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International
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of the Danube River

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zum Schutz
der Donau

Towards Integrated Water Management in the Tisza River Basin



Where we are working

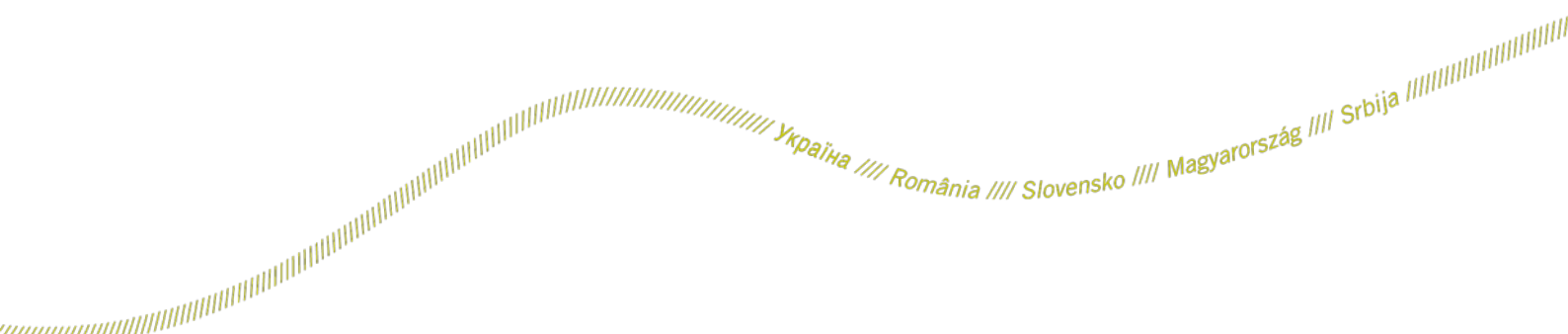
Wetland and floodplain restoration in the Bodrog River Basin: Sénne depression (Slovakia), Viss-oxbow (Hungary)

Reducing pollution and floods though improved river management in the Upper Tisza area: Velyky Buchkiv (Ukraine), Bocicoiu Mare (Romania)



Floodplain land management: Nagykörű region (Hungary), Székelyudvarhely (Romania), and Senta (Serbia)

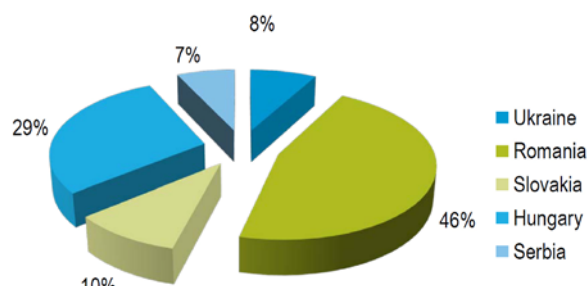
TISZA RIVER BASIN:
UNDP/GEF Tisza MSP demonstration projects' locations



Tisza River Basin at a glance

The picturesque Tisza River Basin is located in the heart of Europe, and is the largest sub-basin of the Danube catchment. It is shared by five countries: Hungary, Romania, Serbia, Slovakia and Ukraine.

Distribution of the area



Size of the Tisza River Basin	157.186 km ²
Length of the Tisza River	966 km
Percentage of the Tisza Basin in the Danube River Basin	19.5 %

Past river engineering works have resulted in shortening of the original length of the Tisza River by 30%. An estimated more than 80% of the original wetlands and floodplains in the Tisza Basin were lost.

	Population in the Tisza River Basin	Total population in million	Status in the EU
Ukraine	1,240,000	47,1	-
Romania	6,095,000	21,7	Member
Slovak Republic	1,670,000	5,4	Member
Hungary	4,126,000	10,1	Member
Serbia	810,000	9,0	-

The Tisza Basin is suffering from floods, drought and pollution, with over two thirds of waters at risk not to meet 'good status' criteria, and demand for water likely to double by 2015.



