

## TRANSBOUNDARY WATER COOPERATION: PROGRESS AND EMERGING CHALLENGES

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Water does not respect geopolitical boundaries. Hydrological systems ignore international relations. Wherever water cuts across borders, those who are in charge of protecting, managing and developing the resource face additional economic, financial, logistical, and political challenges. The Danube River Basin is a case in point, being the world's most international river basin.

2021 marks a milestone for the joint management of Europe's water resources: December brings the deadline for the publication of the new, updated generation of River Basin and Flood Risk Management Plans. These all-important planning instruments aim to meet the requirements stemming from the EU Water Framework Directive and the EU Floods Directive and cover the upcoming 6-years cycle from 2021-2027 at both national and international level.

Danube Water Program Task Team Leader Raimund Mair led this session with the objective to inform participants about latest developments regarding transboundary water cooperation in the Danube Region, and beyond.

### How the UNECE Water Convention supports transboundary water cooperation in the Danube region and worldwide

First, Ms. Sonja Koeppel, Secretary of the Water Convention, United Nations Economic Commission for Europe (UNECE) treated current developments on transboundary water management at the UNECE, including lessons for the Danube region. She reminded the audience that almost two thirds of all freshwater resources worldwide are shared by two or more countries, with the Danube the world's most international river, sharing a basin with 19 countries.

Transboundary water cooperation is therefore crucial for peace, climate adaptation, economic development, and human wellbeing. To succeed it has to overcome considerable challenges, most importantly, difference between national administrative and legal frameworks, resource constraints, friction in data exchange and, of course, financing. To address these challenges, the Water Convention promotes capacity building and an exchange of experiences between countries that share freshwater resources, aiming to improve national and regional water governance.

The Water Convention work program 2022-2024 focusses on monitoring assessment, financing and climate change adaptation on a national, regional and global level. The funding and

financing of transboundary water cooperation and basin development happens in cooperation with the World Bank, the European Investment Bank, and many others. Creating the crucial enabling environment requires adequate legal and institutional frameworks and strong governance.

With a special focus on the Danube region, Ms. Koeppel named water allocation in transboundary contexts, climate change adaptations in transboundary basins, the water-food-energy-ecosystems nexus in transboundary basins and the development of legal frameworks for transboundary water cooperation as important topics. She closed her presentation with the UNECE Project on hazard and crisis management in the Danube Delta, where the ICPDR is also involved.

### River Basin Management Planning in the Danube River Basin

Ms. Edith Hödl, Technical Expert for River Basin Management, International Commission for the Protection of the Danube River (ICPDR), subsequently gave an overview of the ICPDR and the latest developments on River Basin Management planning by the commission.

The legal instrument for cooperation on transboundary water management is the Danube River Protection Convention (DRPC) of 1994. River Basin Management happens on three levels of coordination:

- Basin-wide level – where ICPDR operates on catchment areas above 4000 sq.km. like The Danube River catchment area
- National level – internationally coordinated sub-basin level (e.g. Sava and Tisza)
- Sub-unit level – management units within the national territory

There are two Management Plans for the Danube River Basin, with update cycles of 6 years. The Danube River Basin Management Plan addresses significant water management issues, organic pollution, hydromorphological alterations and climate change and the Danube Flood Risk Management Plan.

The commission made significant progress regarding the organic pollution within relatively short time, with shifts to enhanced technologies and big investments in the wastewater sector between 2005 and 2018. There was also good progress regarding hydromorphological alterations in the Danube River Basin with improvements of river continuity (e.g. fish passes), the reconnection of wetlands and floodplains and improvement of morphological conditions (river restoration) underway since 2009.

Additional activities of the ICPDR aim at adaptations to climate change. Those include:

- the ICPDR Strategy on Adaptation to Climate Change, issued in 2012 and updated in 2018,
- the report “Effects of Climate Change (Drought, Water Scarcity, Extreme Hydrological Phenomena and other Impacts)”, updated in 2021,
- the introduction of the Danube Hydrological Information System (HIS) which will provide basic hydrological and meteorological data in near real-time,
- and activities to improve the water balance of the Danube River Basin to prepare for future water quantity challenges.

## Flood Risk Management in the Danube River Basin

The session's final presentation was delivered by Mr. Igor Liska, Technical Expert in Water Management / Water Quality, International Commission for the Protection of the Danube River (ICPDR), Austria, covering the last 20 years of major flood events in the Danube River Basin.

ICPDR responds to flood risks with the Action Program on Sustainable Flood Protection in the Danube River Basin, adopted in 2004. Meanwhile, the EU Floods Directive is undergoing implementation in three steps, introducing preliminary flood risk assessment between 2011 and 2018, flood risk and flood hazard maps from 2013 until 2019 and flood risk management plans between 2015 and 2021.

The ICPDR's objectives in this field are avoidance of new, and reduction of existing risks, strengthening resilience, raising awareness and upholding the solidarity principle. Strategic level measures for the majority of the countries in the basin include natural water retention, introduction of warning systems, raising awareness, and reducing contamination risks from sites in floodplain areas. Flood Risk Management Plans include textbooks that present best practice examples in a comprehensive manner, enabling even non-experts to appreciate risks, measures, results, and what works for the Danube River Basin.

Mr. Liska's take-home messages are: The implementation of flood risk management measures during the first cycle of the Floods Directive implementation contributed to a significant reduction of flood risks in the whole river basin. Furthermore, the joint implementation of the Floods Directive by EU Member and non-EU Member states strengthened the common view on the holistic flood risk management approach in the whole Danube River Basin.