



Overview



- ICPDR and its Coordination Mechanisms
- Danube River Basin Management Plan(ning) and the Danube River Basin Management Plan Update 2021
 - Significant Water Management Issues
 - Progress 2009-2021 (Organic pollution, Hydromorphological Alterations)
 - Remaining Challenges for 2022-2027
- Additional related ICPDR activities
 - Adaptation to Climate Change
 - Integration Issues and Cooperation with different Sectors

ICPDR IKSD

The ICPDR

- 19 countries covering the DRB
- More than 79 million people in a catchment of 800.000 km²
- Contracting parties to the ICPDR
 - Nine EU-MS: DE, AT, CZ, SK, HU, SI, HR, RO and BG; and European Union
 - Five non-EU Member States: BA, RS, ME, MD, UA









Danube River Protection Convention (DRPC)



signed 29 June 1994, Sofia (Bulgaria)



- Forms the overall legal instrument for co-operation on transboundary water management in the Danube River Basin
- Applies to countries with territories of more than 2000 km² within the Danube Basin
- Foresees establishment of the International Commission for the Protection of the Danube River

Water Framework Directive Coordination mechanisms





River Basin Management is based on three levels of coordination

- Part A International, basin-wide level the roof level (ICPDR)
- Part BNational level and/or the internationally coordinated sub-basin level for
selected sub-basins (e.g. Sava and Tisza)
- Part C Sub-unit level, defined as management units within the national territory

The information increases in detail from Part A to Parts B and C, Part A covers

- rivers with catchment areas > 4,000 km²;
- lakes > 100 km²;
- transitional and coastal waters;
- transboundary groundwater bodies of basin-wide importance.

Two Management Plans for the Danube River Basin





Danube River Basin Management Plan *(Update 2021 in progress)*

The Danube River Basin District Management Plan Part A – Basin-wide overview Updan 2015

Flood Risk Management Plan for the Danube River Basin District

Danube Flood Risk Management Plan *(Update 2021 in progress)*



Significant Water Management Issign IKSD Main pressures on basin-wide level



- Priority pressures for actions requiring joint actions by Danube countries
- Addressed in Danube River Basin Management Plan, updates every six years



Effects of Climate Change (drought, water scarcity, extreme hydrological phenomena and other impacts)

Organic Pollution: Progress 2009-2021





Organic Pollution

- Significant **progress** even in a short period (2005-2018), shift to more **enhanced** technologies
- Improvement of wastewater infrastructure for ca 40 million PE, on-going or planned projects for 25 million PE
- Country investments in wastewater sector: ca. 22 billion EUR (2005-2016, DRB parts), in total more than 40 billion EUR (without DE)

Organic Pollution: Remaining challenges (-2027)



ICPDR IKSD

- 76% (65 million PE) with **adequate treatment**, 20 million PE lagging
- Need of basic infrastructural development for 9.5 million PE (secondary)
- Need of nutrient removal for 10.5 million PE plus treatment upgrade (secondary to tertiary) for 6.5 million PE (protecting the Black Sea)
- Total investment costs estimated by 2040: 57 billion EUR (WB estimate)

Hydromporphological Alterations CPDR KSD Progress 2009-2021



Hydromorphological Alterations

- Numerous hydromorphological measures have been implemented addressing mitigation of
 - hydrological alterations like impoundments, water abstractions and hydropeaking,
 - improvement of river continuity (building of fish passes),
 - reconnection of **wetlands/floodplains** and
 - improvement of morphological conditions (river restoration projects).
- More than 60 implemented measures related to the improvement of hydrological alterations, mainly to impoundments and water abstractions
- More than 120 fish migration aids were completed; as for 8 fish migration aids the construction is on-going
- More than than 60,000 ha of wetlands/floodplains partly or totally reconnected; for additional 4,500 ha the construction of reconnection is still ongoing

Hydromporphological Alterations CPDR KSD Remaining Challenges (-2027)



- More than half of water bodies in the DRB are still under (at least one) significant hydromorphological pressure.
- 422 impoundments, 69 water abstractions and 42 cases of hydropeaking are causing significant pressure in the DRB.
- Additionally, **653 river continuity interruptions are not passable for fish migration**, while more than half of water bodies have altered morphological conditions.
- Restoration measures are planned for 245 water bodies in respect of river morphology
- More than 400 restoration measures on river continuity for fish migration planned
- Further 23,399 ha of **wetlands and floodplains** will be reconnected



Additional activities: Adaptation Climate Change

ICPDR IKSD

CLIMATE

- As a leader and pioneer among transboundary river basin commissions in responding to climate change, the ICPDR adopted the first ICPDR Strategy on Adaptation to Climate Change in 2012, which was updated in 2018
- New significant management issue "Effects of Climate Change (Drought, Water Scarcity, Extreme Hydrological Phenomena and other Impacts)" has a prominent role in DRBMP Update 2021
- Planned Danube Hydrological Information System (HIS) will provide basic hydrological and meteorological near real time data in a standard format and, if possible, validated long-term data series, for flood risk management
- Developing an improved Water Balance for the Danube River Basin as an element for facing the expected upcoming water quantity challenge

Additional activities: ICPDR IKSD Integration Issues ICPDR IKSD for the Protection icpdr iksd **Guidance Document on Sustainable Agriculture Development of** Inland Navigation and Environmental Protection in in the Danube River Basin the Danube River Basin THE NUTRIENTS AND DROUGHT ISSUE Joint Statement on Guiding Principles comising this potential conflict in a number of new waterway projects along the Dar ube River (ICPDR) has linked up with the Danube Navigatio a 2007 as latence cases, sectoral discussion process. As a result of 3 interdisciplinary workshops, a "lotal Statement on D of Inland Navigation and Environmental Protection in the Danube River Basin" was agreed. The final document was adopted in December 200 SUSTAINABLE sisting waterways and the development of fature waterway infrastructure. It is norrelyed as a mil AGRIC icpdr iksd **Sustainable** International International Kommission Kommission for the Protection zum Schu **Hydropower Development** in the Danube Basin for the Protection of the Danube River **Guiding Principles** CPDR IKSP www.icodece Picture: FAO-FIGIS Picture: FAO-FIGIS



For more information:

https://www.icpdr.org/



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