Tisza River Basin

Following a long history of cooperation, five countries sharing the largest sub-basin of the Danube catchment opened a new chapter in 2004. Ukraine, Romania, Slovakia, Hungary, and Serbia - established as ICPDR Tisza Group - committed to producing Integrated Tisza River Basin Management Plan. Their effort is supported by the UNDP/GEF, EU, UNOPS and UNEP.

The strongly meandering Tisza River has a significant impact on local economies, and was for centuries subject to human interventions at the local scale.

Today, the EU Water Framework Directive (WFD) is the frame for transboundary cooperation in water management. Its key objective is achieving the 'good status' of all waters by 2015.

The International Commission for the Protection of the Danube River (ICPDR) is a platform for coordination of the EU WFD throughout the Danube River Basin, and on sub-basin level.

Tisza River Basin is the largest sub-basin of the Danube catchment



The first step towards the Integrated Tisza River Basin Management Plan was the preparation of the Analysis of the Tisza River Basin (2007), endorsed by the Tisza Group.

The Analysis characterises the Tisza River and its basin, identifies the key environmental and water management problems, and confirms the need for action.

The ICPDR Tisza Group in its supervisory role is coordinating all activities and information exchange related to the cooperation for the integrated river basin management.

In line with the EU WFD, public participation is especially important for the development of river basin management plans because they integrate environmental goals, social concerns and economic factors.

Following the strategy developed by the ICPDR for public participation throughout the Danube River Basin, the input from the stakeholders will be central component of the UNDP/GEF Tisza medium-size Project (MSP).

The success in the Tisza River Basin strongly depends on the countries working together and with all other partners.



The Integrated Tisza River Basin Management Plan will be finalized in the frame of the UNDP/GEF Tisza MSP, and the results will be disseminated for replication throughout Tisza River Basin and beyond through ICPDR activities.

The work done by the ICPDR Tisza Group toward the Plan for the Tisza River Basin serves as a pilot programme for other European sub-basins and beyond.



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UNDP/GEF supporting Tisza countries

Integrating multiple benefits of wetlands and floodplains into improved transboundary management of the Tisza River Basin (2008-2011)

UNDP/GEF three-year Tisza Medium-sized Project (Tisza MSP) supports the efforts of five riparian states to achieve the 'good status' of the basin waters required by the EU Water Framework Directive by 2015.

Through the work of the ICPDR Tisza Group, measures will be identified which will have positive impacts on both water quality and water quantity of water ecosystems.

The UNDP/GEF Tisza MSP is contributing to the improved transboundary management in two ways:

- Adoption of policies and legislation that promote the use of wetlands / floodplains in line with Integrated Water Resource Management (IWRM) and the EU WFD;
- Implementation of new policies: Through community-level demonstration of effective floodplain management for nutrient retention, habitat restoration, and flood management.

The links between these are crucial for demonstrating the integrated water quality and quantity management approach. The feedback from the field will be incorporated in the Integrated Tisza River Basin Management Plan.

The three demonstration projects, implemented on several locations throughout Tisza River Basin, aim at testing the multiple environmental benefits of wetlands to reduce the impacts of floods/droughts and nutrient pollution.



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UNDP/GEF Tisza MSP builds on experience gained and strategies developed through the 15-years' long UNDP/GEF work in the entire Danube Basin. The results will be replicated throughout the region, and disseminated globally.

The integration of water quality and quantity, land use and biodiversity issues in the Tisza River Basin Management Plan is a significantly innovative approach in the basin.

Embedded in harmonized national, regional, and EU water management policies and tested on multiple demonstration sites, these novel integrated approaches will be replicated in the Danube River Basin through ICPDR activities.



Towards the Integrated Tisza River Basin Management Plan

The Integrated Tisza River Basin Management Plan will integrate issues of both water quality and water quantity, in a combined approach for land and water management, flood and drought.

