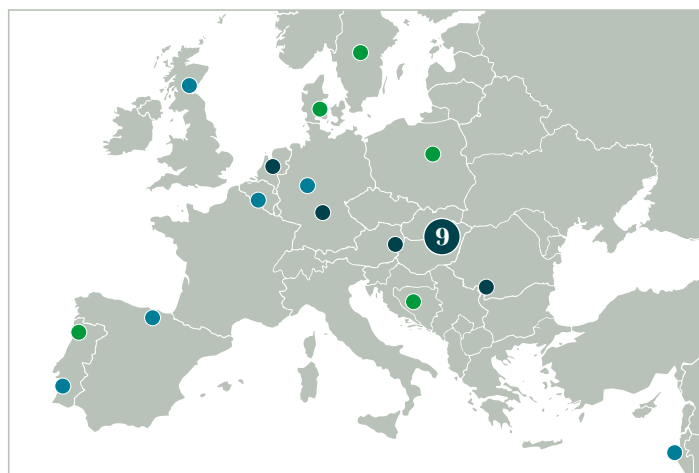
Country: Hungary

Scientific partner: WWF Hungary

Implementation partner: WWF Hungary

Twinning case study: restoration of the Botar river morphology and its hydrological regime (WWF UA)

Website: wwf.hu

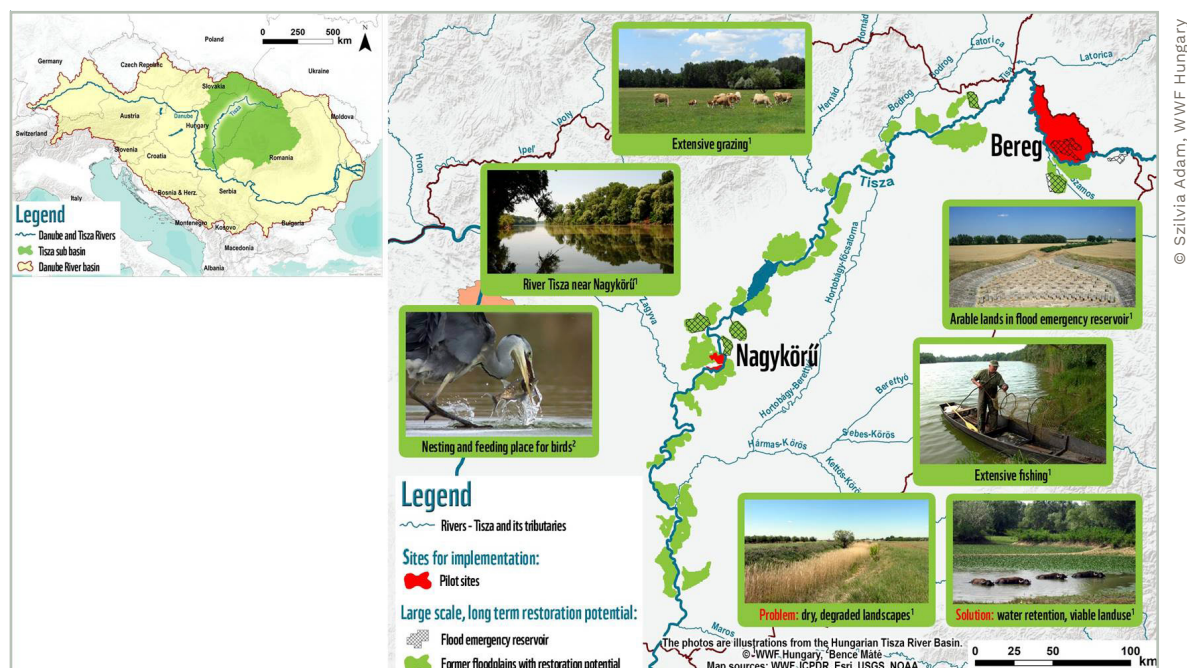


Demonstration

- **Type of restoration:** Planning and implementing a floodplain farming system in the floodway of river Tisza near Nagykörű based on water retention in former wetlands, and restoring habitats (Pilot Site A). A local farmer irrigation community will be established at another site, in the floodway fringe of the Tisza to create the infrastructure for providing water for farming and habitat restoration, reconnecting former floodplains to the river (Pilot Site B).
- **Size:** 1,800 ha (affected areas: Pilot Site A approx. 300 ha, Pilot Site B approx. 1,500 ha; directly restored areas will be smaller). Case Study 9 has an upscaling potential to 150,000 ha of the deep floodplains along the Hungarian part of the river Tisza
- **Locations:** two sites (Pilot Sites A and B) near the village Nagykörű in the middle reach of the Tisza river
- **Value of the case:** floodway used for drought risk reduction, preventing drying of habitats,

floodplain restoration/reconnection, ecological status restoration, enhancing biodiversity, lateral connectivity, wetland reconversion, enhance recreation potential for eco-tourism

- **Stakeholders involved:** local municipalities, local small and large scale farmers, Middle Tisza Regional Water Directorate, local NGOs, small scale local product producers in Nagykörű (e.g. cheese, jam etc.), Municipality of Jász-Nagykun-Szolnok County, Jász-Nagykun-Szolnok County Government Office, Hortobágy National Park Directorate, Ministry for Agriculture, Ministry for Interior, Hungarian Chamber of Agriculture
- **Sectors involved:** agriculture, water resources, fishery, forestry, cross sector (governance, regulation, etc.), environment, climate and disaster, tourism actors, bio-based sectors (processors, retailers)
- **Innovations to be applied:** designing and implementing a modern way of the traditional floodplain farming, harmonising irrigation infrastructure with nature-based water retention measures



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Implemented within MERLIN

- **Restoration measures:** Restoration and construction of nature-based water retention systems; setting up nature friendly floodplain farming systems
- **Size:** 131.67 ha restored to raise ground water levels in a 2200 ha area
- **Scope:** local, regional
- **Vicinity:** rural
- **Stakeholders involved:** National park and water authorities, municipalities, NGOs, landowners, agricultural and forestry organisations, tourism bodies and local communities.
- **Estimated costs:** 280,000€ (including planning, monitoring and construction costs)

Lessons learnt

- Promoting land use change is the most important part for retaining water in the floodplain
- Understanding the farmers needs well is a long process

Additional information

The Tisza sub-basin is the largest one in the Danube River Basin. The Tisza was strongly regulated, floodplains were cut off from the river in the 19-20th centuries. Landscapes are dominated by intensive arable farming, draining the waters dries landscapes. We will develop economically and ecologically viable land-use systems to increase biodiversity, enhance livelihood and climate resilience of communities by natural water retention based floodplain farming.

Strengths

- Holistic landscape restoration
- Strong stakeholder partnerships
- WWF leadership and support

Weaknesses

- Land-use conflicts
- Limited farmer incentives
- Early project stage

Opportunities

- Climate-driven awareness
- Landscape-scale cooperation
- Benefits for local communities
- Demonstration effect

Threats

- Fragmented land ownership
- Funding uncertainty
- Weak participatory culture
- Difficult ecosystem service valuation