The ICPDR Tisza Group through the Analysis of the basin defined the following major water management issues:

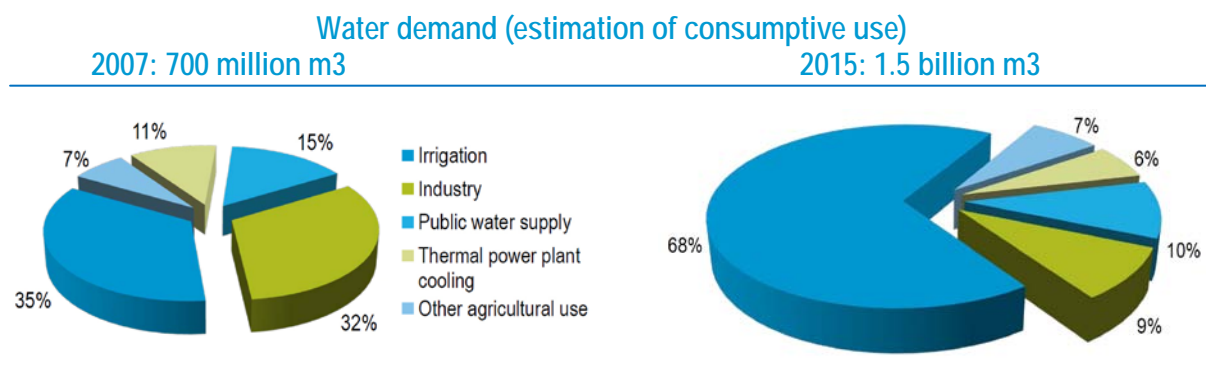
- Organic pollution;
- Nutrient pollution;
- Hazardous substances, specially from mining;
- River engineering;
- Groundwater quality and quantity;
- Water quantity issues.

To address these issues, the Tisza Group with the support of the UNDP/GEF project will incorporate the water quality and ecological plans currently in development under the EU WFD, with flood and drought management. This integration will ensure that the overall management of the Tisza River Basin will address both land and water issues.

The Project is focusing on the development of strategies and implementation of demonstration project on community level. It builds on experience gained and strategies developed through the 15-years' long UNDP/GEF work in the entire Danube Basin.

They aim at testing the multiple environmental benefits of wetlands to reduce the impacts of floods/droughts and nutrient pollution.

The Tisza River Basin Strategies for nutrient reduction and flood/drought mitigation will be complemented by national management plans developed by national experts, and incorporated into the Integrated Tisza River Basin Management Plan.



Wetlands and floodplains form an integral part of the river systems, providing a variety of habitats for wildlife, reducing nutrients, trapping sediments, aiding flood protection and recharging groundwater.

The UNDP/GEF Tisza MSP is promoting integration of environmental benefits of wetlands and floodplains into the river basin management.

The Tisza MSP is an important step in the UNDP/GEF exit strategy from the region. The 'scaling down' of Danube Basin programmes to Tisza sub-basin will also contribute to the development of the Integrated Tisza River Basin Management Plan from both a 'top-down' and a 'bottom-up' perspective, and will carry a significant global replication potential.



Tisza River surface water bodies at risk of not meeting the WFD 'good status' criteria



Demonstration projects

The community-level demonstration projects have crucial contribution to the development of the Integrated Tisza River Basin Management Plan. They will provide experience acquired in the field on the integrated water quality and quantity management approach.

The Tisza Group selected three demonstration projects from over 15 submitted from a range of NGOs, institutes and other actors in the region.

With the pro-active support of UNDP/GEF, these proposals were developed into the three projects, to be undertaken over 18 months.

Implemented on locations throughout the Tisza River Basin, the demonstration projects are seeking practical and cost-effective ways to address pressures typical for the Tisza River Basin:



Reconnecting wetlands for flood protection:
Improving the capacity of wetlands to retain, store and drain excess water;

Integrated land development:

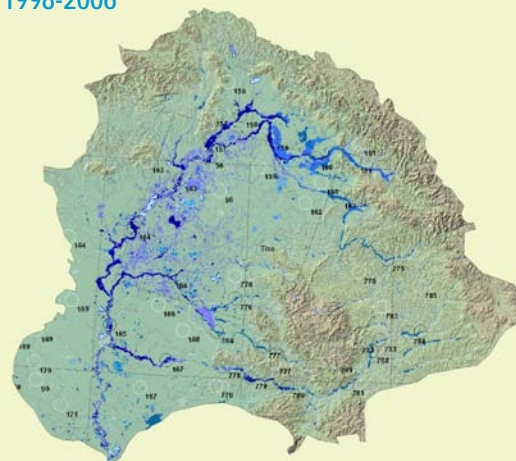
How to overcome fragmentation and unclear land ownership for sustainable resource management; and

Waste and river bank management:

Dealing with multiple pressures – hazardous, organic, and solid waste pollution, and floods.

The projects have started in mid 2009. The multiple benefits of the approaches applied will be discussed on the final workshop in 2010, to understand how these can be further replicated and disseminated.

Flooded areas in the Tisza River Basin 1998-2006



Wetland and floodplain reconnection

A UNDP/GEF Tisza MSP Demonstration Project in the Bodrog River Basin, shared by Slovakia, Hungary and Ukraine

With the original floodplain forests partly destroyed, the Bodrog catchment suffers regular floods all year round due to snow melt and rain. A series of severe floods in 1998-2001 lead to reconsidering of the traditional system of flood prevention based on dikes. The flood prevention strategy applied by the demonstration project is based on the capacity of restored and reconnected wetlands and floodplains to retain, store and drain excess water.

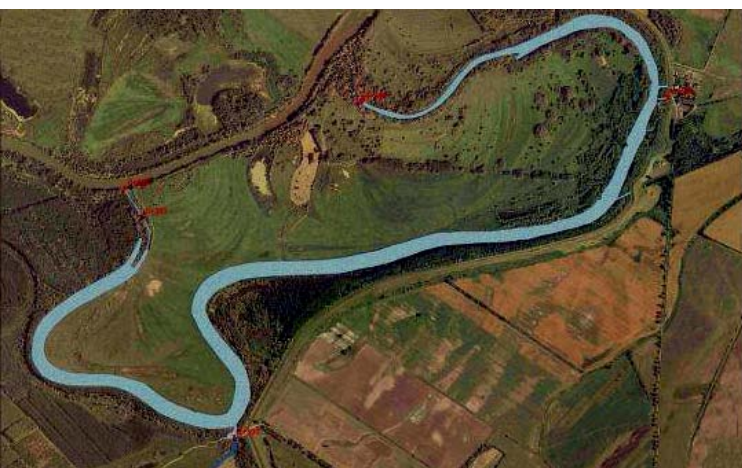
Implemented by: The Global Water Partnership – Slovensko, and 14 partners in Hungary, Slovakia and Ukraine.

In Slovakia:

Restoration of the original floodplains affected by capital-intensive drainage systems, with focus on water retention measures.

In Hungary:

Unblocking water flow to the Viss-oxbow for improved living conditions of protected plants and birds during rainless summers and low flow periods.



Objectives:

- **Development of a Strategy for mitigation of floods** in the Bodrog River Basin, to be incorporated into the Integrated Tisza River Basin Management Plan;
- **Conservation and restoration of original floodplains and wetlands** affected by current land uses and environmentally inappropriate flood protection measures, and
- **Dissemination of project results** for replication on national levels and in other river basins.

Land management in floodplains

A UNDP/GEF Tisza MSP Demonstration Project in Hungary, Serbia and Romania: Improving land use and water management efficiency

Over-fragmentation and unclear land ownership following the privatization in the early 1990s is an impediment to efficient management of the risk-prone areas.

The lessons learned from UNDP/GEF Tisza Biodiversity (2005-2008) project highlighted the need for integrated land management – landscape planning, utilization programming, land consolidation, and property management.

Implemented by: NGO SZOVET – The Alliance for the Living Tisza Association (Hungary), and three partners in Hungary, Romania and Serbia.

at areas with high risk (water stagnation, flood, flash flood, biodiversity loss).

Activities:

- **Legal assessment of all Tisza countries** on integrated land development, to be incorporated in the Tisza Integrated River Basin Management Plan.
- **Implementation of integrated land development** at a pilot site in Hungary, development of additional pilots;
- **Dissemination of results.**

The activities are conducted on three locations with different natural and social characteristics:

Hungary

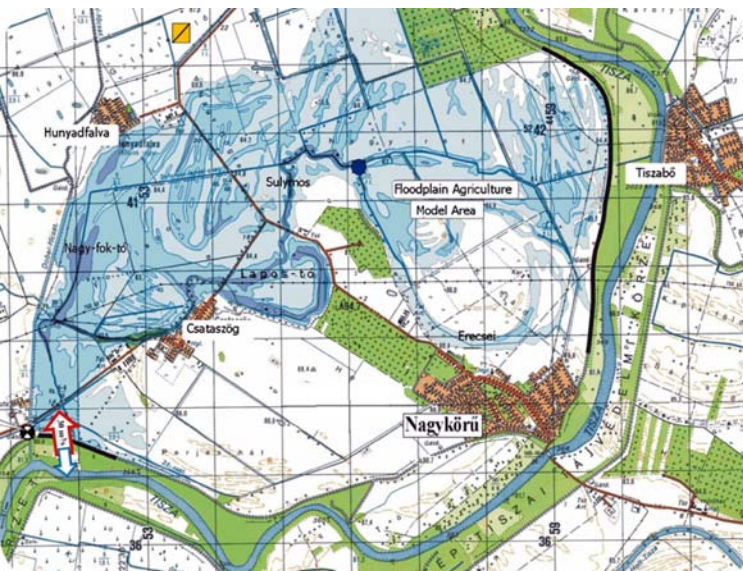
Nagykörü region, Middle Tisza

Romania

Székelyudvarhely, Upper Tisza

Serbia

Senta, Lower Tisza



Objective:

To develop Integrated land and water management protocol based on case studies to support efficient water and land management

Reducing pollution through improved floodplain management

A UNDP/GEF Tisza MSP demonstration project in Romania and Ukraine:

The two mountainous villages in Upper Tisza on Romanian-Ukrainian border live on timber processing, and suffer from severe floods and multiple environmental stresses: toxic wood residues, destroyed riverbeds, poor infrastructure, solid and organic waste and high flood risk.

Implemented by: Zakarpatyya Oblast organization of all-Ukrainian Ecological League and nine partners in Romania and Ukraine.

Objectives:

- Improvement of communal solid waste management system in both villages;
- Development and practical implementation of the Local Flood Risk Management Plan;



- Revitalization of a mountainous stream in Ukraine and a lake habitat in Romania;
- Re-opening of a water gauging station;
- Construction of biological waste water treatment facilities.

The implementation of the project is supported by:



The competent authorities for WFD implementation in the Tisza countries

Ukraine	Ministry for Environmental Protection of Ukraine, www.menr.gov.ua State Committee of Ukraine for Water Management, www.scwm.gov.ua
Slovak Republic	Ministry of the Environment, www.enviro.gov.sk
Romania	Ministry of Environment and Sustainable Development, www.mmediu.ro National Administration "Apele Romane", www.rowater.ro
Hungary	Ministry of Environment and Water, www.kvvm.hu
Serbia	Ministry of Agriculture, Forestry and Water Management, www.minpolj.sr.gov.yu

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